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**History** The University of Missouri - St. Louis College of Business Administration was established in 1967, and was accredited by AACSB-International six years later, the shortest time on record for any school to receive accreditation of its business program. AACSB-

International is the only internationally recognized accrediting agency for business and accounting programs. In 1995, the College of Business Administration received reaccreditation of its business programs, both undergraduate and graduate; and initial separate accreditation of its undergraduate and graduate accounting programs.

**Mission** The mission of the College reflects the traditional academic activities of teaching, research and service. Within the resource and strategic constraints placed on the College by the campus and the UM system, the College 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 College's faculty and staff.

### College of Business Administration Programs

#### Undergraduate Degrees

Bachelor of Science in Accounting

Bachelor of Science in Business Administration  
(with possible emphasis areas in)

Finance

International Business

Logistics and Operations Management

Management and Organizational Behavior

Marketing

Bachelor of Science in Management Information Systems

#### Undergraduate Minors

Accounting

Employee Training and Development (see Evening College)

Finance

General Business

International Business

Logistics and Operations Management

Management Information Systems

Management and Organizational Behavior

Marketing

#### Undergraduate Certificate

International Business Certificate (see International Studies)

#### Graduate Degrees

Master of Accounting

Auditing/Systems

Corporate Accounting

Public Sector Accounting

**Taxation****Master of Business Administration**

Accounting  
Finance  
Logistics and Supply Chain Management  
Management and Organizational Behavior  
Operations Management  
Marketing

**Master of Science in Management Information Systems****Ph.D. in Business Administration  
Information Systems****Graduate Certificates**

Graduate Certificate Program in Business Administration  
Graduate Certificate in Electronic Commerce  
Graduate Certificate in Human Resources Management  
Graduate Certificate in Information Resource Management  
Graduate Certificate in Information Systems Development  
Graduate Certificate in Marketing Management Graduate  
Certificate in Taxation  
Graduate Certificate in Telecommunications Management

**Undergraduate Programs**

Detailed information concerning all degree requirements can be found by visiting our web site, "Alphie" at [http://www.umsi.edu/divisions/business/undergrad\\_advising/](http://www.umsi.edu/divisions/business/undergrad_advising/).

**Lower Division Requirements--all degrees--all students**

Each student must complete a 42-hour block of general education coursework fulfilling six goals--three skill goals and three knowledge goals. The skill goals include two courses in communicating, one course in managing information and one course in valuing. The knowledge goals include three courses in the social sciences, three courses in the humanities, and four courses in the combined areas of mathematics and science. All courses must be selected from a list approved by the Faculty Senate of the campus. In many instances courses required by the College of Business Administration for each of its degree programs will satisfy a segment of the general education requirements. A list of courses which fulfill the humanities, social science, and math/science knowledge goals can be obtained in the Office of Undergraduate Academic Advising in the College of Business Administration, 487 Social Sciences and Business (SSB) building; or by visiting our web site.

**Lower Division Non-Business Course Requirements**

Students pursuing any undergraduate business degree must complete the following non-business courses:

English 10 (1100) Freshmen Composition (communicating skill goal)

One additional "communicating skills goal" course

Mathematics 30 (1030) College Algebra (math/science knowledge goal)

Mathematics 100 (1100) Basic Calculus (math/science knowledge goal)

Mathematics 105 (1105) Basic Probability and Statistics (math/science knowledge goal)

Economics 51 (1001) Principles of Microeconomics (valuing skill goal and social science knowledge goal)

Economics 52 (1002) Principles of Macroeconomics (social science knowledge goal)

A science lecture course (math/science knowledge goal)  
A cultural diversity course

A course required by the State of Missouri

Three humanities courses (humanities knowledge goal)

Two social science courses (in addition to those above)

**Lower Division Business Course Requirements**

Business Administration (BA)

103 (1800) Computers and Information Systems (managing information skill goal)

140 (2400) Fundamentals of Financial Accounting

145 (2410) Managerial Accounting

156 (2900) Legal Environment of Business

**Upper Division Requirements--all degrees--all students****Upper Division Non-Business Requirement**

English 212 (3120) Business Writing, with a minimum grade of C-

**Upper Division Non-Business or Business Requirement**

Two global awareness courses selected from an approved list maintained in the Office of Undergraduate Academic Advising in the College of Business Administration; a so available on our web site

**Upper Division Business Requirements**

Business Administration (BA)

204 (3500) Financial Management

206 (3700) Basic Marketing

210 (3600) Management and Organizational Behavior

250 (3300) Business Statistics

252 (3320) Introduction to Operations Management

391 (4219) Strategic Management

A minimum of 18 additional hours of upper division approved business electives

**Assessment--All degrees--all students**

The Academic Profile Test is administered to all entering freshmen and to all graduating seniors.

Business Administration 390 (4220), Business Assessment Testing, is administered to all graduating seniors. A "Satisfactory" grade is required for graduation.

#### General Degree Requirements—all degrees—all students

- Students must complete a minimum of 120 credit hours for any baccalaureate degree from the College of Business Administration
- Students must complete a minimum of 60 non-business hours
- Students must complete a minimum of 48 hours in business courses
- Students must complete a minimum of 36 hours of upper division business courses
- Students are limited to a maximum of 24 credit hours in any single business discipline beyond core courses
- Students are limited to a maximum of 78 credit hours in business and economics combined
- Students must attain a minimum campus grade point average of 2.0. Grade modification may be used in calculating this grade point average
- Students must attain a minimum business grade point average of 2.0. Grade modification may not be used in calculating this grade point average
- Students seeking an emphasis area or major within the Bachelor of Science in Business Administration degree, Bachelor of Science in Accounting degree, and/or Bachelor of Science in Management Information Systems degree must attain a minimum grade point average of 2.0 in the emphasis/major. Grade modification may not be used in calculating this grade point average
- A minimum grade of C- is required for each course in the business core (except BA 391); for each course which serves as a prerequisite for another course; and for each course in an emphasis area and/or major
- Of the maximum of 18 hours which may be taken on a satisfactory/unsatisfactory graded basis, only 9 hours can be in business, and those are restricted to electives—courses beyond the required business core courses
- Business course prerequisites are enforced by the College of Business Administration and include a minimum campus grade point average of 2.0 as a condition for taking any upper division business course
- Emphasis Areas may be added for up to two years following degree completion
- Each additional degree from the College of Business Administration requires 15 unique hours taken at UM-St. Louis subsequent to completion of the prior business degree

#### Transfer Issues

- Students must complete a minimum of 60 hours from four year, baccalaureate degree granting colleges/universities
- A minimum of 50% of all business course work must be completed at UM-St. Louis
- Students must complete a minimum of 21 graded hours in business courses
- Individuals must complete their last 30 hours in residence at UM-St. Louis
- A minimum of 56 graded hours at UM-St. Louis are required to qualify for consideration for Latin Honors
- Students seeking to use a lower division course to satisfy an upper division business requirement must validate the course being transferred. If successfully validated, the transfer course will waive the need to take the upper division equivalent course at UM-St. Louis, but the course transferred will be counted as lower division; it will not count toward the 36 upper division hours required in business
- Completion of a 42-hour general education block, which is certified by the sending institution as fulfilling its general education requirement, will be viewed as fulfilling UM-St. Louis' general education. However, all lower division courses required as part of a degree program at UM-St. Louis must be completed

#### Requirements Unique to Specific Degrees in the College of Business Administration

##### Bachelor of Science in Accounting Degree

**Mission** The Accounting Area provides a rigorous educational experience to individuals of diverse ethnic and academic backgrounds as a framework for life-long learning. Up-to-date curricula in bachelors and masters degree programs combine accounting principles and technology with a solid foundation in the social, organizational, and ethical responsibilities expected of an accounting professional in private practice, industry, and not-for-profit organizations. A faculty of full-time scholars provides high-quality teaching, basic and applied research, and service to the professional and academic communities.

##### Lower or Upper Division Non Accounting Courses Required

##### One of:

Communication 30(1030), Interpersonal Communication I  
or  
Communication 40(1040), Introduction to Public Speaking

**OR**

Business Administration 205(3100), Contemporary Business Communications

**and one of:**

Philosophy 30(1130), Approaches to Ethics

**or**

Philosophy 154(2254), Business Ethics

#### Upper Division Accounting Courses Required

##### Business Administration (BA)

340A (3401), Financial Accounting and Reporting I

340B (3402), Financial Accounting and Reporting II

345(3411), Cost Accounting

347(3441), Income Taxes

**and one of either**

344(3421), Accounting Information Systems and Spreadsheet Applications

**or**

215(3810), Information Systems Analysis

See the Office of Undergraduate Academic Advising for alternatives to satisfy the State of Missouri's requirement of 150 hours for eligibility to take the Uniform Certified Public Accounting Examination.

#### Bachelor of Science in Business Administration Degree

##### General Business

For those undecided regarding a specific emphasis area, a general business degree option is available. Students must complete a minimum of 18 hours of upper division approved business electives (see comprehensive list of business courses in the course descriptions section of this publication)

##### Emphasis in 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.

A minimum of 15 hours of upper division finance electives must be selected from the following

##### Business Administration (BA)

207(3525), Practicum in Investments

295B(3595), Business Administration Problems – Finance

296(3599), Independent Study (approved)

327(3590), Practicum in Finance

328(3564), Estate Planning and Trusts

332(3561), Principles of Insurance

333(3562), Life Insurance and Employee Benefits

334(3520), Investments

335(3521), Financial Risk Management

336(3502), Treasury Management

337(3542), Principles of Real Estate

338(3560), Practice of Personal Financial Planning

339(3563), Retirement Planning and Employee Benefits

350(3501), Financial Policies

351(3502), Computer Applications in Finance

352(3522), Security Analysis

355(3540), Financial Services Industry and Instruments

356(3541), Commercial Bank Management

380(3580), International Finance

395B(3598), Business Administration Seminar – Finance

#### Track Certification

Students may combine selected courses from the list above, and other specified upper division business electives, to fulfill a designated track with dual objectives of acquiring in depth knowledge, and to prepare and be eligible for various professional certification examinations. Detailed information is available in the Office of Undergraduate Academic Advising. The specific tracks available include

- Corporate Finance
- Financial Institutions and Services
- Investment and Portfolio Management
- Financial Planning
- Insurance

#### Emphasis in International Business

National markets are becoming increasingly integrated. The study of international business focuses on understanding the forces behind this globalization of markets and production.

The following courses are required of all individuals seeking an emphasis in International Business

##### Business Administration (BA)

314(3682), Managing the Global Workforce

316(3780), International Marketing

380(3580), International Finance

393(4689), International Strategic Management

Proficiency in a foreign language of international commerce (determined by the College of Business Administration) must be demonstrated—13 credit hours in one approved language or satisfactory performance on the UM-St. Louis foreign language proficiency examination

An international experience is encouraged for all parties in the program; such experience is required for those individuals seeking the International Business emphasis through the Pierre Laclède Honors College. (International students in the Honors College program are required to demonstrate a three-month, full-time work experience in the United States.)



**Emphasis in Logistics and Operations Management**

This discipline has as its objective to get the appropriate goods or services to the right place, at the right time, in the right quality and quantity—thereby making the greatest contribution to the organization.

Students must complete a minimum of 12 credit hours selected from the following, with no more than one course in programming

**Business Administration (BA)**

224(3806), Managerial Applications of Object-Oriented Programming I (programming)  
 295C(3395), Business Administration Problems—Logistics and Operations Management  
 296(3199), Independent Study (approved)  
 306(3843), Decision Support Systems  
 307(3844), End-User Computing for Business Applications (programming)  
 308A(4320), Production and Operations Management  
 308B(4330), Business Logistics Systems  
 308C(4322), Lean Production in Manufacturing and Service Operations  
 308D(4324), Service Operations Management  
 329(4312), Business Forecasting  
 330(4326), Quality Assurance in Business  
 331(4314), Multivariate Analysis  
 375(4350), Operations Research  
 385(4354), Operations Research II  
 395C (3398) Business Administration Seminar—Logistics and Operations Management  
 Computer Science (CS)  
 125(1250), Introduction to Computer Science (programming)

**Emphasis in Management and Organizational Behavior**

The study of management and organizational behavior focuses on the behavior of individuals and groups in an organizational setting.

Students must complete BA 311(3611), Advanced Management and Organizational Behavior, plus 3 courses selected from

**Business Administration (BA)**

280(3612), Professional Skills Development  
 295E(3695), Business Administration Problems—Management and Organizational Behavior  
 296(3199), Independent Study (approved)  
 309(3621), Human Resource Management  
 312(3622), Industrial and Labor Relations  
 314(3682), Managing the Global Workforce  
 317(3680), International Management  
 318(3623), Industrial and Organizational Psychology (same as Psychology 318[3318])  
 319(3624), Employee Training and Development

324(3684), The Japanese Management System  
 325(3685), Role of the Global Corporation  
 392(4614), Entrepreneurship/Small Business Management  
 395E(3698), Business Administration Seminar—Management and Organizational Behavior

**Emphasis in Marketing**

Marketing involves the activities needed to facilitate an exchange. This includes selling products, services, or ideas to both individual consumers and business buyers.

Students must complete 4 upper division electives from among

**Business Administration (BA)**

270(3720), Management of Promotion  
 275(3740), Marketing Research  
 295F(3795), Business Administration Problems—Marketing  
 296(3199), Independent Study (approved)  
 301(3710), Consumer Behavior  
 302(3741), Quantitative Marketing Methods  
 303(3760), Business-to-Business Marketing  
 315(3701), Marketing Management  
 316(3780), International Marketing  
 321(3721), Internet Marketing  
 322(3750), Sales Management  
 395F(3798), Business Administration Seminar—Marketing

**Bachelor of Science in Management Information Systems Degree**

**Mission** The Management Information Systems (MIS) area endeavors to prepare high-potential students of diverse backgrounds for successful careers in the MIS profession. Careers in MIS may include programming, systems analysis and design, database administration, end-user support, network administration, and management consulting. The goal is to provide students with the skills to deal with the challenges confronting the MIS profession and to contribute to their solutions. The faculty strives to further the practice and understanding of MIS through teaching, research, and service to the profession.

Students are required to complete a minimum of 7 courses beyond required business core courses

**Programming/File Structure—2 courses selected from track A or track B****Track A—Business Administration (BA)**

109(3805), COBOL Programming  
 209(3815), File Management

**Track B—Business Administration (BA)**

224(3806), Managerial Applications of Object-Oriented Programming I  
 225(3816), Managerial Applications of Object Oriented Programming II

Analysis and Design—2 courses—Business Administration (BA)

215(3810), Information Systems Analysis  
310(4850), Information Systems Design

Database—1 course—Business Administration (BA)  
212(3845), Database Management Systems

**Students must complete 2 courses (at least 1 300-level business [BA] course) from Business Administration (BA)**

109(3805), COBOL Programming—Track B students only

209(3815), File Management—Track B students only

224(3806), Managerial Applications of Object-Oriented Programming I—Track A students only

225(3816), Managerial Applications of Object-Oriented Programming II—Track A students only

295D(3895), Business Administration Problems—Management Information Systems

296(3199), Independent Study (approved)

304(3841), The Management of Information Systems

305(3842), Management of Telecommunications

306(3843), Decision Support Systems

307(3844), End-User Computing for Business Applications

344(3421), Accounting Information Systems and Spreadsheet Applications (but not with 351)

351(3502), Computer Applications in Finance (but not with 344)

395D(3898), Business Administration Seminar—Management Information Systems

Computer Science (CS)

240(2700), Computer Systems: Architecture and Organization

241(2710), Computer Systems: Programming

330(4300), Introduction to Artificial Intelligence

376(4760), Operating Systems

### Minors in Business Administration

#### General Requirements

- All minors are 15 credit hours or 5 courses, including business core courses
- Students must attain a 2.0 grade point average for all courses in the minor
- Students must attain a minimum grade of C- in each course included in the minor
- All courses in the minor must be on a graded basis
- A minimum of 9 credit hours of coursework included in the minor must be taken in residence at UM-St. Louis
- One must complete a baccalaureate degree at UM-St. Louis in order for a minor to be conferred
- A minor may be added for up to two years following completion of the baccalaureate degree

### Minor in General Business

This minor is available only to students seeking a baccalaureate degree outside the College of Business Administration

#### Five courses selected from Business Administration (BA)

103(1800), Computers and Information Systems

140(2400), Fundamentals of Financial Accounting

156(2900), Legal Environment of Business

204(3500), Financial Management

206(3700), Basic Marketing

210(3600), Management and Organizational Behavior

252(3320), Introduction to Operations Management

### Minor in Accounting

Available to all students except those pursuing the Bachelor of Science in Accounting degree. Students must complete

#### Business Administration (BA)

140(2400), Fundamentals of Financial Accounting

145(2410), Managerial Accounting

plus any three upper division accounting electives

### Minor in Employee Training and Development (see Evening College)

### Minor in Finance

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete

#### Business Administration (BA)

204(3500), Financial Management

plus any four upper division finance electives

### Minor in International Business

Available to all students except those pursuing the Bachelor of Science in Business Administration degree with an emphasis in International Business.

Students must complete any 5 courses in International Business.

### Minor in Logistics and Operations Management

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete

#### Business Administration (BA)

252(3320), Introduction to Operations Management

plus any four upper division logistics/operations management electives, including no more than one programming course selected from

Business Administration (BA)

224(3806), Managerial Applications of Object-Oriented Programming I  
 307(3844), End-User Computing for Business Applications  
 Computer Science (CS)  
 125(1250), Introduction to Computing

#### Minor in Management and Organizational Behavior

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete Business Administration (BA)  
 210(3600), Management and Organizational Behavior  
 311(3611), Advanced Management and Organizational Behavior  
 plus any 3 upper division management and organizational behavior electives

#### Minor in Management Information Systems

Available to all students except those pursuing the Bachelor of Science in Management Information Systems degree. Students must complete Business Administration (BA)  
 103(1800), Computers and Information Systems  
 One programming course selected from Business Administration (BA)  
 109(3805), COBOL Programming  
 224(3806), Managerial Applications of Object-Oriented Programming I  
 and 3 additional upper division information systems electives. At least one of these electives should be selected from Business Administration (BA)  
 212(3845), Database Management Systems  
 215(3810), Information Systems Analysis  
 or a 300-level course

#### Minor in Marketing

Available to all students except those pursuing the Bachelor of Science in Business Administration degree. Students must complete Business Administration (BA)  
 206(3700), Basic Marketing  
 plus any 4 additional upper division marketing electives

#### Graduate Studies

The College of Business Administration offers four graduate degrees: the Doctor of Philosophy in Business Administration (Ph.D.) the Master of Business Administration (MBA), the Master of Science in Management Information Systems (MS in MIS), and the Master of Accounting (MAcc). All programs carry the prestigious accreditation of the AACSB.

#### Admission Requirements

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

As in most AACSB-accredited graduate business programs, the UM-St. Louis College of Business generally requires Graduate Management Admissions Test (GMAT) scores. Information on the GMAT exam can be obtained from the Office of Graduate Business Studies, or on the Internet at [www.gmac.com](http://www.gmac.com). The examination tests one's ability to read, understand, and to reason logically with both verbal and quantitative material. The test is not a measure of achievement or business knowledge. Under certain conditions, the applicant may petition for waiver of the GMAT requirement, based on possession of an advanced degree and/or the ability to supply acceptable scores from an equivalent test.

#### Doctor of Philosophy in Business Administration (Ph.D.)

The Ph.D. program is a full-time program of study designed to prepare academic scholars who will excel in the national and international marketplace. This is the only doctoral business program with an Information Systems emphasis offered at a public university in the state of Missouri. Courses are taught by full-time, nationally known scholars who have been recognized as one of the most academically prolific IS faculties in America.

#### Master of Business Administration Program (MBA)

The MBA is available in two formats: the evening MBA program and the Internet-Based MBA program. Both are fully accredited by AACSB International – The Association to Advance Collegiate Schools of Business. for Management Education the premier accrediting body in collegiate business education. The MBA programs are designed to prepare students for administrative and professional positions. They also provide an appropriate foundation for students contemplating doctoral work and eventual careers in college teaching and research. The programs are designed for students who have bachelor's degrees from accredited institutions, including those with undergraduate backgrounds in the sciences, engineering, humanities, or arts. Graduate Business program information is available online at <http://mba.umsl.edu>.

#### The Evening MBA Program

The MBA curriculum provides training in the fundamental areas of business 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 legal, economic, social, and political issues.

- The internal operation of various business organizations and management's role in channeling human behavior to satisfy both personal and organizational goals.
- Basic concepts, terminology, and interaction of the accounting, marketing, finance, information technology and operations management disciplines.
- Quantitative management decision-making models put to use in the context of current management information systems.

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

#### **Degree Requirements**

Depending on the student's previous background, programs will range from 39 to 54 hours. Coursework must be completed within a six-year period. At least 30 hours of coursework must be taken while enrolled as an MBA candidate at UM-St. Louis.

Candidates must take at least one course at either the core level or from the business breadth requirements list in each of the following six areas: accounting, finance, management, marketing, information systems, and management science. Also, no more than 15 credit hours may be taken in any one of the six areas.

Students are also required to have completed the equivalent of Econ 301, Quantitative Methods and Modeling in Economics, Business, and the Social Sciences, by the end of their first 15 hours in the program.

#### **Required Courses**

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

#### **General Requirements – 18 hours**

Econ 301(3150), Quantitative Methods and Modeling in Economics, Business, and the Social Sciences  
 BA 405(5100), Managerial Communication  
 BA 408(5000), Economics for Managers  
 BA 412(5900), Law, Ethics, and Business  
 LOM 481(5300), Statistical Analysis of Management Decisions  
 BA 490(5219), Strategy Formulation and Implementation

#### **Core Requirements – 18 hours**

Accounting 440(5400), Financial and Managerial Accounting  
 Finance 450(6500), Financial Management  
 Management 460(5600), Organizational Behavior and Administrative Processes  
 Marketing 470(5700), Contemporary Marketing Concepts

IS 480(6500), Management Information Systems  
 LOM 483(5320), Production and Operations Management

#### **Business Breadth Requirements – 9 hours**

A student must take a second-level course in three of the following areas:

#### **Accounting:**

Accounting 442(5401), Financial Reporting and Analysis

**Finance:** Any approved graduate level course beyond Finance 450(6500)

**Management:** Any approved graduate level course beyond Management 460(5600)

**Marketing:** Any approved graduate level course beyond Marketing 470(5700)

**Information Systems:** Any approved graduate level course beyond IS 480(6800)

**Logistics and Operations Management:** Any approved graduate level course beyond LOM 483(5320)

#### **Electives**

The student must take a minimum of nine hours of elective courses. A maximum of six hours of electives may be taken at the 300 level. Graduate students may be required to complete additional work in these courses. Nine elective hours may be taken outside the College of Business Administration if the student has approval in advance from a graduate adviser for the specific courses desired.

#### **Emphasis Areas**

MBA students may obtain emphasis areas in Accounting, Finance, Management, Marketing or Operations Management. In addition to the requirements articulated above, the requirements for each emphasis area are shown below.

#### **Emphasis in Accounting**

MBA students seeking an Emphasis in Accounting must complete a minimum of 12 hours of graduate level Accounting electives beyond ACCT 440(5400) and including ACCT442 (5401). A maximum of 15 hours in any functional area will count toward degree requirements. (Ordinarily only courses that are not substantially the same as courses taken for credit in a student's undergraduate program would be acceptable.) The total number of elective courses required will depend on the number of hours to earn the MBA degree.

#### **Emphasis in Finance**

MBA students seeking an Emphasis in Finance must complete a minimum of 12 hours of Finance electives beyond Finance 450(6500). A maximum of 15 hours in any functional area will count toward the degree requirements. One Finance course may apply toward the Business Breadth requirement, and the remainder toward the Elective requirement. The total number of elective

courses required will depend on the number of hours waived. Students must complete at 39 credit hours to earn the MBA degree.

#### **Emphasis in Management**

MBA students seeking an Emphasis in Management may choose one of the tracks specified below. Regardless of the track chosen, one must complete a minimum of 12 hours of Management electives beyond MGMT 460(5600). A maximum of 15 hours in any functional area will count toward the degree requirements. The total number of elective courses required will depend on the number of hours waived. Students must take, at least 39 credit hours to earn the MBA degree.

#### **General Management Track**

Any 4 MGMT courses.

#### **Human Resource Management Track**

MGMT 461(5621), Managing Human Resources + 3 courses selected from MGMT 463(5624), 464(5623), 465(5622), 466(5625).

#### **Emphasis in Marketing**

MBA students seeking an Emphasis in Marketing must complete a minimum of 12 hours of Marketing electives beyond MKTG 470(5700), including MKTG 471(5701). A maximum of 15 hours in any functional area will count toward the degree requirements. The total number of elective courses required will depend on the number of hour waived. Students must complete at least 39 hours credit hours to earn the MBA degree.

MKTG 471(5701), Marketing Planning and Strategy + 3 additional MKTG courses

#### **Operations Management**

MBA students seeking an Emphasis in Operations Management must complete 9 hours from approved courses in addition to LOM 481(5300) and LOM 483(5320). Up to 3 hours may be transferred from another AACSB – accredited graduate program at the discretion of the Area Coordinator. A maximum of 15 hours in any functional area will count toward the degree requirements. The total number of elective hours required will depend on the number of hours waived. Students must complete at least 39 credit hours to earn the MBA degree.

The 9 credit hours (generally 3 courses) may be chosen from among:

LOM 408B(5330), Business Logistics Systems  
 LOM 408C(5322), Lean Production  
 LOM 408D(5331), International Logistics and Operations Management  
 LOM 408E(5332), Logistics and Supply Chain Modeling  
 LOM 430(5326), Quality Management  
 LOM 482(5350), Management Science Methods  
 LOM 486(5312), Advanced Statistical Methods for Management Decisions

LOM 487(6360), Advanced Logistics & Operations Management Applications

LOM 493(5354), Simulation for Managerial Decision Making

LOM 494(6354), Advanced Operations Research Topics  
 IS 497(6833), Decision Support Systems

MKT 408(5770), Supply Chain Management

BA 408F(5333), Topics in Logistics and Supply Chain Management

LOM 414(5301), Introduction to Geographic Information Systems

BA 420(5198), Seminar in Business Administration\*

BA 430(5299), Individual Research\*

\*Subject to approval of the Area Coordinator.

A student cannot receive an emphasis in both Operations Management and Logistics & Supply Chain Management for the same set of courses. An overlap of up to 3 credit hours out of the 9 hours required is allowed.

#### **Previous Education**

Based on a formal review and evaluation by the Office of Graduate Studies in Business, students may be granted waivers of certain courses from the general and core requirements. Waivers depend on the applicability of prior coursework and the student's performance in these courses. Regardless of the number of courses waived, all students must take at least 39 hours to earn the degree.

#### **Professional MBA On-Line Program**

A weekend-based Internet-enhanced version of the MBA program exists as an alternative to the traditional part-time evening program. This program is a 48 credit hour program for professionals with busy work or travel schedules. Students meet on campus monthly, with the remainder of the interaction between instructor and students taking place online. Students proceed through the program as part of a cohort group and complete the requirements for the degree in two years.

The first 30 hours of the Internet-based program consist of the same core courses required in the evening program (except for the mathematics and economics requirements, which are treated as prerequisites and must be satisfied prior to starting the program). The remaining 18 hours consist of the following courses:

Accounting 442(5401), Financial Reporting and Analysis  
 Finance 459(6590), Seminar in Finance

Management 469(5695), Seminar in Management

Marketing 474(5795), Seminar in Marketing

IS 424B(6891), Seminar in Management Information Systems

LOM 494B(6395), Seminar in Logistics and Operations Management

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

The Master of Science in MIS program is designed to provide the technical and managerial knowledge to operate successfully in careers associated with the design, development and management of computer-based information, telecommunications, and Internet applications. The program accommodates students with undergraduate degrees specializing in MIS, business, and computer science, as well as students with undergraduate degrees outside business. The program allows specialization in telecommunications, electronic commerce, or business systems development.

#### **MS in MIS Program Degree Requirements**

The program may require as few as 30 hours for students with undergraduate business degrees from AACSB-accredited institutions. Because of the need to attain general business core competencies as a foundation of the MS in MIS requirements, students with no academic business background will be required to take additional hours as outlined below.

#### **General Requirements**

All students must meet course requirements in quantitative reasoning, general business and MIS. Students must complete a minimum of 30 credit hours beyond the general business core. Of the 30 hours beyond the general business core, at least 15 credit hours in MIS must be completed at the graduate level, and at least 24 of the hours must cover topics beyond IS 480(6800) and IS 423A(6805). Students with a B.S.B.A. with an emphasis in MIS or a B.S. in MIS from an AACSB-accredited institution may, at the student's discretion, substitute two electives for IS 480(6800) and IS 423A(6805). Waivers may be granted for other courses with appropriate undergraduate course work.

#### **Quantitative Reasoning Requirement**

Students are required to have completed by the end of their first semester in the program the equivalent of Econ 301(3150), Quantitative Methods in Modeling in Economics, Business and the Social Sciences with a grade of C or better. Students are also required to complete the equivalent of LOM481(5300) Statistical Analysis for Management Decisions with a grade of C or better. These courses do not count towards the graduate degree, but waivers may be granted with appropriate undergraduate course work.

#### **General Business Core**

Students must have a B.S. in MIS, or a B.S.B.A. with an emphasis in MIS that requires a managerial communication course, and coursework equivalent to at least five of the following courses:

**BA 412(5900)**, Law, Ethics, and Business  
**ACCT 440(5400)**, Financial and Managerial Accounting  
**FIN 450(6500)**, Financial Management  
**MGMT 460(5600)**, Organizational Behavior and Administrative Processes

**MKTG 470(5700)**, Contemporary Marketing Concepts  
**LOM483(5320)**, Production and Operations Management  
**BA 490(5219)**, Strategy Formulation and Implementation

Students who have not met this prerequisite must complete BA 405(5100) Managerial Communication and course work from at least five of the courses listed above.

#### **Program Requirements**

**A. Basic MIS courses 9 credit hours**

**IS 480(6800)**, Management Information Systems  
**IS 423A(6805)**, Applications of Programming for Business Solutions  
**IS 485(6825)**, Management Information Systems: Theory and Practice.

**B. MIS Specialization Courses 15 credit hours**

See specializations following this overall description.

**C. MIS Electives 6 credit hours**

Students must take at least two of the following courses.

A course cannot count for credit as an elective if it is used as a specialization course (see Section B).

**LOM 414(5301)**, Introduction to Geographic Information Systems  
**IS423B(6806)**, Managerial Applications of Object-Oriented Technologies  
**IS 423C(6807)**, Business Programming and File Systems  
**IS 423D(6808)**, Internet Programming for Business  
**IS 424A(6892)**, Seminar in Current Management Information Systems Topics  
**IS 424C(6838)**, Business Process Design  
**IS 424D(6881)**, Management of Transnational Information Systems  
**IS 425(6831)**, Advanced MIS Applications  
**IS 426(6837)**, Management of Client/Server Computing  
**IS 488(6840)**, Information Systems Analysis  
**IS 489(6945)**, Database Management Systems  
**IS 491(6835)**, Electronic Commerce  
**IS 492(6832)**, Information Systems Strategy  
**LOM 493(5354)**, Simulation for Managerial Decision Making  
**IS 495(6850)**, Information Systems Design  
**IS 496(6836)**, Telecommunications: Design and Management  
**IS 497(6833)**, Decision Support Systems  
**IS 498(6834)**, Fourth Generation Languages and End User Computing  
**IS 499(6890)**, Management Information Systems Thesis: Research  
**CSC 377(4770)**, Operating Systems for Telecommunications  
**CSC 427(5780)**, Systems Administration

#### **MIS Specialization Options**

(These are the course requirements for Category B identified previously).

**1. Business Systems Development**

The following four courses are required:

**IS 488(6840)**, Information Systems Analysis  
**IS 489(6845)**, Database Management Systems  
**IS 495(6850)**, Information Systems Design  
**IS 496(6836)**, Telecommunications: Design and Management

Also required is one additional MIS course not being used for credit in Section C.

Students having earned a B.S.B.A. with an emphasis in MIS or a B.S. in MIS from an AACSB-accredited university may be granted waivers for IS 488 and IS 489 with appropriate course work. However, they must take IS 495 and additional electives of their choice to complete this option.

**2. Telecommunications**

The following five courses are required:

**IS 496(6836)**, Telecommunications: Design and Management  
**IS 423B(6806)**, Managerial Applications of Object-Oriented Technologies  
**IS 426(6837)**, Management of Client/Server Computing  
**CSC 377(4770)**, Operating Systems for Telecommunications  
**CSC 427(5780)**, Systems Administration

**3. Electronic Commerce**

The following five courses are required:

**IS 491(6835)**, Electronic Commerce  
**IS 423D(6808)**, Internet Programming for Business  
**IS 426(6837)**, Management of Client/Server Computing  
**IS 489(6845)**, Database Management Systems  
**IS 496(6836)**, Telecommunications: Design and Management

**4. General MIS**

Any five courses from the list under Category C (not being used for credit in Category C) are required.

**Master of Accounting Program (MAcc)**

The MAcc program prepares students to enter the accounting profession or to further 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 or auditing/systems. 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 graduate level. At least 9 credit hours of the student's 30 credit hour program must be in graduate 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 graduate level.

**Mathematics Background Requirement**

Students are required to have completed by the end of their first semester in the program the equivalent of Economics 301, Quantitative Methods and Modeling in Economics, Business, and the Social Sciences, with a grade of C or better. Graduate credit is not given for this course but it may be waived with appropriate undergraduate coursework.

**General Business Core**

Students must have credit for the equivalent of one 3-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 course work or may be waived with appropriate courses taken as an undergraduate.

**Professional Accounting Core**

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

**BA**

**340A(3401)**, Financial Accounting and Reporting I  
**340B(3402)**, Financial Accounting and Reporting II  
**344(3421)**, Computer Applications in Accounting  
**345(3411)**, Cost Accounting  
**Accounting 441(5411)**, Concepts in Management Accounting  
**BA Accounting 347(3441)**, Income Taxes  
**BA Accounting 348(4435)**, Auditing

**MAcc Degree Requirements (minimum: 30 credit hours)**

Accounting Courses (minimum: 15 credit hours, 12 credits at the graduate level)

**BA Accounting 341(4401)**, Financial Accounting & Reporting III\*  
**BA Accounting 342(4402)**, Financial Accounting & Reporting IV\*

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



**Accounting 421(5402), Professional Accounting Research  
Accounting 431(5441), Tax Research**

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

**Accounting 445(4503), Seminar in Financial Accounting Theory**

**Accounting 439(6441), Seminar in Taxation**

**Accounting 446(5435), Seminar in Auditing**

**Accounting Electives** to meet 15 credit-hour and graduate level requirements

**Non-Accounting Courses** (minimum: 9 credit hours at the graduate level)

**BA 405(5100), Managerial Communication\***

**BA 412(5900), Law, Ethics, and Business\***

**IS 480(6800), Management Information Systems\***

**LOM 481(5300), Statistical Analysis for Management Decisions\***

**LOM 483(5320), Production and Operations Management\***

Electives may be necessary to meet 9-credit-hour graduate level non-accounting requirements 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(5441), Tax Research, Accounting 439(6441), Seminar in Taxation, Accounting 433(5443), Taxation of Corporations and Shareholders, and at least two courses from the following list of electives:**

**Accounting 432(5442), Taxation of Estates, Gifts, and Trusts**

**Accounting 434(5444), Taxation of Partnerships and Partners**

**Accounting 435(5445), Tax Practice and Procedure**

**Accounting 436(5446), Advanced Topics in Taxation**

#### **Auditing/Systems Emphasis**

Students desiring an emphasis in Auditing/Systems must complete

**Accounting 421(5402), Professional Accounting Research, Accounting 446(5435), Seminar in Auditing,**

**Accounting 449(5436), Systems Auditing,**

**Accounting 447(5412), Accounting Systems for Management Planning and Control, and at least three courses from the following list of electives:**

**IS 480(6800), Management Information Systems**

**IS 423A(6805), Applications of Programming for Business Solutions**

**IS 488(6840);**

**Information Systems Analysis**

**IS 489(6845), Data Base Management Systems**

**IS 495(6850), Information System Design**

#### **Ph.D. in Business Administration (Information Systems Emphasis)**

##### **Admissions Requirements**

Admission decisions are made on the basis of past academic record, intellectual ability, GMAT or GRE score, and career commitment. Applications are accepted from students who have baccalaureate or graduate degrees. Past graduate work may be credited toward degree requirements where appropriate. Applicants must submit:

- Official academic transcripts.
- Official GMAT or GRE results in fields approved by the College of Business.
- Three letters of recommendation (at least two from individuals with earned doctorates).
- A statement of objectives for the course of study.

##### **Graduate Assistantships**

Stipends for research and teaching assistantships (nine month/20 hours per week) are awarded on a competitive basis. Out-of-state educational fees are waived for graduate assistants.

##### **Degree Requirements**

The Ph.D. in the College of Business Administration requires 75 course credit hours and a minimum of 6 dissertation credit hours beyond the baccalaureate degree. To ensure sufficient background for doctoral-level courses, students must demonstrate appropriate competence in quantitative reasoning, which is evidenced through completion of Econ 301(3150) and BA 408(5000) or their equivalent. Students must also demonstrate appropriate competence in managerial communication, which is evident through completion of BA 405(5100) or equivalent to be determined by the Ph.D. Coordinator.

##### **Course Requirements**

**I. Business & Research Foundation Requirement: 11 Courses (31 credit hours)**

Students are required to take:

**IS 480(6800), Management Information Systems**

**LOM 481(5300), Statistical Analysis for Management Decisions**

**BA 412(5900), Law, Ethics, and Business**

**ACCT 440(5400), Financial and Managerial Accounting**

**FIN 450(6500), Financial Management**

**MGMT 460(5600), Organizational Behavior**

**MKTG 470(5700), Contemporary Marketing Concepts**

**LOM 483(5320), Production and Operations Management**

**LOM 484(5310), Statistical Modeling**

**LOM 488(6840), Experimental and Survey Design and Analysis**

**BA 406(7020), Seminar in Business Administration Teaching (1 credit hour)**

The first eight courses 480(6800), 481(5300), 412(5900), 440(5400), 450(6500), 460(5600), 470(5700), 483(5320)

will normally be waived if students have an UMSL MBA, MS in IS, or MAcc degree, or equivalent course work.

### **II. Supporting Field Requirement: (9 credit hours)**

Students must take 9 credit hours of graduate level courses beyond foundation course work in a supporting field: Supporting fields may include areas of business such as Accounting, Finance, Management, Logistics & Operations Management, and Marketing. Students may select supporting fields from outside the College of Business Administration (such as Applied Mathematics, Computer Science, Political Science, Psychology, etc.) with approval of the Ph.D. Coordinator.

### **III. IS Requirement: 12 courses (35 credit hours)**

Students are required to take the following ten courses:  
 IS 423A(6505), Applications of Programming for Business Solutions  
 IS 485(6825), Management Information Systems: Theory and Practice  
 IS 488(6540), Information Systems Analysis  
 IS 489(6845), Database Management Systems  
 IS 496(6856), Telecommunications: Design and Management  
 BA 407(7021), Philosophical Foundations of Business Administration Research (2 credit hours)  
 IS 490A(4890), IS research seminar  
 IS 490B(7891), Quantitative research methods in MIS  
 IS 490C(7892), Qualitative research methods in MIS  
 IS 490D(7893), Special Topics in MIS

Students are required to take two of the following courses:  
 LOM 414(5301), Introduction to Geographic Information Systems  
 IS 423B(6806), Managerial Applications of Object-Oriented Technologies  
 IS 423C(6807), Business Programming and File Systems  
 IS 423D(6808), Internet Programming for Business  
 IS 424A(6892), Seminar in Current Management Information Systems Topics  
 IS 424C(6838), Business Process Design  
 IS 424D(6808), Management of Transnational Information Systems  
 IS 425(6831), Advanced MIS Applications  
 IS 426(6837), Management of Client/Server Computing  
 IS 491(6835), Electronic Commerce  
 IS 492(6832), Information Systems Strategy  
 IS 495(6850), Information Systems Design  
 IS 497(6833), Decision Support Systems  
 IS 498(6833), Fourth Generation Languages and End-User Computing

#### **Other Requirements:**

Upon completion of coursework, students are advanced to candidacy by successfully completing a comprehensive examination in the field of MIS and a supporting field examination in the student's chosen area.

Students admitted to the program with a relevant Masters degree should pass the comprehensive examination and the supporting field examination within three years of admission to the Ph.D. program. Students admitted to the program with an undergraduate business degree should pass the comprehensive examination and the supporting field examination within four years of admission to the Ph.D. program. Students admitted to the program with an undergraduate degree outside of business should pass the comprehensive examination and the supporting field examination within five years of admission to the Ph.D. program. In these cases, prior coursework will be evaluated for equivalency to Section I course requirements.

Students are required to defend a dissertation proposal within one year of advancement to candidacy.

Students are required to present one paper at a regional, national, or international conference.

Students are required to submit one paper, approved by his/her dissertation advisor, to a refereed journal.

At least two semesters of supervised teaching in the College of Business Administration are required of all doctoral students.

Students must satisfy all Graduate School requirements.

The degree is awarded upon successful completion and defense of the Ph.D. dissertation. The dissertation must be defended within three years of approval of a Ph.D. dissertation proposal.

### **Graduate Certificate Programs in Business Studies**

The College of Business Administration offers eight 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 an intensive course of study in a specialized business topic without requiring completion of a full graduate business degree program. Certificate programs provide students with the opportunity to obtain the advanced knowledge available through a graduate course of study in relatively brief period.

In order to successfully complete a certificate program, students must earn a 3.0 cumulative GPA in certificate classes. Unless otherwise specified, the coursework 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 Program in Business Administration

This is an 18-hour program designed to accommodate individuals with an undergraduate/graduate degree in a non-business field seeking core business knowledge. The program emphasizes coursework designed to cover the major disciplines within the field of business. Upon completion the student will have knowledge of common business theories, practices, and procedures.

To earn the certificate, students must complete six courses as prescribed below. All course prerequisites and all course waivers are applicable. Substitute courses may be approved by the appropriate Area Coordinator and the Director of Graduate Studies in Business. In all cases, 18 hours are needed to complete the graduate certificate.

#### Program Requirements: (5 courses)

ACCT 440(5400), Financial and Managerial Accounting  
 MGMT 460(5600), Organizational Behavior and Administrative Processes  
 MKT 470(5700), Contemporary Marketing Concepts  
 IS 480(6800), Management Information Systems

One of the following:

FIN 450(6500), Financial Management  
 LOM 483(5230), Production and Operations Management

#### Elective Course (1 course):

BA 405(5100), Managerial Communication  
 BA 412(5900), Law, Ethics and Business  
 \*FIN 450(6500), Financial Management  
 \*LOM 483(5230), Production and Operations Management

\*Cannot be used as an elective if used as a program requirement.

### Graduate Certificate in Electronic Commerce

New communication technologies are changing the way organizations work with one another, the way consumers purchase products, and even the types of organizations that exist. Technology is changing the fundamental processes and structures of business. This certificate will introduce students to the interaction of existing processes and structures, and the introduction of new technologies to develop models of business activity in technology intensive environments.

Students must complete 18 hours as specified below.  
 IS 480(6800), Management Information Systems  
 IS 423A(6805), Applications of Programming for Business Solutions  
 IS 423D(6808), Internet Programming for Business  
 IS 491(6835), Electronic Commerce

IS 496(6836), Telecommunications: Design and Management

IS 426(6837), Management of Client/Server Computing

Students may opportunity to take additional electives should they desire to do so.

All course prerequisites and waivers are applicable. Substitute courses must be approved by the IS Area Coordinator and the Director of Graduate Studies in Business. In all cases, 18 hours are needed to complete the certificate. Students should complete the certificate with 3 years from the time they first enroll in the program.

### 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 formal and informal aspects of human resources management.

#### Requirements

Students must complete the following six courses or appropriate substitutes if course waivers are appropriate:  
 Management 460(5600), Organizational Behavior and Administrative Processes  
 Management 461(5621), Managing Human Resources  
 Management 464(5623), Compensation and Benefits  
 Management 465(5222), Union-Management Relations and Collective Bargaining  
 Management 466(5225), Personnel Administration: Theory and Practice  
 LOM 481(5300), Statistical Analysis for Management Decisions

Management 460(5600), Management 461(5621) and LOM 481(5300) 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 Coordinator of the Management area and the Director of Graduate Studies in Business) will be provided. Substitute courses may include Management 462(5611), Advanced Organizational Behavior and Administrative Processes, or a course from outside the College of Business Administration. In all cases, 18 hours are needed to complete the Graduate Certificate in Human Resources Management.

### Graduate Certificate in Information Resource Management

Management of information as a resource will be the key to success in the 21st century. To manage this resource, efficient and effective methods for collection, maintenance and use of data must be established. This certificate exposes students to the managerial and technological issues in the planning of effective transaction processing and decision support systems. Students must complete 18

hours as specified below. In addition, if they have not had the equivalent of IS 480(6800) they must complete that course.

**Programming Requirement:** Students must complete one of the courses listed below:

IS 423A(6805), Applications of Programming for Business Solutions  
 IS 423B(6806), Managerial Applications of Object-Oriented Technologies  
 IS 423C(6807), Business Programming and File Systems  
 IS 423D(6808), Internet Programming for Business  
 IS 498(6834), Fourth Generation Languages and End User Computing

**Core Courses:** Students must complete each of the three courses listed below:

IS 485(6825), Management Information Systems: Theory and Practice  
 IS 488(6840), Information Systems Analysis  
 IS 489(6845), Database Management Systems

**Elective Courses:** Students must complete two courses from the following list. Students may take at most one additional programming course (marked with \*), and may not use any course as an elective already used to meet the Programming Requirement.

IS 423A(6805), Applications of Programming for Business Solutions\*  
 IS 423B(6806), Managerial Applications of Object-Oriented Technologies\*  
 IS 423C(6807), Business Programming and File Systems\*  
 IS 423D(6808), Internet Programming for Business\*  
 IS 424C(6838), Business Process Design  
 IS 492(6832), Information Systems Management  
 IS 496(6836), Telecommunications: Design and Management  
 IS 497(6833), Decision Support Systems  
 IS 498(6834), Fourth Generation Languages and End User Computing\*

Students will have the opportunity to take additional electives should they desire to do so.

All course prerequisites and all course waivers are applicable. Substitute courses must be approved by the IS Area Coordinator and the Director of Graduate Studies in Business. In all cases, 18 hours are needed to complete the Graduate Certificate in Information Resource Management. Students should complete the certificate within three years from the time they first enroll in the program.

#### **Graduate Certificate in Information Systems Development**

The certificate is an 18-hour program designed to provide a focus on the creation and modification of information

systems for business. Topics related to systems development such, as programming and database design are included in the course of study.

#### **Requirements**

Students must complete six courses as specified below (or appropriate substitutes if course waivers are approved):

IS 480(6800), Management Information Systems  
 IS 423A(6805), Applications of Programming for Business Solutions  
 IS 485(6825), Management Information Systems: Theory and Practice  
 IS 488(6840), Information Systems Analysis  
 IS 489(6845), Database Management Systems  
 IS 495(6850), Information Systems Design

Students may take additional electives should they desire to do so.

All course prerequisites and all course waivers are applicable. Substitute courses must be approved by the IS Area Coordinator and the Director of Graduate Studies in Business. In all cases, 18 hours are needed to complete the certificate. Students should complete the certificate within 3 years from the time they first enroll in the program.

#### **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 an interest in sales, brand management, promotion, and consumer behavior.

#### **Requirements**

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

Marketing 470(5700), Contemporary Marketing Concepts  
 Marketing 475(5710), Consumer Motivation and Behavior  
 Marketing 478(5740), Marketing and Business Research

#### **Marketing Management:**

Marketing 471(5701), Marketing Planning and Strategy  
 Marketing 476(5720), Marketing Communications  
 Marketing 477(5730), Product Planning and Pricing

All course prerequisites and all course waivers are applicable. The Marketing Area Coordinator and the Director of Graduate Studies in Business must approve substitute courses. In all cases, 18 hours (including at least 12 hours in Marketing) are needed to complete the certificate.

**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 and 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 a previously completed tax course combined with recent tax experience.

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

**Required Courses**

**Accounting 431(5441)**, Tax Research  
**Accounting 433(5443)**, Taxation of Corporations and Shareholders  
**Accounting 435(5445)**, Tax Practice and Procedure

**Three Additional Courses From:**

**Accounting 432(5442)**, Taxation of Estates, Gifts, and Trusts  
**Accounting 434(5444)**, Taxation of Partnerships and Partners  
**Accounting 436(5446)**, Advanced Topics in Taxation  
**BA 405(5100)**, Managerial Communication or  
**BA 412(5900)**, Law, Ethics and Business

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

**Graduate Certificate in Telecommunications Management**

Managing communications systems is a challenging and demanding job. The telecommunications manager must balance the interests of business, technical, regulatory, and applications aspects of connectivity, as well as maintain network security. The challenge has intensified with the recent exponential growth in the Internet, which has revolutionized the way in which individuals and organizations conduct business.

This certificate focuses on the management of telecommunications systems for business. It includes courses from both MIS and computer science to provide the necessary technical and managerial perspectives. Student must complete six courses as indicated below.

**IS 480(6800)**, Management Information Systems  
**IS 496(6836)**, Telecommunications: Design and Management

**IS 423B(6806)**, Managerial Applications of Object-Oriented Technologies

**IS 426(6837)**, Management of Client/Server Computing  
**Computer Science**

**CSC 377(4770)**, Operating Systems for Telecommunications

**CSC 427(5780)**, Systems Administration

**Graduate Certificate in Telecommunications Science**

Telecommunications science deals with the design, management, and administration of computer networks. The telecommunications specialist deals with issues such as system feasibility, cost optimization, system administration, and information security, while working within the framework of different regulatory agencies. The exponential growth of the Internet and the projected growth in electronic commerce have increased the need for trained professionals in telecommunications science.

Students will study telecommunications science from a technical perspective in four courses offered in the Department of Mathematics and Computer Science. In addition, they will study the regulatory and management aspects in two courses in the College of Business.

**CSC 372**, Object Oriented Analysis and Design

**CSC 377(4770)**, Operating Systems for Telecommunications

**CSC 473(5730)**, Client/Server Computing

**CSC 427(5780)**, Systems Administration

**IS 480(6800)**, Management Information Systems

**IS 496(6836)**, Telecommunications: Design and Management

## 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 Accounting, Business Administration, Finance, Information Systems, Logistics and Operations Management, Management and Marketing

The College of Business Administration uses the University course numbering system 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.

The number in parentheses is the proposed course number scheduled for implementation in the summer of 2003.

A minimum grade of C- shall be required to meet the prerequisite requirement for any course. Prerequisites may be waived only by consent of both the instructor and the area coordinator. A minimum campus GPA of 2.0 is required for admittance to each 200- and 300-level Business Administration course.

### Business Administration (BA)

**93(1590) Personal Finance for Nonbusiness Majors (3)**  
For future professionals who want to learn more about personal finance and how to better manage their resources. The topics include purchasing/leasing cars, home acquisitions, investing in stocks and bonds, mutual funds, retirement planning and health and life insurance. Special emphasis will be on the nontechnical aspects of these issues. Cannot be used for credit in BSBA program.

**95(1000) 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(1800) Computers and Information Systems (3)**  
[MI]

This course covers the basic concepts of networked computers including the basics of file management on local and remote computers, electronic mail, Internet browsers, and web page development. Students are also exposed to applications used in business for solving problems, communicating, and making informed decisions, including word processors, presentations software, and electronic spreadsheets. Students will also develop business applications using a popular programming language or database management tool.

Credit cannot be granted for both CS 101(1010) and BA 103(1800).

**104(1804) FORTRAN Programming (3)**  
Prerequisite: 103(1800). A study of the principles of programming digital computers using the FORTRAN language. Credit will not be granted for both 104(1804) and Computer Science 122(1220).

**109(3805) COBOL Programming (3)**  
Prerequisite: BA103(1800) or Computer Science 125(1250). Structured COBOL programming techniques for business applications are presented. Included are report generation, control breaks, output editing, debugging, tables, and sort concepts.

**140(2400) Fundamentals of Financial Accounting (3)**  
Prerequisites: Math 30(1030) and completion of 27 credit hours (Math 30(1030) may be taken concurrently). This is a one-semester course in financial accounting theory and practice. The primary emphasis is on the corporate financial statements of income, financial position and cash flow—their content and interpretation; and the impact of financial transactions upon them.

**145(2410) Managerial Accounting (3)**  
Prerequisites: Math 30(1030) and BA140(2400). 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(2900) Legal Environment of Business (3)**  
Prerequisites: Econ 51(1001) and BA140(2400). 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(2000) Topics in Business Administration (1-3)**  
Prerequisites: Vary with topic; contact the College of Business Administration. Study of selected special problems in business and administration. May be repeated for credit with different topics.

**204(3500) Financial Management (3)**

Prerequisites: Econ 52(1002), Math105(1105), and BA140(2400), and a 2.0 campus GPA. The study of a firm's need for funds; the institutions, instruments, and markets concerned with raising funds; and the techniques of analysis used to determine how effectively these funds, once raised, are invested within the firm.

**205(3100) Contemporary Business Communication (3)**

Prerequisites: English 10(1100) or equivalent and a minimum campus GPA of 2.0. (Comm 40(1040) 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(3700) Basic Marketing (3)**

Prerequisites: Econ 51(1001), junior standing, and a 2.0 campus GPA. An examination of the character and importance of the marketing process, its essential functions, and the institutions performing them. Attention is focused on the major policies (such as distribution, product, price, and promotion), which underlie the multifarious activities of marketing institutions and the managerial, economic, and societal implications of such policies.

**207(3525) Practicum In Investments (1)**

Prerequisite: BA 204(3500) and a 2.0 campus GPA. Students will apply their knowledge of stocks and bonds by managing a real dollar portfolio of securities. This course requires that students perform technical and fundamental analysis, prepare research reports, present proposals and participate in group investment decisions. The University's Student Investment Trust provides the money for students to invest. Course may be repeated for credit up to a maximum of 3 credit hours.

**209(3815) File Management (3)**

Prerequisite: BA 109(3805) and a 2.0 campus GPA. The course covers job control language, utilities, partitioned data sets, updating of sequential files, indexed files, and 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(3600) Management and Organizational Behavior (3)**

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

**212(3845) Database Management Systems (3)**

Prerequisites: BA 209(3815) or 225(3816) and a minimum campus GPA of 2.0. This course provides an introduction to the design and use of databases in meeting business information needs. Topics include database planning, conceptual design, and data administration. The concepts are studied with projects involving the use of a current database management system.

**215(3810) Information Systems Analysis (3)**

Prerequisites: BA 109(3805), or 224(3806), and a minimum campus GPA of 2.0. Techniques and philosophies of systems analysis are addressed. Included are: traditional versus structured design methods, computer-based tools for systems analysis, workbenches, design and analysis of database systems, maintenance of existing information systems, human/machine interfaces, and security and control.

**224(3806) Managerial Applications Of Object-Oriented Programming I (3)**

Prerequisites: (BA 103(1800) or Computer Science 122(1220) or 125(1250) and a 2.0 campus GPA. The course provides a study of the UNIX operating system and the C++ programming language as they pertain to managerial applications. In addition, the course will introduce the use of object-oriented programming methodologies.

**225(3816) Managerial Applications of Object-Oriented Programming II (3)**

Prerequisites: BA 224(3806) and a minimum campus GPA of 2.0. This course expands object-oriented skills taught in BA 224(3806). The emphasis in this course is on object-oriented development tools and development in a client-server environment. The data management tools will include the use of SQL to access server-based databases

**250(3300) Business Statistics (3)**

Prerequisites: Math 100(1100) and 105(1105), BA 103(1800) and a 2.0 campus GPA. Construction and use of statistical models for business management. Students will learn techniques used for relational analysis and business forecasting and how to apply them in a business context. Tools include CHI-Square tests of statistical independence; analysis of variance; simple linear regression and correlation; multiple linear regression; and extrapolative techniques such as moving averages and exponential smoothing. Emphasis is placed on problem definition, construction of statistical models, analysis of data, and interpretation of results. Computers are used for extensive analyses of case data.

**252(3320) Introduction to Operations Management (3)**

Prerequisites: A 2.0 campus GPA and either (Econ 51(1001), BA 145(2410), and BA 250(3300) or (Math 180(2000)) and Statistics 132(1320). An examination of the concepts, processes, and institutions, which are fundamental to an understanding of manufacturing and service operations within organizations. Emphasis is on the



management and organization of operations and upon the application of quantitative methods to the solution of strategic, tactical and operational problems.

**256(3900) Business Law: Contracts, Sales, Secured Transactions, Bankruptcy (3)**

Prerequisites: BA 140(2400), Econ 51(1001), and a 2.0 campus GPA, or junior standing and a 2.0 campus GPA. Introduction to the laws of contracts, sales, secured transactions, bankruptcy, and other selected topics.

**257(3901) Business Law: Negotiable Instruments, Business Organizations, Property (3)**

Prerequisites: BA 140(2400), Econ 51(1001), and a 2.0 campus GPA, or junior standing and a 2.0 campus GPA. Introduction to the laws of negotiable instruments, the principal-agent relationship, partnerships, corporations, property, and other selected topics.

**270(3720) Management of Promotion (3)**

Prerequisite: BA 206(3700) and a 2.0 campus GPA. A study of the design, organization, and implementation of the marketing communications mix. Various methods, such as advertising, personal selling, and publicity are analyzed as alternatives for use alone, or in combination, to stimulate demand, reseller support, and buyer preference. Particular topics considered include: media selection, sales promotional, packaging, and selling strategy, and their relationships in the promotion process.

**275(3740) Marketing Research (3)**

Prerequisites: BA 103(1800), 206(3700), 250(3300) and a 2.0 campus GPA. An investigation of the acquisition, presentation, and application of marketing information for management. Particular problems considered are defining information requirements, evaluating research findings, and utilizing information. Statistical methods, models, and/or cases are employed to illustrate approaches to marketing intelligence problems, such as sales forecasts, market delineation, buyer motives, store location, and performance of marketing functions.

**280(3612) Professional Skills Development (3)**

Prerequisites: A minimum campus GPA of 2.0 and Junior Standing. This course focuses on career management. Topics include job search, interviews, resumes and cover letters, presentation skills, business etiquette, entry strategies, and career alternative.

**289(3200) Career Planning (1)**

Prerequisite: A minimum of junior standing and a 2.0 campus GPA. The emphasis of this course will be to assist business students to develop an understanding of themselves as related to employment, to develop an understanding of the world of work, and to integrate these so that effective career decisions can be made.

**295(3195) Business Administration Problems (1-10)**

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

**296(3199) Independent Study (1-3)**

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

**301(3710) Consumer Behavior (3)**

Prerequisites: BA206(3700) and a minimum campus GPA of 2.0. A study of such consumer functions as decision making, attitude formation and change, cognition, perception, and learning. The marketing concepts of product positioning, segmentation, brand loyalty, shopping preference and diffusion of innovations are considered in context with the environmental, ethical, multicultural and social influences on an increasingly diverse American consumer.

**302(3741) Quantitative Marketing Methods (3)**

Prerequisites: BA 103(1800), 206(3700), 250(3300) and a 2.0 campus GPA. Applications of stochastic, deterministic, and simulation techniques to decision areas, such as market potential, product diversification, physical distribution alternatives, retail location, media selection, and market exposure. Quantitative and computerized methods are used heavily to enhance decision making in marketing, especially the selection, allocation, budgeting, and forecasting of marketing resources.

**303(3760) Business-to-Business Marketing (3)**

Prerequisites: Senior Standing, Math 105(1105), BA 206(3700) and a 2.0 campus GPA. A study of the nature of the business-to-business(organizational) marketplace concentrating on those aspects that differentiate it from consumer markets. The major focus of the course is marketing strategy, starting with analysis of the market wants and segments, concepts of pricing, the distribution arrangements, and buyer/seller relations. In this last area, consideration will be given to service, personal selling, sales promotion, and advertising, as found in the organizational marketplace. At all times emphasis is given to relating business-to-business marketing strategy to basic concepts in underlying business disciplines. Lectures and case discussions are used heavily in the course.

**304(3841) The Management of Information Systems (3)**  
Prerequisites: [BA109(3805) or 224(3806)] and a minimum campus GPA of 2.0. Aspects and methods for managing the computer and information resources of organizations. Topics include aligning IS plans with corporate plans, MIS organizational structures, demonstrating the value of MIS to senior management, facility management, purchase decisions, software acquisition, software metrics, project management, security issues, and economic evaluation, as they relate to information resources.

**305(3842) Management of Telecommunications (3)**  
Prerequisite: BA103(1800) and a 2.0 campus GPA. The technical and managerial aspects of telecommunications as they apply to the business environment are discussed. Issues include: communications components and services, local area network architecture, managerial implementations, organizational issues, and cost/benefit analyses.

**306(3843) Decision Support Systems (3)**  
Prerequisites: BA252(3320) and a minimum campus GPA of 2.0. Applications of decision support systems and expert systems in a business environment are studied. Relationships between decision support systems, expert systems, and database management systems are explored.

**307(3844) End-User Computing for Business Applications (3)**  
Prerequisite: BA109(3805) or BA224(3806) and a minimum campus GPA of 2.0. Methods for end user development of applications in a business environment are presented. An end-user programming language (for example, Visual Basic) is used for development of prototypical applications. Case studies and/or programming problems are used to illustrate technology available to end-users for creating software in a windows-based system.

**308A(4320) Production and Operations Management (3)**  
Prerequisites: A minimum campus GPA of 2.0 and either [BA 252(3320) and Math 100(1100)] or [Math 255(3000) and Statistics 132(1320)]. 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(4330) Business Logistics Systems (3)**  
Prerequisites: A minimum campus GPA of 2.0 and either [BA252(3320) and Math 100(1100)] or [Math 255(3000) and Statistics 132(1320)]. Analysis of business logistics systems, their design and operation. Topics include network design, facility location, transportation, vehicle routing, storage and handling, capacity planning, inventory management, and customer service.

**308C(4322) Lean Production in Manufacturing and Service Operations (3)**  
Prerequisites: A minimum campus GPA of 2.0 and either [BA 252(3320) and Math 100(1100)] or [Math 255(3000) and Statistics 132(1320)]. Study of Lean Production philosophy and techniques in manufacturing and service operations. Topics include process analysis and continuous improvement techniques, quick set-ups, total productive maintenance, kanban scheduling, cellular production, team organization of workers, supplier relations, quality management, and the environmental aspects of production.

**308D(4324) Service Operations Management (3)**  
Prerequisites: A minimum of 2.0 campus GPA and either [BA 252(3320) and Math 100(1100)] or [Math 255(3000) and Statistics 132(1320)]. An examination of methods for designing and operating service delivery systems, such as in the health care, financial, transportation, hospitality, and governmental service industries. Topics include process and facility design, facility layout and location, queuing, demand forecasting and management, service quality, staffing, and personnel scheduling.

**309(3621) Human Resource Management (3)**  
Prerequisites: Math 105(1105) BA 210 (3600) and a 2.0 campus GPA. In-depth examination of selected human resources 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(4850) Information Systems Design (3)**  
Prerequisites: BA 212(3845), 215(3810), one of either 209(3815) or 225(3816) and a minimum campus GPA of 2.0. System design, implementation, and methods of systems installation and operation are presented. A system development project is required.

**311(3611) Advanced Management and Organizational Behavior (3)**  
Prerequisite: BA 210(3600) and a 2.0 campus GPA. Building upon 210(3600), 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(3622) Industrial and Labor Relations (3)**  
Prerequisite: BA 210(3600) and a 2.0 campus GPA. Emphasis is on the dynamic relationship between management, employees, unions, and government as determinants in the efficient and effective use of human resources. Current issues and case materials are used to supplement text and lecture.

**314(3682) Managing the Global Workforce (3)**

Prerequisites: A minimum 2.0 campus GPA. In addition, BA 210(3600) and at least one of the following: BA311(3611) or BA309(3621) or enrollment in Honors College. A study of the international dimensions of organizational behavior and human resource management. The course provides an overview of the tools and skills that are necessary to understand and manage people in global organizations. Topics include motivation, leadership, communication, hiring, training, and compensation. Credit not granted for students who have taken BA 317(3680).

**315(3701) Marketing Management (3)**

Prerequisites: Math 105(1105), BA 206(3700), one other three hour marketing course, senior standing and a 2.0 campus GPA. An intensive analysis of major marketing decisions facing the firm, such as level, mix, allocation, and strategy of marketing efforts. Specific decision areas investigated include market determination, pricing physical distribution, product policy, promotion, channel management, and buyer behavior. Competitive, political, legal, and social factors that may affect such areas of decisions are discussed. Cases, models, and problems are used heavily.

**316(3780) International Marketing (3)**

Prerequisite: BA 206(3700) and a 2.0 campus GPA. Marketing management problems, techniques and strategies needed to apply the marketing concept to the world marketplace. Understanding a country's cultural and environmental impact on the marketing plan is emphasized, as well as competing in markets of various cultures. Worldwide consumerism, economic and social development, the spread of multinational corporations, business ethics, and current economic and marketing issues are examined.

**317(3680) International Management (3)**

Prerequisites: A minimum 2.0 campus GPA. In addition, Econ 52(1002) and BA 210(3600); or consent of the area coordinator and the instructor. A study of international business and 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. Credit not granted for students who have taken BA 314(3682) or BA 393(4689).

**318(3623) Industrial and Organizational Psychology (3)**

[Same as Psych 318(3318)] Prerequisites: Psych 201(2201) or Math 105(1105), BA 210(3600). 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(3624) Employee Training and Development (3)**

Prerequisite: A minimum 2.0 campus GPA. In addition, BA 210(3600) 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.

**321(3721) Internet Marketing (3)**

Prerequisites: BA 206(3700) and a minimum campus GPA of 2.0. This course will offer an opportunity to explore the impact of the Internet and information technology on the practice of marketing. The Internet and information technologies have revolutionized the way companies create and maintain exchange relationships between themselves and their customers. Companies, both big and small, are in the process of using the Internet to maximize the scope, effectiveness and efficiency of their existing marketing programs. This course is designed to impart students with an understanding of the range of issues involved in planning and implementing effective marketing and information communication strategies for commercial or not-for-profit organizations. The course's emphasis will not be on actual design of a web site per se, even though the merits and demerits of different layout types will be discussed. Some of the topics covered include, among others, strategic planning and its tactical implementation in electronic marketing, target market analysis and identification, the Internet's marketing capabilities and limitations, management of customer and supplier relations concerns about privacy and ethics, and understanding how the new technology has had an impact on the field of Marketing.

**322(3750) Sales Management (3)**

Prerequisites: BA 206(3700) and BA 210(3600); (BA 210(3600) may be taken concurrently). Also a minimum campus GPA of 2.0. The aim of this course is to provide an understanding of how selling is critical to the success of marketing. The course will promote critical thinking skills as well as practical selling skills needed in a competitive marketplace. Course topics include, among others, selling principles and techniques, understanding of the tasks and roles of the sales manager, the management of sales professionals within an organization, developing and applying effective persuasive communications, creating a vision, developing and implementing a sales-team strategy, structuring sales-force, designing and assigning territories, recruiting, training, motivation and evaluating salespeople, methods of compensation, and forecasting sales. The emphasis will be on ways the sales-force can be molded to build long-lasting relationships with customers through the systematic analysis and solution of customers' problems.

**324(3684) The Japanese Management System (3)**

Prerequisites: BA 210(3600) and a 2.0 minimum campus GPA. This course provides an introduction to various aspects of the contemporary Japanese business system. The emphasis is on interpretation of issues from a managerial perspective. Topics include an overview of Japan's economic growth, government policies, industrial and financial structure of Japanese business, labor-management relations, internal management practices, international competitive strategies, managing U.S. subsidiaries in Japan, penetrating the Japanese market, Japanese investment in the U.S.A., and current issues in U.S. -Japan economic relations.

**325(3685) Role of the Global Corporation (3)**

Prerequisites: A minimum campus GPA of 2.0 and BA 210(3600) or permission of the instructor. The purpose of this course is to create awareness of controversial issues about international business. Students will gain a better understanding of resistance to and criticism of international business and will become better prepared for dealing with these issues and problems.

**326(3581) Business in China (3)**

Prerequisites: A minimum campus GPA of 2.0 and junior standing. Introduces students to the practices of doing business in China. Students will be introduced to the Chinese economic and business environment. Issues related to trade and foreign direct investment in China will be discussed. The course adopts an innovative approach; utilizing lectures, case analysis, projects, and student presentations.

**327(3590) Practicum in Finance (1-3)**

Prerequisites: A minimum campus GPA of 2.0; one must have completed and/or be currently enrolled in at least 6 credit hours of finance electives and have consent of supervising instructor and Area Coordinator. A Business College GPA of at least 2.5 is also required. Students are employed in the field of finance where they apply the knowledge and skills learned in the classroom. Professional development and obtaining specialized work experience in a Track area are the primary goals. The student's program will be monitored by a finance faculty member with the student providing a formal written report at the end of the project.

**328(3564) Estate Planning and Trusts (3)**

Prerequisite: A minimum campus GPA of 2.0; BA 204(3500) or consent of instructor and Area Coordinator. This course will focus on the responsibility of a financial planner in the formulation and implementation of an estate plan. Topics include wills, lifetime transfers, trusts, gifts, estate reduction techniques, tax implications in estate planning, business and inter-family transfers, dealing with incompetency, postmortem techniques, and the role of fiduciaries. Lectures, cases, and guest speakers will be used to stimulate analysis and discussion.

**329(4312) Business Forecasting (3)**

Prerequisites: A minimum campus GPA of 2.0 and either [(BA 252(3320) and Math 100(1100)] or [(Math 255(3000) and Statistics 132(1320)]. Further study of statistical tools for forecasting in a decision-making context. Topics include explanatory models (multiple regression), classical time series decomposition, and extrapolative techniques (exponential smoothing and Box-Jenkins procedures). In addition, methods for considering problems of intervention effects, seasonality, and collinearity will be discussed. Students will perform extensive analyses of time series data using computer packages.

**330(4326) Quality Assurance in Business (3)**

Prerequisites: A minimum campus GPA of 2.0 and either [BA 252(3320) and Math 100(1100)] or [Math 255(3000) and Statistics 132(1320)]. 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(4314) Multivariate Analysis (3)**

Prerequisites: A minimum campus GPA of 2.0 and either [(BA 252(3320) and Math 100(1100)] or [Math 255(3000) and Statistics 132(1320)]. A study of statistical techniques applicable to multivariable relationships.

**332(3561) Principles of Insurance (3)**

Prerequisites: BA 204(3500) and 2.0 campus GPA. This is a survey course intended to introduce students to the basic concepts of insurance. Topics include the nature of risks, types of insurance carriers and markets, insurance contracts and policies, property and casualty coverages, life and health insurance, and government regulations. The functions of underwriting, setting premiums, risk analysis, loss prevention, and financial administration of carriers are emphasized.

**333(3562) Life Insurance (3)**

Prerequisites: BA 204(3500) or equivalent and a minimum campus GPA of 2.0. This course explores the life insurance business from the perspective of both the consumer and provider. Coverage will include an analysis of the various types of life insurance products, aspects of life insurance evaluation, reinsurance, underwriting, and uses of life insurance in financial planning. Also included is an examination of the tax, legal, and ethical requirements.

**334(3520) Investments (3)**

Prerequisite: BA 204(3500) and a 2.0 campus GPA. Financial analysis of debt and equity instruments available on organized exchanges and in less tangible over-the-counter markets. Techniques of such analysis are presented in context with economic and management circumstances within the company, industry, and economy.

**335(3521) Financial Risk Management (3)**

Prerequisites: BA 204(3500) and a 2.0 campus GPA. A study of derivative securities (forward contracts, futures, swaps and options) used in financial risk hedging. Emphasis will be placed on financial innovations and methods for tailoring a preferred risk/return trade-off. In addition, a project or a simulation will be utilized to emphasize the effects of risk management on portfolio development.

**336(3502) Treasury Management (3)**

Prerequisites: BA 204(3500) and a 2.0 campus GPA. The focus of this course is on the role cash management plays in corporate finance. Topics include cash collection and payment systems, forecasting cash flows, electronic fund transfers, check processing, international cash management and managing bank relationships. Students passing the course with a grade of A or B are permitted to take the qualifying exam to become a Certified Cash Manager (CCM) under a special arrangement with the Treasury Management Association. Along with other finance courses, this class prepares students for careers in the treasury departments of major companies or with service providers like banks.

**337(3542) Principles of Real Estate (3)**

Prerequisites: BA 204(3500) and a 2.0 campus GPA. As an introduction to the real estate industry, the course broadly explores all phases of acquisition, development and disposal of real property. Topics include legal requirements of contracts, property rights, valuation and appraisal techniques, marketing, brokerage operations and practices, mortgage financing, leasing and property management.

**338(3560) Practice of Personal Financial Planning (3)**

A minimum campus GPA of 2.0; BA 204(3500) or consent of instructor and Area Coordinator. Professional financial planning requires broad knowledge of investments, insurance, income taxation, retirement planning, and estate planning, as well as certification requirements and legal/ethical issues. This course introduces students to the field of financial planning, and provides an integrated overview of the topics listed above. Students interested in the Financial Planning track are encouraged to complete this course prior to taking other courses in the track.

**339(3563) Retirement Planning and Employee Benefits (3)**

Prerequisites: A minimum campus GPA of 2.0; BA 204(3500) or consent of instructor and Area Coordinator. The course is designed to give students an understanding of the retirement planning process. Students will gain an appreciation of the usefulness (and shortcomings) of employee benefits and develop an ability to counsel others on important retirement and employee benefit decisions. Corporate pension and profit sharing plans, self-employed Keough plans, IRA's annuities, health insurance and social security will be discussed.

**340A(3401) Financial Accounting and Reporting I (3)**

Prerequisites: A minimum 2.0 campus GPA, Math 30(1030), BA 145(2410), and 57 credit hours. Review of the foundations of financial accounting theory and of the financial statement preparation process. Accounting theory and practice related to current assets (except for investments in securities). The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

**340B(3402) Financial Accounting and Reporting II (3)**

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30(1030) and BA 340A(3401). Accounting theory and practice related to topics such as, investments in securities, operational assets, current and long-term liabilities, and leases. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

**341(4401) Financial Accounting and Reporting III (3)**

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30(1030) and BA 340B(3402). Accounting theory and practice related to topics such as income taxes, pensions, owner's equity, earnings per share, and the statement of cash flows. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

**342(4402) Financial Accounting and Reporting IV (3)**

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30(1030) and BA 340B(3402). 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(3451) Accounting for Governmental and Not-for-Profit Entities (3)**

Prerequisites: A minimum 2.0 campus GPA, Math 30(1030), BA 340A(3401), and 57 credit hours. Principles of fund accounting and financial reporting for governmental and not for profit entities. This course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

**344(3421) Accounting Information Systems and Spreadsheet Applications (3)**

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30(1030), BA 103(1800), 145(2410), and 340A(3401). Examines the fundamental of accounting information systems, including hardware and software considerations, internal controls, and transaction processing cycles. Also focuses upon the development of efficient spreadsheets as applied to financial and managerial accounting concepts.

**345(3411) Cost Accounting (3)**

Prerequisites: A minimum 2.0 campus GPA, Math 30(1030), BA340A(3401), and 57 credit hours. The study of the basic principles of cost determination for, and control of, manufacturing and distribution activities. Topics include job-order costing, process costing, cost allocations, and the development and use of standard costs within a system of absorption costing.

**347(3441) Income Taxes (3)**

Prerequisites: A minimum 2.0 campus GPA, Math 30(1030), BA340A(3401), 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(4435) Auditing (3)**

Prerequisites: A minimum campus GPA of 2.0. In addition, Math 105(1105), 340B(3402), and BA 344(3421) or 215(3810). An introduction to auditing practice. Includes the social role of auditing and the services offered by auditors in internal, governmental, and public accounting practice. Emphasis is on the financial auditing process, including professional ethics, audit risk assessment, study and evaluation of internal control, gathering and evaluating audit evidence, and audit reporting decisions.

**349(4441) Business Income Taxation (3)**

Prerequisite: A minimum 2.0 campus GPA. In addition, BA347(3441). 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(3501) Financial Policies (3)**

Prerequisites: BA 204(3500) and a 2.0 campus GPA. The intensification and application of the concepts developed in BA 204(3500). 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(3502) Computer Applications in Finance (3)**

Prerequisites: BA 103(1800), 204(3500), one 300-level finance course, and a 2.0 campus GPA. Financial problem solving and applications on the microcomputer. A project-oriented course with an emphasis on micro-based finance projects: present value/IRR analysis, duration, immunization, portfolio optimization, leasing, capital budgeting, financial forecasting, options, and futures.

**352(3522) Security Analysis (3)**

Prerequisites: BA 334(3520) or 350(3501); a minimum campus GPA of 2.0 and consent of professor. The goal of

the course is to provide practical experience for students wishing to become stock analysts for national brokerage firms and the investment industry. Each student will have primary responsibility over one small, publicly traded St. Louis Company. The student is expected to become an expert on this company, its products, its financial condition and performance, competitors and the industry as a whole. This level of expertise is developed by visiting the company's facilities, interviewing executives, analyzing financial statements, and reading relevant research reports including current business periodicals. Each student is required to prepare a comprehensive written report on his or her assigned company.

**355(3540) Financial Services Industry and Instruments (3)**

Prerequisites: BA 204(3500) and a 2.0 campus GPA. The theory of financial services, instruments, and markets is discussed. In this framework, the valuation consequences of money and capital markets, corporate control, complex contracting, and regulatory environment are developed. Topics also include hedging, interest rate risk, deposit insurance, and financial instruments.

**356(3541) Commercial Bank Management (3)**

Prerequisites: Econ 52(1002), BA 204(3500), and a 2.0 campus GPA. Corporate finance and microeconomics are applied to matters of importance to commercial bankers. Among the subjects treated are bank-asset portfolio construction, lending policies, liabilities management, bank capital structure, short-run cash management, financial market rates and flows, and quantitative models for bank management. Commercial bank management is analyzed from an internal viewpoint in terms of what bank managers should look for in asset management and why; what market conditions they should be aware of; and what techniques they can use to meet changing economic and financial conditions.

**375(4350) Operations Research (3)**

Prerequisites: A minimum campus GPA of 2.0 [Math 100(1100) and BA 252(3320)] or [Math 255(3000)]. 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(3580) International Finance (3)**

Prerequisites: BA 204(3500) and a 2.0 campus GPA. A study of international financial markets, instruments, portfolio strategies and international financial management. Topics will include international risks, foreign diversification, foreign investment, foreign exchange determination and international working capital management issues. Derivatives are explored as instruments to hedge foreign exchange risk exposure, and special markets are evaluated in the international corporate/investments setting. Cases and/or outside readings may be used to emphasize inter-related issues.



**385(4354) Operations Research II (3)**

Prerequisites: A minimum of a 2.0 campus GPA, BA 375(4350) and either BA 250(3300) or Statistics 132(1320). Topics of special interest including mathematical programming, stochastic decision-making, digital simulation, game theory, and other selected techniques. (Formerly Mathematical Programming).

**390(4220) Business Assessment Testing (0)**

Prerequisite: Concurrent enrollment in BA 391(4219). 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(4219) Strategic Management (3)**

Prerequisites: Senior standing and BA 204(3500), 206(3700), 210(3600), a minimum campus GPA of 2.0; and concurrent enrollment in BA 390(4220). This is a capstone course drawing on the subject matter covered in prerequisite courses. Emphasis is on the formulation and implementation of corporate, business and functional strategies designed to achieve organizational objectives. Topics include the role of top management, globalization of business and ethical perspectives. Case studies and research reports may be used extensively. (It is preferred that this course be taken during the student's final semester.)

**392(4614) Entrepreneurship/Small Business Management (3)**

Prerequisites: BA 156(2900), 204(3500), 206(3700), 210(3600), and a 2.0 campus GPA. This integrative general management course is designed to communicate the academic principles of business management applicable to solving of problems of small- and medium-size businesses and assist in their development. This course will provide a background in the forms of business, the development of business plans and systems integration, venture capital, accounting, procurement, promotion, financing, distribution and negotiations for initial organization, and operation and expansion of the firm.

**393(4689) International Strategic Management (3)**

Prerequisites: A minimum 2.0 campus GPA and BA 314(3682), 316(3780) and 380(3580) or consent of the instructor. A study of the international dimensions of strategic management. Provides an introduction to the key concepts and tools necessary for international competitive analysis. Topics include the international dimensions of strategy formulation and implementation, diversification, strategic alliances, and divestment. Credit not granted for students who have taken BA 317(3680).

**395(3198) Business Administration Seminar (1-10)**

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

**396(4288) Internship in International Business (3-6)**

Prerequisites: Econ 51(1001) and 52(1002), BA 140(2400) and 145(2410), an additional 12 hours in BA, concurrent enrollment in a UM overseas program; also a 2.0 minimum campus GPA. The internship will be a supervised field experience in a business/international organization at a foreign site. Students will work for 10 weeks on projects directed by host organization supervisors in consultation with an 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.

**Accounting (400-Level)****419(5451) Management Accounting and Auditing in Governmental and Not-for-Profit Entities (3)**

Prerequisites: BA 418(5450) and Accounting 441(5411) 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(5402) Professional Accounting Research (3)**

Prerequisite: BA 341(4401). 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(5452) Seminar in Governmental and Non-Profit Accounting (3)**

Prerequisites: BA 418(5450). 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(5441) Tax Research (3)**

Prerequisite: BA 347(3441) 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(5442) Taxation of Estates, Gifts, and Trusts (3)**

Prerequisites: BA 347(3441) and Accounting 431(5441), 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(5443) Taxation of Corporations and Shareholders (3)**

Prerequisites: BA 347(3441) and Accounting 431(5441), 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(5444) Taxation of Partnerships and Partners (3)**

Prerequisites: BA 347(3441) and Accounting 431(5441), 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(5445) Tax Practice and Procedure (3)**

Prerequisite: BA 347(3441) 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 (5446) Advanced Topics in Taxation (3)**

Prerequisites: BA 347(3441) and Accounting 431(5441), 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(6441) Seminar in Taxation (3)**

Prerequisite: At least nine hours of 400-level tax courses including Accounting 431(5441) 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(5400) Financial and Managerial Accounting (3)**

This course provides an introduction to accounting, with emphasis on preparation of financial statements for external parties (financial accounting) and accumulation of cost information to aid internal planning and control (managerial accounting). Topics covered include measurement of assets and liabilities, revenues and expenses, the accounting cycle, financial statements, cost

terminology, cost behavior, product costing, and relevant costs for decision making. This course provides the necessary background for Accounting 442 (Financial Reporting Analysis).

**441(5411) Concepts in Management Accounting (3)**

Prerequisites: Math 100(1100) or Econ 301(3150) with a minimum grade of "C" and Accounting 440(5400). The development, interpretation, and uses of accounting reports and supplementary information for management planning, control, and decision-making. Emphasizes the application of relevant cost behavior, control, and traceability concepts in the preparation of internal accounting reports, with a secondary emphasis upon product costing techniques as appropriate to financial accounting needs. Topics include break-even analysis, operational budgeting, direct costing, absorption costing, standard costs and variance analysis, business segment analysis, responsibility accounting, distribution cost accounting, and gross profit analysis.

**442(5401) Financial Reporting & Analysis (3)**

Prerequisites: Accounting 440(5400) or the equivalent. This course builds on the foundations covered in Accounting 440(5400) emphasizing in-depth analysis of published financial statements. The course begins with discussion of the role of financial accounting information in capital markets and contracting, and continues with examination of a number of specific accounting issues. Students are encouraged to look behind the numbers to better understand the economics of the underlying transactions, and properly interpret what the reported numbers mean about a firm's future prospects.

**443(5480) International Accounting (3)**

Prerequisites: BA 340B(3402). Accounting practices for multinational businesses. Discussion of comparative financial accounting practices, the development of international accounting standards, and managerial accounting practices related to multinational operations.

**445(5403) Seminar in Financial Accounting (3)**

Prerequisite: BA 341(4401). A study of current financial reporting issues. Analysis of current problems and approaches pertaining to the communication of corporate financial information to the U.S. and international investment communities.

**446(5435) Seminar in Auditing (3)**

Prerequisites: BA 348(4435) or permission of instructor. A study of advanced auditing and attestation issues, with an emphasis on operational auditing. Topics include professional ethics, risk analysis, internal control, fraud detection, analytical procedures, determining and assessing operational objectives, and reporting and implementing audit findings.

**447(5412) Accounting Systems for Management Planning and Control (3)**

Prerequisites: Accounting 441(5411) and LOM 481(5300), 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(5491) Seminar in Advanced Theory and Contemporary Issues in Accountancy (3)**

Prerequisite: Accounting 445(5403) and LOM 481(5300). 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(5436) Systems Auditing (3)**

Prerequisites: Accounting 440(5400), IS480(6800), 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.

**Business Administration (400-Level)****405(5100) 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.

**406(7020) Seminar in Business Administration Teaching (1)**

Prerequisites: Admittance into the Ph.D. Program. This course explores the practice and pedagogy of teaching business administration.

**407(7021) Philosophical Foundations of Business Administration (3)**

Prerequisites: Admittance into the Ph.D. Program. This course investigates the ontological and epistemological assumptions of business administration research.

**408(5000) Economics for Managers (3)**

The first portion of this course introduces microeconomic analysis of consumers, firms, and government. The concepts and tools of economic analysis are applied to the production and distribution functions of organizations. The last portion is devoted to the macroeconomic influence of capital markets, the influence of interest rates, inflation, and the business cycle.

**410(5001) Managerial Economic Analysis (3)**

Prerequisites: BA 408(5000) or Econ 51(1001) and Econ 52(1002). 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(5002) Analysis of National Economic Environment (3)**

Prerequisites: BA 408(5000) or Econ 51(1001) and Econ 52(1002). 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(5900) Law, Ethics, and Business (3)**

Analysis of the relationship between law and business with emphasis on the ability of, and extent to which, governments regulate business activities. Topics covered include the employer-employee relationship, protection of consumers, antitrust regulation, and securities law. Also discussed are ethical issues confronting management of the modern business enterprises.

**415(5905) Societal, Environmental, and Management Decisions (3)**

Prerequisites: BA 408(5000). 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.

**417(5280) International Business Operations (3)**

Prerequisite: FIN 416(6580). Functional management within multinational corporations; case studies of operations abroad; and focus on managerial decision making.

**418(5450) Governmental Budgeting and Financial Control (3)**

Prerequisite: Completion of the MPPA Computer Proficiency Exam OR demonstrated proficiency with spreadsheets. (Same as Public Policy Administration 418(6180).) 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(5198) 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(5290) Current Topics in Business Administration (1)**

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

**430(5299) Individual Research (1-10)**

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

**490(5219) Strategy Formulation and Implementation (3)**

Prerequisites: FIN450(6500), MGT460(5600), MKT470(5700), LOM 483(53200). 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.

**Finance (400-Level)****416(6580) International Finance, Investment, and Commercial Relations (3)**

Prerequisite: FIN 450(6500). This course provides students with a working knowledge of the international environment relating to the financial and securities markets along with the impact on corporate operations. International risk and tools to control risk are studied in a practical environment that may include cases. Individual research may be required to reinforce the topics studied in the classroom. Class discussion of current issues and related readings are encouraged.

**450(6500) Financial Management (3)**

Prerequisites: ACC 440(5400) (or BA 140(2400)), LOM 481(5300) (or BA 250(3300)), and BA408(5000) (or Econ 51(1001) and Econ 52(1002)). This course provides an in-depth analysis of corporate finance including asset pricing, risk and return, short- and long-term investment decisions, capital structure choices, dividend policy, derivatives, mergers and acquisitions, and a host of other current topics. The material is taught through lectures and problem solving.

**451(6501) Advanced Financial Management (3)**

Prerequisites: FIN450(6500) and LOM 481(5300). 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(6520) Security Analysis (3)**

Prerequisites: FIN450(6500) and LOM 481(5300). 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(6540) Capital Markets and Financial Institutions (3)**

Prerequisite: FIN450(6500) The theory of financial intermediation is discussed in the context of banks, savings and loans, public and private insurance companies, and investment banking. In this framework, the relationship with money and capital markets, markets for corporate control, complex financial contracting, and regulatory environment is developed.

**457(6521) Introduction to Derivatives (3)**

Prerequisite: FIN450(6500). 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(6541) Commercial Bank Management (3)**

Prerequisite: FIN450(6500). 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.

**459(6590) Seminar in Finance (3)**

Prerequisite: FIN450(6500). This course incorporates a wide range of advanced topics in finance including, but not limited to, an evaluation of various financial assets as investment opportunities, trends in capital markets, derivatives and management of financial and non-financial firms.

**Information Systems (400 Level)****406 (7020) Seminar in Business Administration Teaching (3)**

Prerequisite: Admittance into the Ph.D. program. This course explores the practice and pedagogy of teaching business administration.

**407(7021) Philosophical Foundations of Business**

Prerequisite: Admittance into the Ph.D. program. This course investigates the ontological and epistemological assumptions of business administration research.

**423A(6805) Applications of Programming for Business Solutions (3)**

Prerequisite: IS480(6800). This course provides a study of business-oriented programming. A programming language will be introduced and discussed in detail. Emphasis will be on program definition and the use of such programs in business-oriented applications

**423B(6806) Managerial Applications of Object-Oriented Technologies (3)**

Prerequisite: IS423A(6805). This course deals with business-oriented programming in an object-oriented environment. The emphasis will be on program definition, and tools and development in a client-server environment. The course will involve the study of an object-oriented language in addition to object-oriented methodologies for systems development.

**423C(6807) Business Programming and File Systems (3)**

Prerequisite: IS423A(6805). The course provides a study of business-oriented programming in a traditional centralized environment. 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.

**423D(6808) Internet Programming for Business (3)**

Prerequisites: IS423A(6805). Focus on web-based applications development for business. It will begin with the fundamentals of web-based computing, including web client and server interaction, the MIME standard, server and client data frame headers, the CGI standard, and error conditions as they pertain to business applications. In addition, JAVA will be introduced to build web-based GUI-interfaces and back-end servers. Finally, business applications issues such as firewalls, proxy servers and data encryption using secure servers will be included.

**424A(6892) Seminar in Current Management Information System Topics (3)**

Prerequisite: IS480(6800) and IS485(6825) (may be taken concurrently). Advanced topics of current interest in management information systems. Content to be determined each time the course is offered. May be repeated for credit.

**424B(6891) Seminar in Management Information Systems (3)**

Prerequisite: IS480(6800). Topics of current interest in management information systems. Topics may include international information systems, electronic commerce, decision support systems, information systems strategy, telecommunications, and information systems management

**424C(6838) Business Process Design (3)**

Prerequisites: IS480(6800) and IS485(6825) (may be taken concurrently). This course presents the concepts of process design for improving customer service and satisfaction. Issues related to characteristics, goals, benefits and costs of enterprise-wide design, and the role of information technology during the design process will be discussed. Further topics may include: computer-based modeling tools for process design, total quality management and quality circles, and organizational learning.

**424D(6881) Management of Transnational Information Systems (3)**

Prerequisites: IS480(6800) and IS485(6825) (may be taken concurrently). The course presents concepts of managing global information technology. Issues covered include: global information technology, systems development, electronic data interchange, cross-border data flows, and national and international information structures. Further topics may include information technology enabled economic development, global outsourcing of information systems services, and social, organizational and ethical implications.

**425(6831) Advanced MIS Applications (3-6)**

Prerequisite: IS488(6840) 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 will 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.

**426(6837) Management of Client/Server Computing (3)**

Prerequisite: IS496(6836). This course explores a wide range of topics necessary for the management of client/server computing technology. Students will explore the business advantage and opportunities that client/server systems can provide an organization. In addition, the course will introduce topics of importance to implementing technology in an organization. Finally, the course will provide a framework for understanding the diverse technical components of client/server technology, technical standards and their implications for interoperability of components.

**480(6800) Management Information Systems (3)**

Prerequisite: Econ 301(3150). (Same as Public Policy Administration 480(6800)). An overview of management information systems is presented, including IS managerial concepts and hands-on exposure to technology. Concepts include alignment of information systems strategy with organizational strategy, MIS components and organizational structures, issues in the design and implementation of systems, and understanding the role of information systems in organizations. Students are exposed to several technologies, including the information superhighway, application software packages, and a programming language.

**485(6825) Management Information Systems: Theory and Practice (3)**

Prerequisites: IS480(6800). The course presents and analyzes critically current MIS topics in the context of business organizations. Issues may include: organizational and behavioral concerns, the fit between information systems and organizations, information systems development and implementation, software evaluation and procurement, systems performance, and information systems planning and control.

**488(6840) Information Systems Analysis (3)**

Prerequisite: IS423A(6805). 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(6845) Database Management Systems (3)**

Prerequisite: IS423A(6805). 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.

**490A(7890) IS Research Seminar (3)**

Prerequisites: IS480(6800); Admittance into the Ph.D. Program. Analysis of the research problems, approaches, and findings of Management Information Systems Research. May be repeated for credit when the subject matter is different.

**490B(7891) Quantitative Research Methods in IS (3)**

Prerequisites: IS480(6800); Admittance into the Ph.D. Program. Analysis of research design and validity of quantitative methods applied to the study of Management Information Systems, including laboratory experiments, sample surveys, and field experiments.

**490C(7892) Qualitative Research Methods in IS (3)**

Prerequisites: IS480(6800); Admittance into the Ph. D. Program. Analysis of research design and validity of qualitative methods applied to the study of Information

Systems, including case studies, action research, and ethnomethodology.

**490D(7893) Special Topics in IS (3)**

Prerequisites: Consent of instructor; Admittance into the Ph.D. Program. In-depth analysis of special topics in IS research. May be repeated for credit when the subject matter is different.

**491(6835) Electronic Commerce (3)**

Prerequisite: IS480(6800). Electronic commerce is a modern business methodology that addresses the needs of organizations, merchants, and consumers to cut costs while improving the quality of goods and services and increasing the speed of service delivery. In this course, students will examine critical information technologies that provide a basis for electronic commerce and their application in a variety of sectors and industries. It will begin with coverage of the tools, skills and business concepts that surround the emergence of electronic commerce and the consequences of applying these information technologies to difference commercial processes from both an operational and strategic perspective. We will also explore several of the problems surrounding electronic commerce such as security, privacy, content selection and rating, intellectual property rights, authentication, encryption, acceptable use policies, and legal liabilities.

**492(6832) Information Systems Strategy (3)**

Prerequisite: IS485(6825). This course presents the management of computer-based information resources in the context of business organizations. Issues may include: management strategies and policies for improving organizational productivity, measurement, evaluation and acquisition of management information services, office automation, end-user computing, computer use in international environments, social organizational perspectives and ethical implications. The course will be taught using cases.

**495(6850) Information Systems Design (3)**

Prerequisites: IS488(6840) and IS489(6845). This course builds upon the analysis techniques presented in IS488(6840). 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(6836) Telecommunications: Design and Management (3)**

Prerequisite: IS480(6800) (may be taken concurrently). 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(6833) Decision Support Systems (3)**

Prerequisite: LOM481(5300). Applications of decision support systems in a business environment are studied. Issues pertaining to maintenance of data, construction of models and provision of supporting technology are explored. Students will analyze, design and implement a managerial decision support system using current development tools.

**498(6834) Fourth Generation Languages and End User Computing (3)**

Prerequisite: IS423A(6805). 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(6890) Management Information Systems Thesis Research (1-6)**

Credit to be awarded upon successful defense of thesis.

**Logistics and Operations Management (400 Level)**

**408B(5330) Business Logistics Systems (3)** Prerequisites: LOM483(5320) (may be taken concurrently). Analysis of business logistics systems and their role in supply chain management. Covers both design and operation of logistics systems and their components. Topics may include network design, facility location, transportation, vehicle routing, inventory management, customer service and logistics information systems.

**408C(5322) Lean Production (3)** Prerequisites: LOM483(5320). Study of lean production philosophy and techniques in manufacturing and service operations. Topics include process analysis and continuous improvement, set-up reduction, total productive maintenance, kanban scheduling, cellular production, work teams, supplier relations, quality management, and the environmental aspects of production. Cases and a course project will be used to integrate and apply the course material

**408D(5381) International Logistics and Operations Management (3)**

Prerequisites: LOM483(5320). A study of international logistics and operations management strategy, planning and operations. Topics may include multinational logistics and supply chain strategies, global network design and sourcing, international transportation, distribution and operations, import-export, risk management, etc.

**408E(5332) Logistics and Supply Chain Modeling (3)**

Prerequisites: LOM483(5320) and LOM 408B(5330). Application of leading software packages utilized in logistics and supply chain management. This course covers

the economic tradeoffs involved in decisions, data requirements, operating parameters, and applications of software packages to traditional logistics and supply chain problems, such as route analyses, warehouse location, supply chain design, cross-docking, and coordinated service center location and operational strategies. This "hands on" course is designed to prepare students for higher-level supply chain analyses and consulting work.

**408F(5333) Topics in Logistics and Supply Chain Management (3)**

Prerequisites: Consent of instructor. This course covers topics in logistics and supply chain management. This may include subjects such as domestic and international transportation, transportation economics, supply chain strategy, logistics system design, procurement, reverse logistics, e-logistics, and information systems for logistics and supply chain management.

**408G(5334) Internship in Logistics and Supply Chain Management (1)**

Prerequisites: Consent of instructor. Students receive practical experience in the area of logistics or supply chain management. The internship is supervised by a professional in the host organization in consultation with a faculty member.

**414(5301) Introduction to Geographic Information Systems (3)**

Prerequisites: LOM481(5300) or equivalent, and consent of instructor. Geographic information systems (GIS) are sophisticated computer-based systems for analysis, capture, presentation and maintenance of geographically referenced data. This course includes extensive use of GIS software and provides a foundation in using GIS for spatial analyses. A range of examples is used to emphasize use of GIS as a tool to support analysis and decision-making.

**428(7350) Operations Research-Deterministic Models (3)**

Prerequisites: Math 345(4450) or equivalent. (Same as Math 435(5350)). A study of deterministic methods and models in operations research. This course provides an introduction to operations research and focuses on model building, solution and interpretation of results. Topics include formulation, solution, duality and sensitivity analysis in linear programming, integer programming, network flow models, nonlinear optimization, and dynamic programming.

**429(7352) Operations Research-Stochastic Models (3)**

Prerequisites: Stat 320(4200) or equivalent. (Same as Math 436(5360)). A study of stochastic methods and models in operations research. Provides an introduction to probabilistic models for decision making under uncertainty. Topics include stochastic processes, queuing theory and models, probabilistic inventory theory and models, Markovian decision problems, simulation and reliability.



**430(5326) Quality Management (3)**

Prerequisite: LOM481(5300) or Stat 320(4200) or consent of instructor. (Same as Math 437(5370)). An applied course on total quality management. Quality improvement approaches are presented and the managerial implications and responsibilities in implementing these approaches are discussed. Topical coverage includes the construction and interpretation of control charts, graphical methods, quality function deployment, robust experiments for product design and improvement, mistake-proofing (poke yoke), the Deming approach, Baldrige award criteria, quality cost audits, worker empowerment and reward systems. Cases involving both business processes and physical processes are used to illustrate successful quality improvement efforts.

**481(5300) Statistical Analysis for Management Decisions (3)**

Prerequisites: IS480(6800) (may be taken concurrently) and Econ 301(3150) with a minimum grade of a 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(5350) Management Science Methods (3)**

Prerequisite: LOM 483(5320). This course provides a working knowledge of management science techniques. It emphasizes analytical approaches to solving business problems, construction of mathematical models, and manipulation of model variables for managerial decision-making. Topics include mathematical programming, including integer and network models, heuristics, and simulation models.

**483(5320) Production and Operations Management (3)**

Prerequisites: IS480(6800) and LOM Prerequisite: LOM481(5300). This course discusses issues related to the creation and delivery of goods and services. Topics include the design of production processes, the layout and location of facilities, forecasting, scheduling, inventory control, queuing, materials planning, and quality control. Analytical techniques such as linear programming are used in studying these problems.

**484(7310) Statistical Modeling (3)**

Prerequisites: LOM481(5300) or consent of instructor. This course covers advanced statistical topics in a business context including linear models, multivariate statistics, factor analysis, discriminant analysis, canonical correlation and nonparametric statistics.

**486(5312) Advanced Statistical Methods for Management Decisions (3)**

Prerequisite: LOM481(5300) A study of statistical methods applicable to specialized areas of statistical analysis. Topics include Markov Processes, distribution-

free tests, sampling theory and methods, experimental design, time series analysis, and spectral analysis.

**487(6360) Advanced Logistics and Operations Management Applications (3)**

Prerequisite: LOM483(5320) and consent of instructor. Application of analytical techniques to business problems in logistics, operations and supply chain management. After a brief review of techniques and an examination of typical applications reported in the literature, the major portion of the term is spent in analyzing and solving an actual business problem. A team approach may be used with groups of students responsible for finding and solving a problem. Primary emphasis is placed on the use of analytical techniques to solve management problems.

**488(6840) Experimental and Survey Design and Analysis (3)**

Prerequisites: LOM484(7310). This course covers the linear model and analysis of variance, including survey design, validity and reliability, design of experiments and applied regression methods. Topics may include analysis of covariance, multiple comparison procedures, cluster analysis and factorial experiment designs.

**493(5354) Simulation for Managerial Decision Making (3)**

Prerequisites: LOM481(5300) and (LOM 482(5350) or LOM483(5320)). 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(6354) Advanced Operations Research Topics (3)**

Prerequisite: Consent of instructor. Advanced topics from such areas as mathematical programming, stochastic processes, decision theory, or game theory are studied in depth.

**494B(6395) Seminar in Logistics and Operations Management (3)**

Prerequisite: LOM 483(5320). Topics of current interest in logistics and operations management. Topics may include just-in-time and lean production, quality management, manufacturing and service systems, transportation and logistics, quantitative management tools, etc.



**Management (400-Level)****419(5612) Negotiating Workplace Conflict (3)**

Prerequisites: PPA/MGT 460(6600), and Graduate Standing (Same as Public Policy Administration & Sociology 468(5451)). Examines conflict and cooperation between individuals, groups, and organizations over the control of work. A central theme is how this conflict is expressed, controlled and resolved. Students will participate in exercises to learn the basics of two-party negotiations.

**460(5600) Organizational Behavior and Administrative Processes (3)**

(Same as Public Policy Administration 460(6600)). 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(5621) Managing Human Resources (3)**

Prerequisite: MGT460(5600). 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(5611) Advanced Organizational Behavior and Administrative Processes (3)**

Prerequisite: MGT460(5600). 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(5624) Organizational Training (3)**

Prerequisite: MGT460(5600) or MGT461(5621) 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(5623) Compensation and Benefits (3)**

Prerequisites: MGT461(5621) and LOM481(5300). 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(5622) Union-Management Relations and Collective Bargaining (3)**

Prerequisites: MGT460(5600) and BA 412(5900). Primary concern is with the setting and the dynamics of contract negotiation and administration. Emphasis is on the development of insight and understanding of the forces affecting the decisions of the parties to a labor contract within the context of the social, political, and economic environment of the organization. A dynamic approach is taken to examine difficulties that arise in attempting to administer a collectively established relationship between employer and employee.

**466(5625) Selected Topics in Human Resource Management (3)**

Prerequisites: MGT461(5621) and LOM481(5300). This course provides an advanced treatment of selected human resource management topics. Primary focus is on topics such as job analysis, pre-employment screening devices, test validation, and civil rights laws. Other topics, such as performance appraisal, recruitment, promotions, and terminations may be covered. Various class projects may be assigned to supplement readings, lectures, and discussion.

**467(5613) Dynamics of Interpersonal Relations (3)**

Prerequisite: MGT460(5600) or academic background in general psychology. The self-concept, personality dynamics, and mechanisms of adjustment. Catalysts and barriers to effective communication. Examination of the functional relationship between ego-needs, perceptual distortion, and stereotypical thinking. Roleplaying, the resolution of role-conflict, and objective self-evaluation. The development of cooperation and trust as a prerequisite to effective human relations.

**468(5689) International Business Strategies (3)**

Prerequisites: BA 408(5000) and ACC 440(5400). 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 changes.

**469(5695) Seminar in Management (3)**

Prerequisite: MGT460(5600). Topics of current interest in management. Possible topics include, human resource management, international management, and entrepreneurship.

**Marketing (400-Level)****408(5770) Supply Chain Management (3)**

Prerequisites: Consent of Instructor. This course addresses supply chain management and its implications, with a focus on what firms can do to maintain competitiveness in the quickly changing business landscape. Topics may include, but are not limited to, value chain analyses, marketing business-to-business, supply chain analytics, procurement, production, logistics, and inventory management within supply chains.

**470(5700) Contemporary Marketing Concepts (3)**

Prerequisite: BA 408(5000). 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(5701) Marketing Planning and Strategy (3)**

Prerequisite: Marketing 470(5700). Emphasizes the development of a total marketing program through an analytical study of the marketing-mix, the diagnosis of the business situation, along with the influence of exogenous variables and the development of an effective campus marketing strategy. Stresses importance of an integrated marketing plan and utilize 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.

**474(5795) Seminar in Marketing (3)**

Prerequisite: Marketing 470(5700). This course addresses advanced problems in contemporary marketing. Topics may include, but are not limited to, marketing strategy, marketing communications and advertising, product management, consumer behavior, channels of distribution, international marketing, and marketing research.

**475(5710) Consumer Motivation and Behavior (3)**

Prerequisite: Marketing 470(5700). 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(5720) Marketing Communications (3)**

Prerequisite: Marketing 470(5700). 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(5730) Product Planning and Pricing (3)**

Prerequisite: Marketing 470(5700). 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.

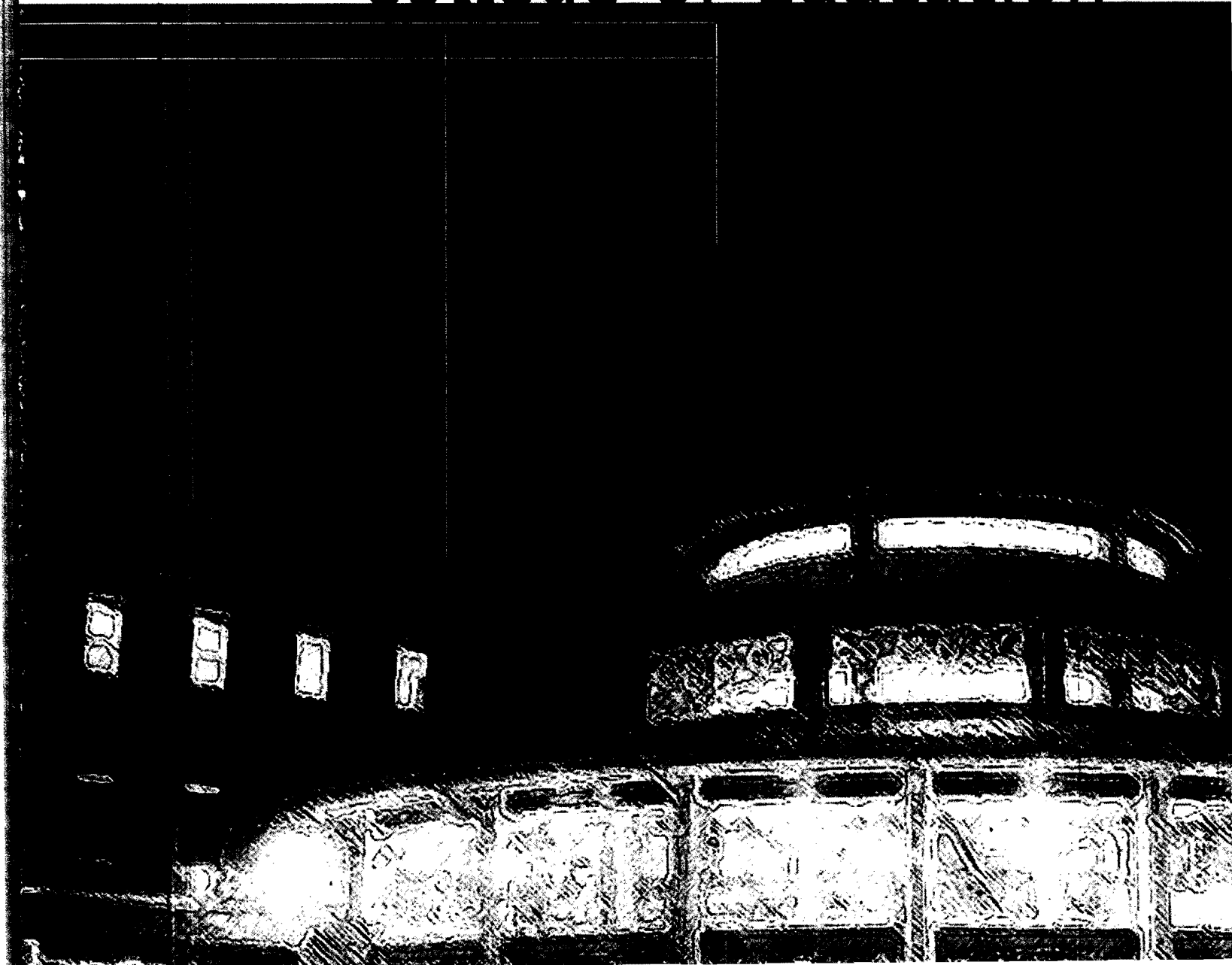
**478(5740) Marketing and Business Research (3)**

Prerequisites: Marketing 470(5700) and LOM 481(5300). 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(5760) Marketing Channel Strategy (3)**

Prerequisites: MKT470 and LOM483. 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.

# College of Education





## College of Education

### Accreditation

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

### Course Designations in the College of Education

The following abbreviations are used to indicate instructional areas in the course listings and descriptions in the College 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 Courses (Ed Rem)  
 Educational Technology Courses (Ed Tec)  
 Elementary Education Courses (Ele Ed)  
 Higher Education (Hir Ed)  
 Physical Education Courses (Phy Ed)  
 School-Wide Education Courses (Educ)  
 Secondary Education Courses (Sec Ed)  
 Special Education Courses (Spc Ed)  
 Teacher Education Courses (Tch Ed)

### Teacher Education

#### Degrees and Areas of Concentration

The College 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, physical education, and secondary education. Courses are also available for those seeking certification for middle school. In cooperation with other schools and colleges of the university, the College of Education provides a program for students pursuing other degrees but planning for a teaching career in secondary education.

#### General Education Requirements

Students in the College 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 credit. Courses graded on a satisfactory/unsatisfactory basis are not accepted within these last 30 semester credit hours. This residency requirement applies to students seeking a degree or teacher certification.

#### Education Majors

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

#### Admission to the College of Education

Any students who designate education degree programs as their intended degree paths will have Education as their assigned academic unit. Students admitted to the College of Education must also be admitted to the teacher education program.

**Application and 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 in which they are enrolled. The admission program requires student action at the following levels.

Applications to the undergraduate teacher education program are processed through the office of teacher education. Eligibility is based upon fulfillment of the following requirements:

- Submission of qualifying scores on C-BASE in areas of English, writing, mathematics, science and social studies, as mandated by the Missouri Excellence in Education Act of 1985. Consult the undergraduate education office, College 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. Graduates of the general studies program in the UM-St. Louis Evening College, however, must take the C-BASE).
- Scores of either 20 on the ACT Composite (18, when taken prior to 11-1-89) or 800 on the SAT (verbal plus math)\*.
- Completion of 60 hours of college or university courses (at UM-St. Louis or another accredited school).
- A grade point average of 2.5 or better.
- Completion of level one courses, or the equivalent, with a grade of C or better.
- Agreement to subscribe to a standard of preprofessional behavior. (This standard is available in the undergraduate education office.)
- Submission of a criminal record check and child abuse/neglect screening.

#### General Information

##### \* 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 retake 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 Associate Dean for Undergraduate Education to attest that basic

educational competencies are met if the grade point average from 60 hours of college or university courses is at least 2.5. 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 College 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-St. Louis services: Center for Academic Development, Women's Center; Counseling Service; Veteran Affairs Office; Video Instructional Program; Horizons (Peer Counseling Center).

In addition, assistance may be available through correspondence courses, University of Missouri-Columbia. Copies of this policy are available in the office of teacher education.

**Application to the Student Teaching Program** The application for student teaching is a two-part process which begins two semesters before the semester in which the student plans to do student teaching.

Deadlines	Pre-application (60 Hour Form)	Formal Application
Fall student Teaching	1 <sup>st</sup> week in September of previous year *	1st week in September of previous year
Winter student Teaching	1 <sup>st</sup> week in December of previous year *	1st week in December of previous year

\*Check student teaching bulletin board in Marillac Hall for exact date.

**Step I Preapplication:** Students must submit both of the following items to the office of teacher education, Room 155, Marillac Hall:

- Proof of formal acceptance to the teacher education program (approved 60 hour form), required of both pre- and post degree students. Students will then sign an application list and receive a ticket to attend the formal application meetings which will be held at the beginning of the semester.

**Step II Formal Application: Students:**

- Must attend one of three formal application meetings offered at the beginning of each semester to receive application materials. Dates and times will be posted on the student teaching bulletin board in Marillac Hall.
- Will be admitted to the meetings by ticket only.
- Will complete and return applications within two weeks after the meetings to the office of teacher education, 155 Marillac Hall. Applications will not be accepted after the deadline.

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

- Full admission to the teacher education program for both pre- and post degree students.
- Completion of 90 hours of approved course work at the time of application.
- A cumulative grade point average of 2.5 or above by the semester before 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.
- Grade point average of 2.5 in the teaching field (secondary education students only).
- Completion of English 210(3100), Advanced Expository Writing, or equivalent, with a grade of C- or better.
- Completion of Comm 40(1040), or equivalent, Introduction to Public Speaking, with a grade of C- or better.
- Completion of general education requirements and near completion of course requirements in the teaching major.
- A grade of C of better in all professional education courses so designated. Lists of these courses available in the office of undergraduate education and from advisers. A grade of C- is not acceptable.
- Satisfactory recommendations by student teaching area representatives in the teacher education program.
- Completion at UM-St. Louis of no fewer than 12 hours of approved course work.
- Completion of prerequisite courses in professional education and psychology.
- Completion of TB screening, police, and child abuse checks.

The student teaching experience in the early childhood, music, physical education, and special education certification programs has been strengthened by providing assignments in two different school settings. Students will be expected to do student teaching on a full-day basis for an entire semester. The student teaching experience in elementary, middle school and secondary content areas completed at one site for a full semester and students are expected to be on-site for full days throughout the

semester. The student teaching, experience must be done in residence. 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 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.

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 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 reapply for student teaching. At the time of reapplication 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 reapplication, 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 reapply for admission to student teaching. The remedial requirements will be determined by the office of teacher education after consultation with the cooperating teachers, university supervisors, and student teachers involved. The students must provide appropriate evidence that the remedial requirements have been met at the time they reapply for admission to student teaching. It is understood that meeting the remedial requirements does not guarantee success in the subsequent student teaching experience.

Student teaching during the summer semester is available through special arrangement with the undergraduate education office and will generally satisfy one-half of the students teaching requirement. Under certain circumstances, student teaching while employed a full-time teacher is allowed. Guidelines and requirements may be explored in the undergraduate education office.

For further information regarding certification, contact the undergraduate education office, 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 Education when they apply for admission to student teaching or during the semester before the one in which they expect to finish degree requirements. See note below on the on PRAXIS examination.

#### **Bachelor of Educational Studies**

Candidate should consult the undergraduate education office, 155 Marillac Hall for more information.

#### **Bachelor of Science in Community Education**

Candidate should consult the undergraduate education office, 155 Marillac Hall for more information.

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

#### **Bachelor of Arts**

Students seeking the B.A. degree with teacher certification must complete a state certification form with the office of teacher education. See note below on the on PRAXIS examination.

#### **Certification**

In cooperation with the Missouri State Department of Elementary and Secondary Education, the College of Education is responsible for recommending teaching certificates for 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, and for advising and recommending for certification those post degree students who meet requirements.

All individuals must pass the appropriate Praxis/National Teacher's Examination to meet graduation and/or certification requirements. This exam should be taken during the semester immediately prior to that of student teaching.

By completion of specified undergraduate courses at the University of Missouri-St. Louis, students may obtain certification in the following fields: elementary education; early childhood education; middle school; music education; physical education; special education: behavioral disorders (BD), educable mentally handicapped (EMH), and 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/theater. Graduate programs leading to certification in counseling; reading; 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 division of the College of Education.

## Graduate Studies in Education

### 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 community 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, educational technology, severe handicaps and higher education.

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. Programs leading to the Ph.D. degree are offered in the areas of counseling, educational psychology, teaching-learning processes, and metropolitan leadership and policy studies.

### Master of Education Degree

#### Admission and General Requirements

The College 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 community counseling must complete a separate application (see graduate studies in the Counseling division in this *Bulletin*). The minimum number of hours required for the M.Ed. degree is 32 except that the elementary, secondary, and community counseling emphases require 48 hours. The school has adopted a flexible policy on exit requirements, which are determined divisionally.

### Advisement and Program Planning

Upon acceptance, each student can contact the Office of Graduate Education for an appointment with the graduate advisor for a first semester course of study (314)516-5433 or NASHford@umsl.edu). After acceptance, each student completes an adviser form, sent by the College of Education's Office of Graduate Studies, 123 SCCB. A faculty 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 half 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 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 broadbased interdisciplinary degree. The two emphasis areas, learning instructional processes and behavioral-developmental processes, embrace two general categories of professional activities.

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

Behavioral-developmental processes place primary emphasis on the nature of individuals. Doctoral studies focus on such elements as learners behavioral and developmental characteristics, typical and atypical development within varied environments, motivation, strategies of behavioral change, and counseling processes. Traditional programs that tend to fall under this heading are counseling, special education, educational psychology, and measurement. Students seeking the Ed.D. degree are expected to meet the doctoral degree requirements and procedures adopted by the Graduate School. (See Doctoral Degree Requirements for details.)

#### Admission and General Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit three letters of recommendation (two letters must be from individuals with an earned doctorate, preferably prior instructors), 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 in a timely manner. 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, 12 hours:

6 hours from:  
Quantitative research methodology, Ed Rem 431(6710) and above.

6 hours from:  
Qualitative research methodology

##### Common doctoral seminars, 6 hours

##### 2. Role Specialization, 48 hours:

Emphasis area doctoral seminars (6-12)  
Emphasis area electives (15-27)  
Related area (12-18)  
Internship (3-9)

##### 3. Dissertation, 12 hours

**Total: minimum 90 hours, postbaccalaureate**

#### Doctor of Philosophy Degree

The Ph.D. degree in education, offered in cooperation with the School of Education at the University of Missouri-Kansas City and the College of Education at the University of Missouri-Columbia, is designed for educators who desire directed research experience promoting scholarly inquiry in education. Four emphases are available:

Counseling  
Educational psychology  
Teaching-learning processes  
Educational leadership and policy studies

#### Admission and General Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit:

- Three letters of recommendation (at least two from individuals with earned doctorates, preferably prior instructors).
- An original essay.
- A professional resume.
- Evidence of above-average academic records.
- GRE scores (a composite [verbal, quantitative, and analytical subtests] score of 1500 or better desired)

A favorable vote of an admission interview committee, composed of faculty in the emphasis area, is required. Admission is competitive.

#### Admission Application

To ensure time for review and decision, complete applications and accompanying materials must reach the office of admission in a timely manner. In addition, applicants are urged to request transcripts and letters of recommendation at least two weeks before submitting their papers. Consideration of applications cannot be undertaken until all materials are available. Applicants to the Counseling emphasis are asked to apply by January 15<sup>th</sup>.

#### Degree Requirements

##### General Foundations, 9-12 hours:

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

##### Research Methods, 15-18 hours:

Educational Research and Evaluation Methods (Ed Rem) 431(6710): Educational Research Methods I, and at least 12 hours from Ed Rem courses numbered above 431(6710): 6 hours in quantitative methods and 6 hours in qualitative methods.

##### Foreign Language Proficiency or Other Research Tools, equivalent to 6 hours

**Emphasis Area (Primary Discipline) courses, 21-27 hours, with at least 16 in residence, in one of the following four areas:**

##### 1. Teaching-Learning Processes

Minimum 15 hours in cognate area  
Minimum 3 hours in curriculum or instruction  
Minimum 3 hours in educational psychology

##### 2. Educational Leadership and Policy Studies

Minimum 21 hours in educational leadership, either in K-12, higher education, work, adult, or community education

settings, selected in consultation with the faculty advisor and advisory committee.

### 3. Educational Psychology

Minimum of 21 hour in educational psychology. Program may include courses in research and evaluation methods, school psychology, developmental psychology, cognition and learning, character education, and socio-cultural theory. Courses in the primary discipline will be selected in consultation with the faculty adviser and advisory committee.

### 4. Counseling

Cns Ed 414(6050), Individual Inventory  
 Cns Ed 420(6040), Group Procedures in Counseling  
 Cns Ed 442(6400), Career Information and Development  
 Cns Ed 495(6030), Foundations for Multicultural Counseling  
 Cns Ed 485(6370), Community Counseling Practicum (or Cns Ed 482(6270), School Counseling Practicum  
 Cns Ed 486(6380), Community Counseling Field Experience I (or Cns Ed 483(6280), School Counseling Field Experience I or Cns Ed 494(6378), Counseling Practicum II)  
 Cns Ed 487(6385), Community Counseling Field Experience II (or Cns Ed 484(6285), School Counseling Field Experience II or Cns Ed 490(6376), Internship)  
 Cns Ed 426(7000), Advanced Theories of Counseling and Family Therapy  
 Cns Ed 443(6410), Advanced Career Development  
 Cns Ed 455(7030), Counselor Education and Supervision  
 Cns Ed 475(7770), Doctoral Practicum (3 hours)  
 Cns Ed 496(7020), Seminar in Counseling Research  
 Cns Ed 498(7010), Advanced Multicultural Counseling  
 3 semester hours of electives in Cns Ed approved by advisory committee.

Additionally, all students should complete Cns Ed 476(7780), Doctoral Internship I and Cns Ed 477(7785), Doctoral Internship II, as the research internship; and a secondary discipline in Ed Psy consisting of at least Ed Psy 412(6310), Psychology of Learning Processes, Ed Psy 413(6113), Personality Development and Adjustment, and Ed Rem 422(6716), Individual Assessment of Cognitive Abilities.

**Related (Secondary Discipline) Courses, 12-15 hours, in education or another department.**

**Required Exit course, 3 hours**

**Education 414(7414) Common Doctoral Seminar:  
 Research: Implementing Change in Educational Systems**

**Research Internship, 6-9 hours**

**Dissertation, 12 hours**

**Total: Minimum 90 hours, postbaccalaureate**

### Support Services

The College 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 Education -155 MH

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

#### Office of Graduate Education - 123 SCCB

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 Division of Counseling. 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 preservice and inservice 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.

#### Technology and Learning Center - 100 Marillac

The center provides education students and faculty a model environment for managing new methods of teaching through the newest technologies; a place to research and develop technology-enhanced teaching methods to engage K-12 students; and programs that connect school classrooms to the workplace.

## Schoolwide Courses in Education(Educ)

### 65(1065) The University (3)

A College 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.

### 204(2204) 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.

### 290(2290) Internship I (6)

Prerequisites: Senior standing and consent of instructor. Field experience in educational setting under university supervision. Includes planning, research, evaluation, and other professional activities in the student's area of concentration.

### 291(2291) Internship II (6)

Prerequisite: Completion of or concurrent enrollment in EDUC 290(2290). Continuation of EDUC 290(2290).

### 297(2297) 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(4301) 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(5006) Graduate Workshop (1-10)

Prerequisite: Consent of instructor.

### 308(6308) Graduate Institute (1-10)

Prerequisite: Consent of instructor.

### 317(5317) Topics in the Teaching of Writing (1-3)

(Same as English 317) Prerequisite: English 210 or equivalent. Special topics in the practice of and pedagogy of writing designed for in-service teachers. Topics may include writing at specific grade levels, writing/reading workshops, writing in urban settings, writing across the

curriculum, action research, new technology, classroom and district-level assessment. May be repeated once for credit if topics differ. Counts toward Certificate in writing.

### 393(5993) 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(6408) Graduate Seminar (1-10)

Prerequisite: Consent of instructor. Intensive study of selected issues in education.

### 414(7414) 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(7415) 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.

### 475(6475) Microcomputer Applications in Music Education (3)

(Same as Music 475.) Prerequisites: Graduate standing in music. An examination of the potential of microcomputers in the music education field. Experiences with available hardware and software suitable for applications that include inventory, budget, music library cataloging, digital music synthesis, and computer-assisted instruction at all levels.

### 476(6476) Microcomputer-Assisted Instruction Curriculum Development in Music (3)

(Same as Music 476(5760).) Prerequisites: Graduate standing in music. Design and development of Computer-Assisted Instruction (CAI) lessons in music. Commercial courseware and various CAI models will serve as the basis for creating original programs that can be used effectively to implement objectives of the music curriculum for a specific school or school district. The design, refinement, and production of a major CAI program for use in an elementary, secondary, or postsecondary setting is required.

**477(6477) Advanced Microcomputer Application in Music (3)**

(Same as Music 477.) Prerequisite: Graduate standing in music. The study of complex microcomputer applications including music synthesis, MIDI, music-oriented graphics, voice and pitch recognition, administrative applications, and computer-assisted instruction.

**480(7880) Research Internship I (3)**

Prerequisite: Nine hours of research methods or statistics and consent of instructor. Supervised experience in the conduct of research studies or scholarly inquiry.

**481(7881) Research Internship II (3)**

Prerequisite: Educ 480(7880) and consent of instructor. Supervised experience in the conduct of research studies or scholarly inquiry.

**482(7882) Research Internship III (3)**

Prerequisite: Educ 481(7881) and consent of instructor. Supervised experience in the conduct of research studies or scholarly inquiry.

**491(6491) 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.

**495(7495) Doctoral Research Tools (1-6)**

Prerequisites: Ed Rem 431(6710). Structured individual or small group instructional or supervised investigative experience in and with a specific research skill and/or procedure that will be needed in the production of a doctoral dissertation. May not substitute for any existing graduate courses that cover same research tool skills.

**497(6998) Thesis Research (1-10)**

Prerequisite: Consent of instructor.

**499(7999) Dissertation Research (1-12)**

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

## Division of Counseling and Family Therapy

### Faculty

**Therese S. Cristiani**, Associate Professor,\*\* Chairperson  
Ed.D., Indiana University  
**R. Rocco Cottone**, Professor\*\*  
Ph.D., Saint Louis University  
**Patricia A. Jakubowski**, Professor Emerita\*  
Ed.D., University of Illinois  
**Arthur E. Smith**, Professor Emeritus  
Ph.D., Saint Louis University  
**Susan Kashubeck-West**, Associate Professor\*  
Ph.D., Ohio State University  
**Mark Pope**, Associate Professor\*\*  
Ed.D., University of San Francisco  
**W. Glenn White**, Associate Professor Emeritus\*  
Ph.D., University of Missouri-Columbia  
**Lela K. Bunch**, Assistant Professor  
Ph.D., University of Missouri-Columbia  
**S. Kent Butler**, Assistant Professor  
Ph.D., University of Connecticut  
**Dawn M. Szymanski**, Assistant Professor  
Ph.D., Georgia State University

\* members of graduate faculty

\*\*members of doctoral faculty

### General Information

The Division of Counseling and Family Therapy 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. The Division of Counseling and Family Therapy offers work leading to the M.Ed, Ph.D. and Ed.D. and requisite course work for state certification in elementary and secondary school and counseling, and school psychological examiner. Non-certification degree work is available in community counseling and is designed to prepare students to take the state examination for licensed professional counselor.

Areas of emphasis in the M.Ed. counseling degree program are elementary school, secondary school, or community counseling.

The following Division of Counseling and Family Therapy programs have been accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP):

- Community Counseling (M.Ed. degree)
- Community Counseling with a Specialization in Career Counseling (M.Ed. degree)
- School Counseling (M.Ed. degree)

CACREP, a specialized accrediting body recognized by the Commission on Recognition of Postsecondary

Accreditation, grants accredited status to graduate-level programs in the professional counseling field.

Students wishing to receive Missouri certification in elementary school counseling, or secondary school counseling, must complete all required courses in addition to holding teaching certificates valid in Missouri or taking the equivalent coursework. (Consult your adviser if you have questions on these matters.) The community counseling area, for which there are no certification requirements, is appropriate only for the practice of counseling in non K-12 settings.

The master of education degree in counseling has an exit requirement of a comprehensive examination. Students may sit for the exam after completing 36 units in their degree program. There is a service charge for taking the exam. The exam will be given at least twice a year. All degree students should consult with their advisers about this requirement

### 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 community or school counseling must complete the divisional 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 (6000), Personal and Professional Development in Counseling in their first semester. Admissions will be conducted twice a year. The deadlines for applications are June 1 for the fall semester and November 1 for the winter semester. Students are accepted on a provisional basis pending their completion of application materials, Cns Ed 410 (6000), and review by the Counseling Faculty Review Board.

Since it is the objective of the counseling 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 counseling 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 (6000), Personal and Professional Development in Counseling; Cns Ed 411 (6010), Theories of Counseling; Cns Ed 482(6270), School Counseling Practicum or Cns 485 (6370), Community Counseling Practicum; Cns Ed 483(6280) School Counseling Field Experience I and Cns Ed 484(6285), School Counseling Field Experience II or Cns Ed 486 (6380), Community Counseling Field Experience (6 units), will automatically trigger a review process which may result in the termination of the student's degree program.

Students admitted to the master's degree program in counseling on restricted status must attain a 3.0 GPA for the first 12 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 12 hours of course work: Cns Ed 410 (6000), Personal and Professional Development in Counseling; Cns Ed 411 (6010), Theories of Counseling, and Cns Ed 482(6270), School Counseling Practicum, or Cns Ed 485 (6370), Community Counseling Practicum. 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)**

- 410(6000), Personal and Professional Development in Counseling
- 411(6010), Theories of Counseling
- 412(6600), Theories & Techniques of Counseling Children and Adolescents
- 413(6020), Ethical and Professional Issues in Individual and Relationship Counseling
- 414(6050), Individual Inventory
- 420(6040), Group Procedures in Counseling
- 431(6200), Foundations of School Guidance
- 442(6400), Career Information and Development
- 482(6270), School Counseling Practicum
- 483(6280), School Counseling Field Experience I
- 484(6285), School Counseling Field Experience II
- 495(6030), Foundations for Multicultural Counseling

**Psychological Foundations and Human Development (Ed Psy)**

- 410(6210), Lifespan: Individual & Family Development
- 432(6532), Psycho-Educational Differences in Childhood

**Educational Research and Evaluation Methods (Ed Rem)**

- 421(6709), Educational and Psychological Measurement
- 431(6710), Educational Research Methods and Design

Individuals seeking certification as a professional school counselor in the State of Missouri who are non-teacher certificated must take the following courses in addition to their counseling degree: Ed.Psych 411 (6111), Sec Ed 416 (6416), SE 320, and Elem. Ed. 410 (6410) or Sec. Ed. 415 (6415).

**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)**

- 410(6000), Personal and Professional Development in Counseling
- 411(6010), Theories of Counseling
- 412(6600), Theories & Techniques of Counseling Children and Adolescents
- 413(6020), Ethical and Professional Issues in Individual and Relationship Counseling
- 414 (6050), Individual Inventory
- 420(6040), Group Procedures in Counseling
- 431(6200), Foundations of School Guidance
- 442(6400), Career Information and Development
- 482(6270), School Counseling Practicum
- 483(6280), School Counseling Field Experience I
- 484(6285), School Counseling Field Experience II
- 495(6030), Foundations for Multicultural Counseling

**Psychological Foundations and Human Development (Ed Psy)**

- 410(6210), Lifespan: Individual & Family Development
- 432(6532), Psycho-Educational Differences in Childhood

**Educational Research and Evaluation Methods (Ed Rem)**

- 421(6709), Educational and Psychological Measurement
- 431(6710), Educational Research Methods and Design

Individuals seeking certification as a professional school counselor in the State of Missouri who are non-teacher certificated must take the following courses in addition to their counseling degree: Psych Ed 411 (6111), Sec Ed 416 (6416), Sec Ed 320, and Elem. Ed. 410 (6410) or Sec Ed. 415(6415).

**Master of Education: Emphasis in Community Counseling**

The community 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 (CNS ED)**

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

- 410(6000), Personal and Professional Development in Counseling
- 411(6010), Theories of Counseling
- 413(6020), Ethical and Professional Issues in Individual and Relationship Counseling
- 414(6050), Individual Inventory
- 415(6300), Foundation of Community Counseling
- 420(6040), Group Procedures in Counseling
- 442(6400), Career Information and Development
- 485(6370), Community Counseling Practicum
- 486(6380), Community Counseling Field Experience (6)
- 495(6030), Foundations of Multicultural Counseling



**Psychological Foundations and Human Development  
(Ed Psych)**

The following course is required:  
413(6113) Personality Development and Adjustment

**Educational Research and Evaluation  
Methods (Ed Rem)**

The following course is required:  
431(6710), Educational Research Methods and Design

**Area of Specialization (9 hours)**

Course work in the area of specialization is to be selected in consultation with the adviser and may include career counseling, mental health counseling, rehabilitation counseling, child and adolescent counseling, couples and family counseling, and others.

**Career Outlook**

**Elementary and Secondary School Counselors**

The demand for school counselors throughout the state is quite high. There is a shortage of school counseling personnel at all levels. Additionally, many teachers who do not intend to leave the classroom pursue this program 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 Community Counseling.

**Community 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, and 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.

## **Course Descriptions**

Prerequisites may be waived by consent of the department. For information about certification and licensure, an adviser should be consulted. Course descriptions in this section are **Counseling (Cns)** courses.

### **Counseling (Cns)**

#### **110(1400) Making a Career Choice (1)**

Introduces students to career development theories (Holland, Super, Bolles, etc.) And the career decision-making process. Students receive an overview of career development theory and learn how these theories pertain to the formulation of career plans. Self-assessment and decision-making techniques learned in this class can be revisited throughout the life span. The seminar format allows for small group discussion of career-related issues and personal application of career development principles.

#### **310(3000) 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.

#### **318(3210) Counseling Gifted Students (3)**

Prerequisites: Spc Ed 313(3313), Ed Psych 312(3312), 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(3710) Counseling the Chemically 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.

#### **331(3220) Counseling Individuals with Special Needs (3)**

Prerequisite: Spc Ed 313(3313), 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(3720) 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.

#### **404 Seminars (1-10)**

Prerequisite: Graduate Standing

#### **410(6000) Personal and Professional Development in Counseling (3)**

Prerequisite: Provisional acceptance to the Counseling Program or consent of instructor. 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(6010) Theories of Counseling (3)**

Prerequisite: Cns Ed 410(6000). 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(6600) Theories and Techniques of Counseling Children and Adolescents (3)**

Prerequisite: Cns Ed 410(6000), 411(6010) (with a grade of B or better in both courses) or consent of the instructor. Focus is on counseling theories and their applicability to the developmental special concerns of children and adolescents including child-at-risk issues such as: abuse, suicide, divorce, and death and dying. Individual, group, and family intervention techniques and consultation skills will be emphasized, as well as legal and ethical considerations for counselors. Strategies presented can be utilized in a variety of settings. Multicultural considerations are also addressed.

#### **413(6020) Ethical and Professional Issues in Individual and Relationship Counseling (3)**

Prerequisite: Cns Ed 410(6000). 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(6050) Individual Inventory (3)**

Prerequisites: Ed Rem 421(6709). 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.

**415(6300) Foundation of Community Counseling (3)**

Prerequisites: Cns Ed 410(6000) and Cns Ed 411(6010).  
A study of counseling profession applicable to a variety of human service settings. Introduction to the basic philosophical, historical, and psychological foundations of community and agency counseling. Designed to acquaint the student with the foundations and roles of the counselor in various community and agency settings.

**420(6040) Group Procedures in Counseling (3)**

Prerequisites: Cns Ed 411(6010) 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(6500) Introduction to Systems Theory for Marriage and Family Counseling (3)**

Prerequisite: Cns Ed 411(6010). 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(6510) Marriage Counseling and Enrichment (3)**

Prerequisite: Cns Ed 423(6500) 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(6520) Family Counseling (3)**

Prerequisites: Cns Ed 423(6500) and Cns Ed 482(6280) or 485(6370), or consent of instructor. This course offers an in-depth analysis of strategic, structural, experiential, communications, behavioral, and psychodynamic approaches to systems change and family counseling. The range of techniques and applied practices evolving from each orientation are explored as are normal and dysfunctional family processes. Various counseling modalities, such as individual, concurrent, collaborative, conjoint, group, intergenerational, and networking are also considered.

**426(7000) Advanced Theories of Counseling and Family Therapy (3)**

Prerequisites: Cns Ed 411(6010) and Cns Ed 423(6500), Cns Ed 482(6280) or 485(6370) or consent of instructor. Contemporary and emergent theories in counseling and family therapy are presented and analyzed. Research issues are addressed.

**427(6700) Introduction to Addictive Behaviors and Addiction Counseling (3)**

Prerequisites: Cns Ed 411(6010) consent of instructor. Exploration of the theoretical foundations of contemporary approaches to such addictive behaviors as alcohol and drug abuse, smoking, compulsive gambling, and sexual addiction. The nature, etiology, prevention, and treatment of addictions are discussed and analyzed from a variety of theoretical perspectives. The applications of these specific theoretical models to various treatment settings are examined. Multicultural considerations are also addressed.

**428(6540) Preventive Interventions with Couples and Families (3)**

Prerequisite: Cns Ed 423(6500), 424(6510), or 425(6520). Interventions for preventing the development of mental health problems in a couple or family context are surveyed. Premarital counseling, couple and marriage enrichment training, family life education, and relationship enhancement training will be reviewed. Outreach approaches will also be presented.

**429(6782) Advanced Strategies in Addictions Counseling (3)**

Prerequisite: Cns Ed 427(6700), or consent of instructor. Study of advanced, empirically supported counseling approaches and techniques for the treatment of addictive behaviors. An emphasis is placed on screening and assessment procedures and on matching interventions to individual client and community needs.

**430(6784) Counseling the Dual Diagnosed Substance Abuser (3)**

Prerequisites: Cns Ed 427(6700) and Cns Ed 411(6010). This course introduces the student to the special needs, concerns, and problems encountered when counseling clients who are both mentally ill and chemically dependent. Subject areas include an overview of counseling methodologies, diagnosis, and psycho-pharmacology.

**431(6200) 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 nonacademic needs.

**432(6530) Assessment and Case Management in Couple and Family Counseling (3)**

Prerequisites: Cns Ed 423(6500), 424(6510), or 425(6520). Techniques measures for assessing couple, marriage and family functioning are reviewed. The case management process is outlined, including stages of case development. Ethical issues related to case recording keeping are reviewed

**433(6550) Trends, Family Counseling (3)**

Prerequisites: Cns Ed 423(6500), 425(6520). The evolution of family types and structures in American cultures will be reviewed. Cultural influence on diverse system structures will be surveyed. Problems that impede family functioning and development, such as socioeconomic disadvantage, discrimination, addiction, unemployment, family blending, and abuse will be addressed, with special emphasis on the effects on family development and intervention strategies. Research data on normative and non-normative family functioning will be presented.

**442(6400) Career Information and Development (3)**

Prerequisites: Graduate standing. 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. Techniques and methods of career counseling are discussed. Various theories of career development and career choice will be examined.

**443(6410) Advanced Career Development (3)**

Prerequisites: Cns Ed 442(6400) or consent of instructor. Emphasis is on current theories of career development, career choice, and techniques and methods of career counseling. Issues concerning education and training, work, leisure, the family, life roles, and culturally diverse populations are studied. The role of career theory in planning, development, and delivery of a career development program is explored.

**444(6420) Career Assessment in Counseling and Rehabilitation (3)**

Prerequisites: Cns Ed 414(6050) and 442(6400) or consent of instructor. This course provides an in-depth and specialized look at the educational and psychological assessment techniques used in career counseling, especially the assessment of career interests, work values, work environment, work skills, work samples, career development stages, career maturity, career decision making, and career beliefs. Issues of using computers in the delivery of career development services will be discussed.

**451(6610) 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.

**455(7030) Counselor Education and Supervision. An introduction to clinical supervision in counseling.**

Theories, models, and research in supervision will be presented. Students will supervise master's level students in practicum and internship courses in counseling.

**460(6800) Rehabilitation Counseling (3)**

Prerequisite: Cns Ed 410(6000), 411(6010), 482(6270) or 485(6370). This course addresses: a) the history of vocational rehabilitation; b) specialty issues in rehabilitation counseling; c) medical aspects of disability; d) the rehabilitation process; e) theories of rehabilitation; f) the assessment process of individuals with disabilities; g) the job placement and work adjustment process of individuals with disabilities; h) ethical issues in rehabilitation counseling.

**461(7802) Theory and Practice of Clinical Hypnosis in Counseling (3)**

Prerequisite: Cns Ed 482(6270) or 485(6370) or Consent of instructor. Clinical hypnosis is conceptualized and approached as a system of skilled communication. Historical perspectives, major models (Traditional, Standardized, and Utilization [Ericksonian]), myths, and misconceptions will be explored. Students will develop skills in direct and indirect trance induction procedures, and case conceptualization with individuals and multiple participants. Legal and ethical considerations will be presented.

**462(7040) Counseling Women Toward Empowerment (3)**

Prerequisite: Cns Ed 410(6000), 411(6010) 482(6270) or 485(6370). An introduction to Women's issues in counseling. Relational theory, healthy female development, and an overview of clinical issues most common to females will be presented.

**470(7050) Advanced Assessment in Counseling (3)**

Prerequisite: Cns Ed 414(6050) and doctoral standing or consent of the instructor. This course develops advanced skills in the assessment process which includes the administration, scoring, and interpretation of psychological tests and environmental inventories, clinical interviewing, observation, and the gathering of historical and collaborative information; and the integration of this information into patterns to predict human functioning.

**472(7806) Practicum in Group Counseling (3)**

Prerequisite: Cns Ed 471 (7804) and doctoral standing or consent of instructor. Students will lead or co-lead a supervised counseling group in the community.

**475(7770) Doctoral Practicum (3)**

Prerequisites: Doctoral standing. 100 hours of on-campus doctoral-level supervised counseling practice. Students will counsel clients and will be introduced to teaching and supervising beginning counseling trainees in a clinical context. As a prerequisite to the doctoral internship, students will be expected to demonstrate competence in skills required of counselor educators and clinical supervisors. Students will receive 1.5 hours of group and 1 hour of individual supervision by a graduate faculty member.

**476(7780) Doctoral Internship I (3)**

Prerequisites: Cns Ed 475(7770); Ed Rem 471(7804) and 481(7781). 300 clock hours of doctoral-level supervised practice in counseling. Students provide counseling services to clients at field sites, teach and supervise beginning counseling trainees, and conduct clinical research projects. Students are supervised by a graduate faculty member, with 2 hours per week of group supervision or 1 hour per week of individual supervision.

**477(7785) Doctoral Internship II (3)**

Prerequisites: Cns Ed 476(7780) or concurrent enrollment. Continuation of Cns Ed 476(7780), Doctoral Internship I, with 300 clock hours of doctoral level supervised practice in counseling required. Students provide counseling services to clients at field sites, teach and supervise beginning counseling trainees, and conduct clinical research projects. Students are supervised by a graduate faculty member, with 2 hours per week of group supervision or 1 hour per week of individual supervision.

**480(7070) Advanced Clinical Issues in Counseling (3)**

Prerequisite: Doctoral standing or consent of instructor. This course will address advanced clinical issues with seriously disturbed clients.

**482(6270) School Counseling Practicum (3)**

Prerequisite: Cns Ed 410(6000) and 411(6010) (both courses with a grade of B or better) or consent of the instructor. Supervised practice in counseling with children and adolescents and the opportunity for students to learn to facilitate personal change and problem solutions using a defined systematic framework, theoretical orientation, or research base.

**483(6280) School Counseling Field Experience I (3)**

Prerequisite: Cns Ed 482(6270) with a grade of B or better and consent of instructor. A 300-hour closely supervised field experience under the direction of a graduate faculty member. Designed to move the student to an appropriate level of competence and evidence of growth in the professional school counselor role. Students will receive 1.5 hours of group and 1 hour of individual supervision weekly by a graduate faculty member.

**484(6285) School Counseling Field Experience II (3)**

Prerequisites: Cns Ed 483(6280) with a grade of B or better and consent of instructor. A 300-hour closely supervised field experience under the direction of a graduate faculty member. The course will build on and extend the School Counseling Field Experience I. The student will acquire counseling competencies and ethical practice in keeping with the Missouri state guidelines for school counselors. Students will receive 1.5 hours of group and 1 hour of individual supervision weekly by a graduate faculty member.

**485(6370) Community Counseling Practicum (1-6)**

Prerequisite: Cns Ed 410(6000) and 411(6010) and consent of instructor. One hundred clock hours of supervised practice in counseling to provide the opportunity for students to pragmatically integrate and process materials, theories, techniques, and methodologies as they are applied in the counseling profession.

**486(6380) Community Counseling Field Experience (1-6)**

Prerequisite: Cns Ed 485(6370) and consent of instructor. A 100-hour field experience for each semester-credit-hour of enrollment. Students will be closely supervised under the direction of a graduate faculty member. Students must demonstrate counseling competencies and skillful ethical practice. Students will receive 1.5 hours of group supervision weekly by a graduate faculty member and 1 hour of individual supervision weekly by field experience site supervision during terms of enrollment.

**495(6030) Foundations for Multicultural Counseling (3)**

Prerequisite: Cns Ed 411(6010). 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.

**496(7020) Seminar in Counseling Research (3)**

Prerequisite: Ed Rem 431(6710), doctoral standing or consent of instructor. The purpose of this course is to review and analyze current counseling research literature. Ethical issues will be addressed.

**497(6497) Problems (1-10)****498(7010) Advanced Multicultural Counseling (3)**

Prerequisite: Cns Ed 495(6030) and doctoral standing or consent of instructor. This advanced course addresses theories and research in multicultural counseling.

## Division of Educational Leadership and Policy Studies

### Faculty

**Carole A. Murphy**, Associate Professor\*\*, Chairperson  
Ed.D., Texas A & M University

**Judith A. Cochran**, E. Desmond Lee Professor in Tutorial Education\*\*  
Ph.D., Arizona State University

**Cecil Abrahams**, Distinguished Professor\*  
Ph.D., University of Alberta, Canada

**Lloyd I. Richardson Jr.**, Professor\*\*  
Ph.D., George Peabody College

**Charles D. Schmitz**, Professor\*\*, Dean  
Ph.D., University of Missouri-Columbia

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

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

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

**Lowe S. (Sandy) MacLean**, Vice Chancellor Emeritus\*  
Ed.D., Indiana University-Bloomington

**Thomas R. Schnell**, Associate Professor\*\*  
Ph.D., Southern Illinois University, Carbondale

**Patricia Somers**, Associate Professor\*\*  
Ph.D., University of New Orleans

**Ken Owen**, Affiliate Associate Professor\*  
Ed.D., Saint Louis University

**Steven Adamowski**, Assistant Professor  
Ph.D., St. Louis University

**Patricia Boyer**, Assistant Professor\*\*  
Ph.D., University of Missouri-Columbia

**Mary Cooper**, Assistant Professor of Adult Education\*  
Ph.D., University of Minnesota

**E. Paulette Isaac**, Assistant Professor\*  
Ed.D., University of Georgia

**Kathleen Sullivan-Brown**, Assistant Professor\*\*  
Ph.D., Washington University

**Shawn Woodhouse**, Assistant Professor\*\*  
Ph.D., University of Missouri-Columbia

**Wendell L. Smith**, Assistant Professor\* Special Assistant to the Chancellor and Dean Emeritus  
Ph.D., Ohio State University

**Margaret R. Dolan**, Affiliate Assistant Professor\*  
Ph.D., St. Louis University

**Tom Hensley**, Affiliate Assistant Professor\*, Director of Special Programs, Continuing Education and Outreach  
Ed.D., University of Missouri-St. Louis

**John Ingram Jr.**, Affiliate Assistant Professor  
Ph.D., University of Wisconsin-Madison

**Gladys E. Smith**, Affiliate Assistant Professor\*  
Director of PreCollegiate Programs  
Ph.D., St. Louis University

**Lynn Beckwith Jr.**, Superintendent in Residence\*  
Ed.D., St. Louis University

\* members of Graduate Faculty

\*\* members of Doctoral Faculty

### General Information

The Division of Educational Leadership and Policy Studies faculty is housed on the second floor of Marillac Hall. Questions about the division and its offerings may be directed to the division office, 269 Marillac Hall (314) 565-5944.

The division offers master's degree work and advanced certification studies in elementary and secondary school administration, special education administration, and the superintendence. Higher education, adult education, and community education are additional emphases offered.

The division offers courses in K-12 school administration, higher education, and adult and community education. The M.Ed. degree is offered in K-12 school administration. Both the Ed.D. and Ph.D. are offered with emphases in K-12 school administration, higher education, and adult education.

### Graduate Studies

The program options in the division include:

- Elementary and secondary school administration.
- Certification for school district administration.
- Higher education administration
- Adult and community education.

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

The school administration and certification sequences are organized into 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 and is designated the advanced certification studies program. Both phases are correlated with current Missouri requirements for certification as a principal or director of elementary or secondary education or school superintendent in Missouri schools.

The programs in higher education administration are intended to be incorporated in a doctoral program of studies, either the Ph.D. or the Ed.D. Students can expect to be involved in cohort groups, non-traditional scheduling of most courses, and to be taking selected courses that are Web-based or through interactive television. Students are responsible for developing their individual programs. They are encouraged to take full advantage of the program-

planning assistance provided by advisers early in 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 semester hours. The curriculum for Advanced Certification studies is 60 semester hours.

**Degree Requirements**

**1.00 Contexts Core (15 semester hours)**

Ed Adm 421(6201) Knowledge Contexts of Education Administration and Policy

Ed Adm 422(6202) Social Contexts of Education

Ed Adm 423(6203) Political Contexts of Education

Ed Adm 424(6204) Economic Contexts of Education

Ed Adm 425(6205) Legal Contexts of Education

**1.20 Research/Change Core (6-9 semester hours)**

\*Ed Rem 420(6707) Classroom Measurement and Evaluation

\*\*Ed Adm 431(6301) Education Administration Policy Research

Ed Adm 453(6503) Organizational Change in Education

**1.30 School Specialization Core (12 semester hours)**

**1.31 Elementary School Administration**

Ed Adm 432(6302) Elementary School Administration

Ed Adm 441(6401) School Staff Development and Supervision

Ele Ed 411(6411) Curricular Issues in Elementary Schools

Ele Ed 422(6422) Curriculum Construction in Elementary Schools

\*\*\* Ed Adm 490(6900) Internship

**1.32 Secondary School Administration**

Ed Adm 434(6304) Secondary School Administration

Ed Adm 441(6401) School Staff Development and Supervision

Sec Ed 415(6415) Secondary School Curriculum

Sec Ed 416(6416) Curriculum Construction in Secondary Schools

\*\*\*Ed Adm 490 (6900) Internship

\* Required if student had no equivalent course at the undergraduate level.

\*\* Exit course--must be taken during last semester of M.Ed. program.

\*\*\* Must be taken within the last 10 semester hours before completion of M.Ed. program.

**Master of Education: Educational Administration with Emphasis in Community Education**

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

**Degree Requirements**

2.10 Ed Fnd 421(6421) Philosophy of Education  
Ed Fnd 435(6435) History of Western Education  
OR  
Ed Fnd 320 History of American Education  
Ed Fnd 422 Social Contexts of Education  
Ed Fnd 423 Political Contexts of Education  
Total Required Sem. Hrs. Section 2.10 = 12

**2.20 Research Core**

Ed Adm 431(6301) Educational Administration Policy Research

Ed Rem 330 (5730) Educational Statistics

Total Required Sem. Hrs. Section 2.20 = 6

**2.30 Community Education**

Ed Rem 461(6601) Administration of Community and Adult Education

Ed Adm 462 (6602) Programming in Community and Adult Education

Ed Adm 490(6900) Internship: Community Education

Total Required Sem. Hrs. Section 2.30 = 9

**2.40 School Specialization\*\***

**2.41 Elementary School Administration**

Ed Adm 432(6302) Elementary School Administration

Ele Ed 411(6411) Curricular Issues in the Elementary School

OR

Ele Ed 422(6422) Curriculum Construction in Elementary Schools

Total Required Sem. Hrs. Section 2.41 = 6

**2.42 Secondary School Administration**

Ed Adm 434(6304) Secondary School Administration

Sec Ed 415(6415) The Secondary School Curriculum OR

Sec Ed 416(6416) Curriculum Construction for Secondary Schools

Total Required Sem. Hrs. Section 2.42 = 6

TOTAL Master of Education-Community Educ = 33

\*Exit Requirement--Taken within the last 9 semester hours of the M.Ed. program.

\*\*Students take either section 2.41 or section 2.42, not both sections.



## Course Descriptions

### Educational Administration (Ed Adm)

Prerequisites may be waived by consent of the department.

#### 411(6101) Foundations of School Administration I (1)

Prerequisites: Admission to the masters, doctoral, and/or certification programs in education administration. This course is (1) an introduction to the sources of knowledge and information about education administration, (2) a review of written and oral communications standards in education administration, and (3) the uses of technology in education administration. Each student will be assigned to a Collegium (5-10 students under the direction of a faculty adviser) and begin the construction of a portfolio of academic work. Students will remain in their assigned collegium until they complete their programs of study.

#### 412(6102) Foundations of School Administration II (1)

Prerequisites: Ed Adm 411(6101). This course must be taken during the middle third of the thirty-three (33) semester hour M.Ed. program or any administrator certification program. The course is designed to engage students in activities that relate the academic study of education administration to practice in the schools and to continue the construction of their individual portfolios.

#### 413(6103) Foundations of School Administration III (1)

Prerequisites: Ed Adm 412(6102). This course must be taken during the last semester of the thirty-three (33) semester hour M.Ed. program or any administrator certification program. The course engages the student in an assessment simulation that parallels that of the Interstate School Leaders Licensure Consortium Council (ISLLC) of the Council of Chief State School Officers (CCSSO). Students will complete their individual portfolios by the end of this course.

#### 421(6201) Knowledge Contexts of Education Administration and Policy (3)

Prerequisites: Enrolled in Ed Adm program or consent of instructor. This course is a survey of the various views of knowledge that have influenced the nature of the organizational structures and policies of American educational institutions. The course is framed both by the purposes of American education and the scientific management movement of the first quarter of the 20<sup>th</sup> Century.

#### 422(6202) Social Contexts of Education (3)

Prerequisites: Ed Adm 421(6201) or consent of instructor. This course is a critical examination of different perspectives on the social structures within which education policies are constituted and their concomitant practices implemented.

#### 423(6203) Political Contexts of Education (3)

Prerequisites: Ed Adm 421(6201) or consent of instructor. This course is a critical examination of those aspects of local, state, and federal politics which significantly influence the political contexts within which education policies are constituted and their concomitant practices implemented.

#### 424(6204) Economic Contexts of Education (3)

Prerequisites: Ed Adm 421(6201) or consent of instructor. This course is a critical examination of those aspects of local, state, and national economic structures which influence the nature of education policies and their concomitant practices.

#### 425(6205) Legal Contexts of Education (3)

Prerequisites: Ed Adm 421(6201) or consent of instructor. This course is a critical examination of both (1) local, state, and federal laws and (2) Western notions of justice within which education policies are constituted and their concomitant practices implemented.

#### 431(6301) Education Administration Policy Research (3)

Prerequisites: consent of instructor. A study of issues and trends in basic, applied, and action research in educator al policy making.

#### 432(6302) Elementary School Administration (3)

Prerequisite: Completion of at least (15) credit hours of the M.Ed. in Education Administration or consent of instructor. 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.

#### 433(6303) Middle School Administration (3)

Prerequisites: Completion of at least (15) credit hours of the M.Ed. in Education Administration or consent of instructor. This course is a comprehensive, systematic study of the middle school principalship. Emphasis is placed on relating theories of learning, teaching, and organization to effective administration of middle schools.

#### 434(6304) Secondary School Administration (3)

Prerequisites: Completion of at least (15) credit hours of the M.Ed. in Education Administration or consent of instructor. 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.

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**435(6305) School District Administration (3)**

Prerequisite: Enrolled in Advanced Certification Program and/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.

**441(6401) School Staff Development and Supervision (3)**

Prerequisite: Ed Adm 421(6201) and/or consent of instructor. This course provides an examination of the conceptual bases and practical applications of staff development and supervision in educational settings. It explores relevant conceptual models presented as heuristic devices to consider a variety of administrative techniques to assess needs, plan, deliver, and evaluate staff development and supervision programs in schooling.

**442(6402) School Personnel Administration (3)**

Prerequisite: Advanced graduate standing and/or consent of instructor. This course is a comprehensive, systematic study of problems in planning, recruitment, selection, induction, and retention relative to school personnel.

**443(6403) Problems in School Public Relations (3)**

Prerequisites: Advanced graduate standing and/or consent of instructor. This course is an examination of a range of both traditional and critical perspectives relevant to home-school-community relations.

**444(6404) Collective Negotiations in Educational Organizations (3)**

Prerequisites: Advanced graduate standing and/or consent of instructor. 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.

**445(6405) Extracurricular Activities (3)**

Prerequisites: Graduate standing and/or consent of instructor. Activities related to the extracurricular program of secondary schools will be studied in depth. Analyses of appropriate activities will include the nature and purposes of these activities.

**446(6406) Leadership in Educational Administration (3)**

Prerequisites: Advanced graduate standing and/or consent of instructor. 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.

**451(6501) Principles of Public School Finance in Missouri (3)**

Advanced graduate standing and/or consent of instructor. 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.

**452(6502) School Buildings and Sites (3)**

Prerequisites: Advanced graduate standing and/or consent of instructor. This course deals with methods and procedures for (1) projecting the future building and facility needs of a public school district, (2) supervising actual planning and construction of educational facilities, (3) optimizing the use of current facilities, and (4) maintenance of buildings, grounds, and equipment.

**453(6503) Organizational Change in Education (3)**

Prerequisite: Advanced graduate standing and/or consent of instructor. 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.

**461(6601) Administration of Adult and Community Education (3)**

Prerequisites: Graduate standing and/or consent of instructor. 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.

**462(6602) Programming in Community and Adult Education (3)**

Prerequisite: Ed Adm 461(6601) and/or consent of instructor. 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.

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**463(6603) Financing of Community Education (3)**

Prerequisites: Graduate standing and/or consent of instructor. 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.

**481(7800) Education Administration Doctoral Seminar (1-6)**

Prerequisites: Admission to doctoral program and consent of instructor. Intensive directed study of selected issues related to the administration of educational institutions.

**482(6800) Education Policy Studies Seminar (1-6)**

Prerequisites: Admission to doctoral program and consent of instructor. Intensive directed study of selected education policy issues.

**490(6900) 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(6497) Problems (1-10)**

**Higher Education (HIR ED)**

**401(5401) Current Issues in Higher Education (3)**

Prerequisites: Graduate admission. Familiarizes student with nature and characteristics of American higher education--structure of higher education, roles played by various constituencies, and current issues.

**402(5402) Student Affairs Administration (3)**

Prerequisites: Graduate admission. Survey course in student personnel administration with emphasis on understanding college student and on learning ways to meet his/her academic and nonacademic needs.

**404(6404) The Seminar (1-10)**

Prerequisites: Graduate standing.

**405(6405) Financial Issues in Higher Education (3)**

Prerequisites: Graduate standing. Provides an overview of the state/federal funding mechanisms for higher education in the U.S. Addresses practices in budgeting at various types of postsecondary institutions.

**406(6406) Governance of Higher Education (3)**

Prerequisites: Graduate admission. Concentrates on study of unique system of governance in higher education,

including faculty, institutional, system, and state governing mechanisms.

**420(6420) Legal Aspects of Higher Education (3)**

Prerequisites: Graduate admission. Examines legal rights and responsibilities of faculty, students, staff, and administrators. Includes fair employment, due process, affirmative action, and liability.

**421(6421) Legal Aspects of Postsecondary Teaching (3)**

Prerequisites: Graduate admission. Examines legal issues of interest to faculty. Areas include faculty (contracts, grievances/appeals/affirmative action, free speech, tenure) and student (disability, sexual harassment, academic integrity, free speech, classroom incivility, student behavioral standards, grades) issues.

**422(6422) Policy Analysis of Higher Education (3)**

Prerequisite: Graduate admission. Introduces students to the analysis of higher education public policy. Includes state and local policy analysis and examination of legislative history of major federal higher education laws.

**430(6430) The Community College (3)**

Prerequisites: Graduate admission. Develops an understanding of the two-year college--its past, present, and future. Examines history, operations, funding, internal constituents, curricular mission, societal role, and current issues.

**440(6440) Issues in Institutional Research I (3)**

Prerequisites: Graduate standing. Provides a history and overview of institutional research in postsecondary education. Other areas of interest include student issues, student outcomes, higher education funding, productivity funding, and legal issues.

**441(6441) Issues in Institutional Research II (3)**

This course provides the study of key issues in institutional research, including faculty workload and salary, program assessment, fact books, peer institutions, national databases, and strategic planning.

**473 (6473) Curriculum in Higher Education (3)**

Prerequisites: Graduate standing and/or consent of instructor. The development, implementation, and assessment of curriculum in higher education as well as historical and philosophical perspectives; major figures and emerging trends are included.

**474(6474) The College Student (3)**

Prerequisites: Graduate standing and/or consent of instructor. A comprehensive overview of the theories and research related to college and university student development. Particular attention is given to student demographics, patterns of growth and development, and attitudinal changes.

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**476(6476) Organization and Administration of Higher Education (3)**

Prerequisites: Graduate standing and/or consent of instructor. This course includes the study of the missions, governance, and organizational structures of American higher education institutions. Within this context, particular attention is given to administrative roles, responsibilities, and issues of leadership.

**477(6477) History and Philosophy of American Higher Education (3)**

Prerequisites: Graduate standing and/or consent of instructor. This course is a systematic study of the historical and philosophical contexts that have conditioned the evolution of American higher education. Particular attention is given to significant events, trends, and movements within American higher education.

**481(7800) Higher Education Doctoral Seminar (1-6)**

Prerequisites: Doctoral standing and/or consent of instructor. Intensive directed study of selected issues related to the administration of higher education institutions.

**490(6900) Internship (1-10)**

Prerequisites: Graduate standing and/or consent of the instructor. Closely supervised experience in a field 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(6497) Problems (1-10)**

Prerequisites: Graduate standing and/or consent of the instructor.

**Adult Education (Adu Ed)****311(4311) 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.

**404(6404) Seminar in Adult Education Research (1-10)**

Prerequisites: Adu Ed 410(6410) or consent of instructor. A review of current research on various topics in the field of adult education. An in-depth study of these research topics will be conducted. Application to the field of adult education will be considered. Special focus will be placed on assessing and improving competency in educational, corporate and community settings.

**410(6410) The Adult Learner (3)**

This course is designed for those who help adults learn in a variety of settings. A study will be made of the characteristics of Adult Learners and various theories of

how they learn, as well as the implications of these characteristics and theories for adult education research, programming, curriculum, planning, and instructional practice.

**411(6411) History of Adult Education (3)**

Prerequisites: Adu Ed 410(6410). A study of the historical foundation of adult education in America will include the major theorists and their contributions and the continuing education of the adult in a progressive social context.

**412(6412) Philosophical Foundations of Adult Education (3)**

Prerequisites: Adu Ed 410(6410) or consent of instructor. A comprehensive, systematic philosophical foundation for adult education. Exploration of philosophical underpinnings of various approaches to education of adults--role of learner, teacher, and objectives within each philosophy.

**413(6413) Improvement of Instruction in Adult Education (3)**

Prerequisites: Adu Ed 410(6410) 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(6414) Curriculum Theory and Development in Adult Education (3)**

Prerequisites: Adu Ed 410(6410) 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.

**416(6416) Survey of Adult Distance Education (3)**

Prerequisites: Adu Ed 410(6410). Survey of distance education covers concept, theories, history, present practice, delivery systems, major issues and directions of distance learning. Emphasis on research and practice in U.S.; however, course will explore topics and issues in distance education from international perspective, identifying similarities and differences among countries.

**417(6417) Multicultural Issues in Adult Education (3)**

Prerequisites: Adu Ed 410(6410). Discussion of cultural diversity from an adult education perspective. Topics include cultural self-awareness, challenges/issues in intercultural educational settings, theoretical perspectives of multicultural education, and practitioner concerns and strategies for implementing multiculturalism in adult education settings.

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**418(6418) Assessment in the Adult Classroom (3)**

Prerequisites: AduEd (6) 410 (6410) & EdRem 420(6707) or consent of instructor. This course addresses assessing how effectively adult educators are facilitating adult learning. Emphasis will be on knowledge and skills, learner characteristics, and learner reactions to instruction effectiveness in the adult classroom. Special attention will focus this assessment in the adult classroom within educational, corporate, community, and non-formal settings.

**419(6230) Adult Learning and Development (3)**

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

**420(6420) Survey of Human Resource Development and Adult (3)**

Prerequisites: Graduate standing and permission of instructor. Overview of fields of human resource development and adult education. Examines societal contexts within which training of adults and organization development occur. Explores systems theory that frames a discussion of adult education, training, and organization development. Represents unique characteristics of each field as well as ways in which two fields come together, along with general concepts: definitions, philosophies, goals, sponsoring agencies, professional roles, processes, participants, and resources.

**425(6425) 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(6426) 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(6427) Improvement of Instruction in Teaching Business Subjects (3)**

Prerequisites: Business education certification or 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(6432) 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(6435) Problems in Teaching College Biology (3)**

(Same as Biology 485(5985). 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(6990) Internship (1-10)**

Prerequisites: Adu Ed 410(6410) or 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(6497) Problems in Adult Education (1-10)**

Prerequisites: ADU ED 410(6410) or consent of instructor. Independent study on topics in adult education.

## Division of Educational Psychology, Research and Evaluation

### Faculty

**Matthew W. Keefer**, Associate Professor and Chair\*\*

Ph.D., University of Toronto

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

Ph.D., Wayne State University

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

Ed.D., Indiana University

**William L. Franzen**, Professor \*, Dean Emeritus

Ph.D., University of Wisconsin

**Margaret W. Cohen**, Associate Professor\*\*

Interim Associate Vice Chancellor of Academic Affairs,  
Director, Center Teaching Excellence

Ph.D., Washington University

**Steven D. Spaner**, Associate Professor\*\*

Ph.D., Southern Illinois University-Carbondale

**Elisha A. Chambers**, Assistant Professor\*

Ph.D. Southern Illinois University, Carbondale

**Cody S. Ding**, Assistant Professor\*

Ph.D., University of Minnesota

**Donald A. Gouwens**, Assistant Professor\*

Psy.D., Central Michigan University

**Clark J. Hickman**, Assistant Professor and Associate

Dean of Continuing Education and Outreach\*

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

**Stephen A. Sherblom**, Assistant Professor\*

Ed.D., Harvard University

**Virginia L. Navarro**, Assistant Professor\*\*

Ph.D., Washington University

\* members of Graduate Faculty

\*\* members of Doctoral Faculty

### General Information

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

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

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

### **Course Descriptions**

Courses in this section are grouped as follows:

**Educational Psychology (Ed Psy) and Educational Research and Evaluation Methods (Ed Rem)**

#### **Educational Psychology (Ed Psy)**

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

Prerequisite: Psych 3(1002). (Same as Tch Ed 212(2212)) Foundational study of development of infants, children and adolescents focusing on role of appropriate educational environments in fostering positive physical, cognitive, social, and moral outcomes. Reading relevant research will be combined with experiences in the field and technology-based assignments to investigate influences that shape development processes.

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

Prerequisites: Tch Ed 210(2210), Tch Ed 211(2211), Tch Ed 212(2212) or equivalents and admission to Teacher Education program. (Same as Tch Ed 312(3312)). Application of the principles of psychology to an understanding of the dynamics of teaching behavior and learning behavior. Involves both theoretical and practical approaches to analysis of the learning environment of the school. Required of all who are preparing to teach. Includes a field experience.

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

(Same as Nursing 325(4725)). 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(6404) Seminar (1-10)**

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

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

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

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

##### **411(6111) 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(6310) Psychology of Learning Processes (3)**

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

##### **413(6113) 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(6215) Psychology of Early Childhood Development (3)**

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

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

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

##### **418(6225) The Psychology of Adolescence (3)**

Prerequisite: Ed Psy 411(6111) or consent of instructor. Current research on the psychological changes which occur during adolescence. Attention is paid to the family, school, peer groups, and contemporary settings that practitioners must understand to help young people meet the psychosocial challenges of adolescence.

##### **419(6230) Adult Learning and Development (3)**

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



**420(6534) 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.

**421(6536) Biological Factors Influencing Human Behavior (3)**  
Prerequisite: Ed Psy 411(6111) or Ed Psy 412(6310) or consent of instructor. Examination of biological factors affecting human behavior. Includes an overview of neuroscience, developmental psychophysiology, and basic psychopharmacology. Implications for psychological and educational interventions are considered.

**430(6530) Foundations of School Psychology (3)**  
Prerequisites: Graduate standing and consent of the instructor. Focus on educational foundations of school psychology including the organization and operation of schools. The historical and emerging roles, responsibilities, and functions of a school psychologist are analyzed.

**431(6550) Professional Issues in School Psychology (3)**  
Prerequisites: Ed Psy 430(6530). Advanced examination of professional issues facing school psychologists including legal and ethical considerations, standards of practice, and alternative models of service delivery.

**432(6532) Psycho-Educational Differences in Childhood (3)**  
Prerequisite: Ed Psy 410(6210) or Ed Psy 417(6220) or Ed Psy 418(6225) or consent of instructor. Examination of educational and mental health challenges first seen in childhood, with an emphasis on understanding both educational and mental health classification systems.

**433(6540) Psycho-Educational Interventions in Childhood (3)**  
Prerequisites: Ed Psy 430(6530) and Ed Psy 432(6532) or Cns Ed 410(6000) or consent of instructor. Examination and evaluation of educational and mental health interventions delivered in schools and related settings, with emphases on primary prevention and systems perspectives.

**434(6545) Consultation in Schools and Related Settings (3)**  
Prerequisite: Ed Psy 430(6530) or Cns Ed 410(6000) or consent of instructor. An examination of theoretical principles, research, and legal and ethical issues as applied to consultation practices in schools and related settings.

**440(6440) Moral Development and Education (3)**  
Prerequisites: Ed Psy 410(6210) or Ed Psy 417(6220) or ED PSY 418(6225) or consent of the instructor. An introduction and overview of moral psychology and its

implications for creating learning environments. Questions of human morality are by nature cross-disciplinary, and readings and discussions will involve questions of epistemology, human nature, conceptions of "the good life," evidence for the malleability of human development, and research regarding the foundation, nature, and complexity of moral development.

**441(6445) Character Education and Development (3)**  
Prerequisites: Ed Psy 411(6111) and Ed Psy 417(6220) or Ed Psy 418(6225). Critical survey of theories of character development and models for character education in childhood and adolescence. Includes empirical and conceptual study of the nature of moral character, how it develops, and how it can be fostered in schools.

**442(7642) Sociocultural Perspectives in Education (3)**  
Prerequisites: Doctoral standing or consent of instructor. Investigation of sociocultural theory with a focus on educational applications. Topics include the social formation of mind, language as cultural tool, methodological issues in social science research, and dialogic inquiry as pedagogy.

**443(7644) Motivation Theory in Education (3)**  
Prerequisites: Ed Psy 411(6111) and doctoral standing or consent of instructor. Focuses on the social and cognitive aspects of contemporary theories of motivation and examines supporting research. Participants will apply theory to settings of teaching and learning, training, and counseling relevant to their interests.

**445(7640) Changing Perspectives in Educational Psychology (3)**  
Prerequisites: Ed Psy 411(6111) and doctoral standing or consent of instructor. The advanced exploration of foundational issues in educational psychology. Topics include theoretical perspectives of modes analysis used in the investigation of psychological theories and concepts in education.

**446(6450) Advanced Methods in Character Education (3)**  
Prerequisite: Ed Psy 441(6445). Advanced exploration of methods for promoting character development in schools: class meetings, democratic processes, cross-age learning and character curriculum development. Methods will be critically examined for their empirical and theoretical justifications.

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**447(7647) Teaching for Learning in the Univ. (3)**  
Prerequisites: Graduate standing and consent of the instructor. An examination of current research in learning, motivation, and assessment as it pertains to teaching and learning in post-secondary settings. Designed to guide graduate students to promote active and meaningful learning in college classrooms to develop college students' critical thinking skills. Graduate students across the disciplines may enroll.

**448 Technology-Supported Inquiry Learning (3)**  
Prerequisites: Ed Tec 340(5340) & Ed Psy 412(6310), or consent of instructor. Educational technology such as networked computers and software can play a supportive role in inquiry-based learning. Students will explore the theoretical background, design issues, and pragmatic realities of technology-supported inquiry learning environments. Such learning environments are best understood as systems involving social, cultural, material and psychological aspects. Consideration will be given to the important properties of settings, activities and technologies, as well as to the role of instructors. (Same as Ed Tec 448)

**489(6590) School Psychology Practicum (3-6)**  
Prerequisites: Grade B- or better in Ed Rem 423(6718), Ed Psy 431, Ed Psy 432(6532), and consent of instructor. Supervised experience in psycho-educational assessment, intervention, consultation, and instructional strategies in schools and related settings. Settings and responsibilities to be determined in consultation with site supervisor and program faculty. May be repeated.

**490(6990) 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(6497) Problems (1-10)**

**Educational Research and Evaluation  
Methods (Ed Rem)**

**320(3720) 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.

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

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

**330(5730) Educational Statistics (3)**

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

**404(6404) 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(6705) Evaluation of Data Analysis Programs (3)**

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

**420(6707) Classroom Measurement and Evaluation (3)**

Prerequisites: Graduate admission or consent of instructor. An introductory graduate course to classroom testing and evaluation. Topic areas include comparison of criterion- and norm-referenced theory and technique; classical test theory, reliability, validity and associated descriptive statistics; derived and transformed scores; preparation of instructional objectives for use in developing the classroom test; performance evaluations, and portfolio rubrics.

**421(6709) Educational and Psychological Measurement (3)**

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

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

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

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

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

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

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

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

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

**441(6714) Action Research in Education (3)**

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

**442(6720) Nonparametric Statistics in Education (3)**

Prerequisite: Ed Rem 431(6710) 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.

**451(6730) Educational Program Evaluation (3)**

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

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

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

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

Prerequisite: Admission to doctoral education and Ed Rem 420(6707), or Ed Rem 421(6709), or consent of instructor. An advanced course in measurement theory and practice: issues of reliability, validity, and item analysis for both criterion and norm referenced tests; introduction to factor analysis in the development and analysis of test structure and validity; introduction to item response theory for the improvement of educational testing and research.

**471(7771) Quantitative Research Methods I (3)**

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

**472(7772) Quantitative Research Methods II (3)**

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

**473(7773) Quantitative Research Methods III (3)**

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

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

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

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

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

**490(6990) 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(6497) 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.

## Division of Teaching and Learning

### Faculty

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Gayle Wilkinson**, Associate Professor\*\*  
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**George J. Yard**, Associate Professor Emeritus\*  
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Ph.D., University of New Mexico

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Ph.D., Northwestern University

**Karen Hirsch**, Assistant Professor  
Ph.D., University of North Carolina

**Joseph L. Polman**, Assistant Professor  
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**Kim Song**, Assistant Professor  
Ed.D. Southern Illinois University-Edwardsville

**Laura Westhoff**, Assistant Professor  
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**Sheridan Wigginton**, Assistant Professor  
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**Linda Cason**, Lecturer; Director, Gateway Writing  
Project;  
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**Jacquelyn A. Lewis-Harris**, Lecturer  
M.A., Washington University

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

\* members of Graduate Faculty

\*\* members of Doctoral Faculty

### General Information

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

The physical education offices are located at 234 Mark Twain Building.

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

**Early Childhood Education**  
**Elementary Education**  
**Physical Education**  
**Secondary Education**  
**Special Education**

And the B.E.S. degree in:

**Early Childhood Education**  
**Exercise Science Education**  
**Professional Education**

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

The early childhood undergraduate program is designed for students wishing to teach and direct programs for children from pre-kindergarten through grade three. Students electing this program will work directly with young children as a part of their professional courses.

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

The elementary education program prepares students to teach in grades one through six. Students may also tailor a program leading to a middle school/junior high teaching certificate. A special feature of these programs is the many opportunities to work with children in schools as part of the professional course work.

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

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

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

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

The secondary education program prepares students for teaching these subjects in secondary schools (grade 9-12): biology, business, chemistry, English, French, German, history, mathematics, music, physics, psychology, social studies, speech and Spanish. A special feature of these programs is the close interdisciplinary cooperation between the professional school and other university departments.

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

At the graduate level, the division provides a program leading to an M.Ed in secondary education with emphasis in: adult education, certification studies with adult basic education, secondary education with emphasis in reading, and secondary education and certification. It offers graduate degree work and advanced certification studies in elementary and secondary school administration, special education administration, and the school superintendency.

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

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

Note The State Board of education developed standards for renewable professional certificates, based on specific requirements for training and experience. Details regarding these standards are available in the office of undergraduate studies in education.

#### **Bachelor of Educational Studies**

##### **Admission Requirements**

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

- Be regularly admitted to the College of Education.

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

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

#### General Education Requirements

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

#### Communicative Skills (2 requirements)

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

#### Mathematical Skills

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

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

- Humanities
- Natural sciences and mathematics
- Social sciences

#### Other Requirements

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

#### Degree Requirements

##### Cultural Diversity Requirement (3 hours)

- Ed Psy 312(3312)/Tch Ed 312(3312), The Psychology of Teaching and Learning (3 hours)
- Communication 40(1040), Introduction to Public Speaking (3 hours)
- 6 hours in Psychology or Educational Psychology numbered 200 or higher

- Ed 290(2290), Internship (6 hours)
- Ed 291(2291), Internship (6 hours)
- At least one of the following:
- Phy Ed 282(3282), Physical Growth and Motor Development (3 hours)
- Ed Psy 211, Growth and Development, Ed Psy/Tch Ed 212(2212), (3 hours), Introduction to learners and Learning (3 hours), or equivalent
- Psy 272(2272), Adult Development and Aging (3 hours; same as Gerontology 272(2272))

#### Emphasis in Early Childhood

One of the following two:

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

Total: 27 hours

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

#### Emphasis in Exercise Science

All of the following:

- Bio 113(1131), Human Physiology and Anatomy I (4 hours)
- Bio 114(1141), Human Physiology and Anatomy II (4 hours)
- Phy Ed 204(3204), Special Topics in Physical Education (1-3 hours)
- Phy Ed 283(3283), Kinesiology (3 hours)
- Phy Ed 284(3284), Physiology of Human Exercise (3 hours)
- Phy Ed 285 (3285), Sports Medicine (3 hours)



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

Total 27-29 hours

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

#### **Emphasis in Professional Education Studies**

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

Second Concentration: Electives to total 12 hours to be chosen from an area not selected above or ECH ED, PHY ED, TCH ED, CNS ED, ED PSY, ED REM or ED TEC.

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

#### **Early Childhood Education (Ech Ed) Undergraduate Studies**

##### **Bachelor of Science in Education: Early Childhood**

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

##### **General Education Requirements:**

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

##### **English and Communication (9 hours)**

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

##### **Communication: 3 hours**

##### **Mathematics (3 hours)**

Math 50(1150), Structure of Mathematical Systems I

##### **Biological Science: includes lab (5 hours)**

General Biology 001/Lab 003(1012/1013)

##### **Physical Science: includes lab (4 hours)**

##### **Humanities (8 hours)**

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

##### **Social Science (15 hours)**

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

and one of the following history courses

His 3, American Civilization

His 4(1002), American Civilization

and the following courses:

Pol Sci 85(1850), Global Ecology

Soc 10(1010), Introduction to Sociology, or

any anthropology course.

##### **Degree Requirements**

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

##### **Level I: Exploring Education as a Profession**

Tch Ed 210(2210), Introduction to Teaching

Tch Ed 211(2211), Introduction to American Schools

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

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

Tch Ed 310(3310), Introduction to Instructional Methods

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

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

Tch Ed 315(3315), Literacy Learning and Instruction

Phy Ed 130(3430), Elements of Health Education

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

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

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

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

plus these **Early Childhood Education (Ech Ed)** courses:  
Note Ech Ed 290(3290) and Ech Ed 291(3291) must be taken during the same semester.

312(3312), Introduction to Early Childhood Education  
317(4317), Assessing Individual Needs for Early Childhood

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

332(3332), Early Literacy

346(4346), The Acquisition of Mathematical Concepts

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

314(3314), Curriculum and Practice: Preschool

315(3315), Curriculum and Practice: Primary

303(3303), Curriculum and Practice Laboratory: Infant/Toddler

304(3304), Curriculum and Practice Laboratory: Preschool

305(3305), Curriculum and Practice Laboratory: Primary  
290(3290), Student Teaching in Early Childhood  
Education I (6 hrs)  
291(3291), Student Teaching in Early Childhood  
Education II (6 hrs)

Attention education majors: Professional education  
courses must be completed with a grade point average of  
2.50 and no grade lower than a C- (2.0).  
Total: A minimum of 120 hours

## Graduate Studies

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

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

#### Core Competencies (12 hours):

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

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

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

#### Curricular Application Competencies (9 hours):

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

Ed Rem 420(6707), Classroom Measurement and  
Evaluation  
Ed Rem 421(6709), Educational and Psychological or  
Measurement  
Ed Rem 431(6710), Educational Research Methods (an  
option if a prerequisite measurement course was completed  
at the undergraduate level)  
Ele Ed 422(6422), Curriculum Construction in Elementary  
School

Ele Ed 423(6423), Curriculum Implementation in  
Elementary School

## Career Outlook

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

## Elementary Education (Ele Ed)

### Undergraduate Studies

#### Bachelor of Science in Education: Elementary Education

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

#### General Education Requirements:

##### English and Communication (9 hours)

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

##### Mathematics (6 hours)

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

##### Biological Science: includes lab (5 hours)

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

##### Physical Science: includes lab (4 hours)

##### Humanities (8 hours)

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

##### Social Science (18 hours)

Psych 3(1003), General Psychology

Pol Sci 11(1100), introduction to American Politics,  
or equivalent

And one of the following history courses:

His 3, American Civilization

His 4(1002), American Civilization

Pol Sci 85(1850), Global Ecology

Soc 10(1010), Introduction to Sociology, or

Any anthropology course.  
Econ 306(3052), Microeconomics for the School Curriculum

### Program Requirements

#### Level I: Exploring Education as a Profession

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

#### Level II:

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

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

\*Internship hours are met through special methods courses in Level III.

246(4246), Teaching Mathematics in the Elementary School  
253(4253), Teaching Social Studies in the Elementary School  
330(3330), Children's Literature and Reading  
336(3336), Teaching Language Arts and Reading N-9  
341(4341), Teaching of Science in the Elementary School  
389(3389), The Analysis and Correction of Reading Problems in the Classroom  
\*291(3291), Elementary School Student Teaching

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

#### Middle School/Junior High (5-9)

General education requirements are the same as for elementary education, except that Psychology 271, Adolescent Psychology, is taken in lieu of Psychology 270(2270), Child Psychology.

#### Related Area Requirements

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

#### Program Requirements

Tch Ed 211(2211), Introduction American Schools  
Ed Psy 312((3312), Psychology of Teaching and Learning  
Tch Ed 313(2213), Instruction to Learners with Disabilities and Inclusive Education and these  
**Elementary Education (Ele Ed) courses:**  
246(4246), Teaching Mathematics in the Elementary School  
253(4253), Teaching of Social Studies in the Elementary School

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

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

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

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

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

#### Total: 120 hours

#### Bachelor of Science in Education: Elementary Education (Middle School Certification)

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

#### General Education Requirements

General education requirements are the same as for elementary education.

#### Related Area Requirement

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

#### Program Requirements

#### Level I: Exploring Education as a Profession

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

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

Sec Ed 315(4315), The Middle Level School  
Ele Ed 316(4316), Middle Level Curriculum and Instruction  
Tch Ed 310(3310), Introduction to Instructional Methods  
Tch Ed 312(3312), The Psychology of Teaching and Learning  
Tch Ed 313(3313), Introduction to Learners with Disabilities and Inclusive Education  
Tch Ed 386(4391), Teaching Reading in the Secondary School Content Area

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

Ele Ed 389(3389), The Analysis and Correction of Reading Problems in the Classroom

Sec Ed 305(4880), Writing for Teachers

Ele Ed 317(4317), The Middle level Child

Spc Ed 320(4320), Behavior Management

**Special Methods**

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

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

Ele Ed 253(4253), Teaching of Social Studies in the Elementary School

Ele Ed 246(4246), Teaching Mathematics in the Middle School

Ele Ed 341(4341), Teaching of Science in the Elementary School

Ele Ed 291(3291), Student Teaching

**Area of Concentration for State Certification**

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

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

**Minimum of 120 hours.**

**Graduate Studies**

**Master of Education: Elementary Education**

**General Curricular Program or Specialization in Selected Curricular Areas**

The M.Ed. student in elementary education may elect a general program or the emphasis in reading. Please note, however, that in either case the degree is the master of education in elementary education. Diplomas and transcripts do not show areas of specialization, nor are special certificates awarded.

**1) Core Competencies (12 hours)**

To include Ele Ed 410(6410), Current Research in the Elementary School Curriculum; Ele Ed 411(6411), Curricular Issues in the Elementary School; and 6 hours selected, in consultation with advisers, from among cognate fields or professional education.

**2) Content Competencies (12 hours)**

Students desiring to specialize through a sequence of courses should select at least 9 hours in one of the following areas: children's literature, early childhood, language arts, mathematics education, reading, science

education, social studies education, or special education. Students who elect a general sequence should take no more than 6 hours in any one area.

**3) Curricular Applications Competencies (9 hours)**

Students must select, in consultation with their advisers, a measurement course, and complete the following: Ele Ed 422(6422), Curriculum Construction in Elementary Schools, and Ele Ed 423(6423), Curriculum Implementation in the Elementary School.

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

Electives should be selected according to candidates' needs and/or interests.

**Emphasis in Reading**

The M.Ed. program with emphasis in reading is designed to enable candidates to further their competencies as reading teachers and prepares them for positions as remedial reading specialists, reading consultants, and/or for further graduate study. The minimum required and recommended courses are as follows:

**1) Core Requirements**

At least one graduate-level course in each of the following areas: learning psychology; research, statistics, and measurements; and elementary curriculum.

**2) Courses in Reading**

The following required courses in reading should be taken in sequence. Courses denoted by asterisks are required for certification in remedial reading by Missouri teacher certification regulations. Students, with their advisers' permission, may substitute other courses for any requirement if they have had a recent upper-class undergraduate course covering the same material:

**Required are:**

\*Ele Ed 385, Teaching Reading in the Elementary School

\*Sec Ed 386, Teaching Reading in Secondary School

**Content Areas**

These elementary education (Ele Ed) courses:

\*486(6486), Clinical Diagnosis and Treatment of Reading Disabilities

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

Note Spc Ed 412(6412), 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(6421), Philosophy of Education
- Adu Ed 311(4311), Teaching Basic Reading Skills to Adults
- Ele Ed 484(6484), Developmental Reading (K-13)
- Ele Ed 488(6488), Supervision of School Reading Programs

### Certification Options

A combined M.Ed. and certification option exists. Options include elementary education (1-8), early childhood education (PK-3), and middle school/junior high (4-9). Students should consult certification advisers. Graduate credit will not be given for courses at the 100 or 200 level.

### Career Outlook

Undergraduate and graduate degrees in elementary education are most directly applicable to teaching at the level appropriate to the program emphasis. Increasing specialization of teaching assignments and downward extensions of ages of schooling continue to open employment opportunities. As in the past, elementary education graduates at all degree levels also continue to be attractive candidates for employment in many positions, which require (or are well suited to) training in social and behavioral sciences. Positions in constant contact with and service to the general public such as sales, service, public relations, and general business are most common

examples. Future expansions of opportunities in schools are tied to population growth, increased specialization of services, and reduction in ratios between professional staff and children served. Many currently employed teachers will retire within the next 5-10 years; consequently, a shortage of teachers is anticipated.

### Physical Education (Phy Ed)

#### Undergraduate Studies

#### Bachelor of Science in Education: Physical Education

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

#### Communication Skills (9 hours)

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

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

#### Humanities (8 hours)

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

#### Social Science (9 hours)

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

#### Natural Science (8 hours)

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

#### Mathematics (3 hours)

- One college-level mathematics course

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

#### Electives 11-14 hours

#### PK-9 Emphasis

The following theory of physical education (Phy Ed) courses are required, 31 hours, to be taken with Level I professional education courses:

- 234(3434), Teaching of Wellness and Health Related Fitness (4 hrs)
- 261(3261), Physical Activity for the Exceptional Learner (2 hrs)

- 267(3267), Performance Analysis in Physical Education (3 hrs)
- 275(3275), Psychological Aspects of Physical Education (3 hrs)
- 277(3277), Historical/Philosophical Foundations of Physical Education and Sport (2 hrs)
- 280(3280), Human Anatomy and Physiology, (5 hrs)
- 282(3282), Physical Growth and Motor Development (3 hrs)
- 283(3283), Kinesiology (3 hrs)
- 284(3284), Physiology of Human Exercise (3 hrs)
- 285(3285), Sports Medicine (3 hrs)

The following courses in teaching of skills are required in physical education (Phy Ed), 14 hours, to be taken with Level II professional education courses. These courses are required:

- 220(3420), Teaching of Skills: Movement and Rhythms (3 hrs)
- 221(3421), Teaching of Skills: Dance (3 hrs)
- 222(3422), Teaching of Skills: Grades PK-4 (4 hrs)
- 223(3423), Teaching of Skills: Grades 5-9 (4 hrs)

The following professional education courses are required (31 hours):

**Level I: Exploring Education as a Profession**

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

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

- Tch Ed 312(3312), Psychology of Teaching and Learning
- Tch Ed 313(3313), Introduction to Learners with Disabilities and Inclusive Education
- Tch Ed 386, Teaching Reading in Secondary School Content Areas
- Phy Ed 268(3468), The Curriculum and Methods of Teaching Physical Education

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

Internship hours are met through the teaching of skills courses

- Phy Ed 290(3990), Student Teaching in Physical Education PK-5
- Phy Ed 291(3991), Student Teaching in Physical Education 5-9

**Total: 127 hours**

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

**Grades PK through 12 Emphasis**

The following theory of physical education (Phy Ed) courses are required, 33 hours, to be taken with Level I professional education courses:

- 234(3434), Teaching of Wellness and Health Related Fitness (4 hrs)
- 261(3261), Physical Activity for the Exceptional Learner (2 hrs)
- 267(3267), Performance Analysis in Physical Education (3 hrs)
- 275(3275), Psychological Aspects of Physical Education (3 hrs)
- 276(3276), Sociological Foundations of Physical Education and Sport (2 hrs)
- 277(3277), Historical/Philosophical Foundations of Physical Education and Sport (2 hrs)
- 280(3280), Human Anatomy and Physiology, (5 hrs)
- 282(3282), Physical Growth and Motor Development (3 hrs)
- 283(3283), Kinesiology (3 hrs)
- 284(3284), Physiology of Human Exercise (3 hrs)
- 285(3285), Sports Medicine (3 hrs)

The following courses in teaching of skills are required in Physical Education (Phy Ed), 14 hours, to be taken with Level II professional education courses. These courses are required:

- 220(3420), Teaching of Skills: Movement and Rhythms (3 hrs)
- 221(3421), Teaching of Skills: Dance (3 hrs)
- 222(3422), Teaching of Skills: Grades PK-4 (4 hrs)
- 223(3423), Teaching of Skills: Grades 5-9 (4 hrs)
- 224(3424), Teaching of Skills: Grades 9-12(4 hrs)

The following Professional Education courses are required (31 hours):

**Level I: Exploring Education as a Profession**

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

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

- Tch Ed 312(3312), Psychology of Teaching and Learning
- Tch Ed 313(3313), Introduction to Learners with Disabilities and Education
- Tch Ed 386, Teaching Reading in Secondary School Content Areas
- Phy Ed 268(3468), The Curriculum and Methods of Teaching Physical Education

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

Internship hours are met through the teaching of skills.

Courses. Two of the following three:

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

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

**Phy Ed 292(4992)**, Student Teaching in Physical Education 9- 12

**Minimum: 133 hours**

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

#### **Athletic Coaching Minor**

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

**Phy Ed 283(3283)**, Kinesiology

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

**Phy Ed 312(5312)**, Management of Sports Programs

**Phy Ed 330(5330)**, Prescribing Physical Activity

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

#### **Health Certification**

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

#### **Master of Education: Elementary or Secondary Education with Physical Education as Teaching Field**

A significant number of graduate students choose physical education as the teaching field within one of the master of education degree options. Most are currently employed as teachers of health and/or physical education. Certification requirements in Missouri mandate the completion of a master's degree to professionalize the certificate.

Therefore, a full complement of graduate courses relating to teaching in physical education is available to meet this need. For many who need to pursue teacher certification in physical education while pursuing the master's degree, most course work needed to meet state certification requirements can be taken in the master's program. For those employed outside education, an emphasis in exercise science is also available, providing a foundation of course work designed to prepare a person in this area. Specific information is available regarding each of these degree programs. Please consult with your graduate adviser to discuss the specific options and requirements.

### **Career Outlook**

The employment outlook for physical educators in the schools continues to be positive, especially in the elementary and middle school levels. Recent placement years have yielded full employment opportunities to UM-St. Louis graduates. Rising school enrollments and the expected retirement of a significant portion of currently employed teachers signal optimistic outlooks for the next few years. In addition to elementary, middle school, and high school physical education teaching, more limited opportunities exist in athletic training, dance, research, sports management, and exercise leadership fields serving persons of all age categories.

### **Secondary Education (Sec Ed)**

#### **Undergraduate Studies**

##### **Bachelor of Science in Education: Secondary Education**

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

##### **General Education Requirements**

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

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

##### **Humanities**

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

##### **Communication Skills**

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

##### **Social Studies**

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

##### **Natural Science**

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



**Mathematics**

One college-level mathematics course.

Note All of the courses above must be a minimum of 2 semester hours.

**Program Requirements**

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

**Level I: Exploring Education as a Profession**

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

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

Tch Ed 310(3310), Introduction to Instructional Methods  
Tch Ed 312(3312), Psychology of Teaching and Learning  
Tch Ed 313(3313), Introduction to Learners with Disabilities and Inclusive Education  
Tch Ed 386, Teaching Reading in Secondary School Content Areas

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

Sec Ed 2xx, Curriculum and Methods of Teaching (specific subject area)

**Professional Internship**

Sec Ed 290, Student Teaching  
Attention education majors: Professional education courses must be completed with a grade point average of 2.5 and no grade lower than a C- is acceptable.

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

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

Social Studies certification students must complete a major or an equivalent in hours in one of the following disciplines: anthropology, economics, geography, history, political science, psychology, or sociology and meet these

minimum social science requirements: American history, 12 hours including History/Sec Ed 257(3257); European or world history, 9 hours including History/Sec Ed 258(3258); United States and/or state government, 6 hours including Political Science/Sec Ed 209(3209); economics, 3 hours; geography, 3 hours; and 2 hours of elective social studies credit. For emphasis area advising see the History Department.

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

**General Education Requirements**

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

**Program Requirements**

**Level I: Exploring Education as a Profession**

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

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

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

Tch Ed 386 Teaching Reading in the Secondary School Content Area

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

Sec Ed 2xx Curriculum and Methods of Teaching (specific subject area)

**Professional Internship**

Sec Ed 290 Student Teaching

**Academic major (36 hours required)**

These secondary education (Sec Ed) courses:

162(2162), Computer Keyboarding and Formatting  
261(3261), Methods of Teaching Keyboarding and

Formatting

263(3263), Methods of Teaching Accounting

264(3264), Methods of Teaching Basic Business Subjects

\*265(3265), Secretarial Practice

267(3267), The Secondary Business Curriculum

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

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

plus these Business Administration courses:

103(1800), Computers and Information Systems

140(2400), Fundamentals of Financial Accounting

145(2410), Managerial

156(2900), Legal Environment of Business

256(3900), Business Law I

206(3700), Basic Marketing and  
Econ 51(1001), Principles of Microeconomics

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

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

**Minimum of 120 hours**

**Electives**

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

**Total: 120 hours**

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

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

**Science core courses:**

**Philosophy 280(3380), Philosophy of Science**

**Biology**

**11(1811), Introductory Biology I**

**12(1821), Introductory Biology II**

**11(1111), Introductory Chemistry I**

**12(1112), Introductory Chemistry II**

**Geology 1(1001), General Geology**

**Atmospheric Science 1(1001), Elementary Meteorology**

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

**Physics**

**111(1011), Physics: Mechanics and Heat**

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

**Physics Endorsement**

**Physics**

**200(3200), Survey of Theoretical Physics**

**221(3221), Mechanics**

**223(3223), Electricity and Magnetism**

**231(3231), Introduction to Modern Physics**

**304(4310), Modern Electronics**

**311(4311), Advanced Physics Laboratory I**

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

**Physics 283, Teaching Intern Seminar**

**Graduate Studies**

**Master of Education: Secondary Education**

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

**Degree Requirements for All Secondary Education M. Ed. Students**

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

**Core Requirements (9 hours)**

**Ed Fnd 421(3421), Philosophy of Education**

**Sec Ed 415(3415), The Secondary School Curriculum**

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

**Exit Requirement (3 hours)**

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

**Ed Fnd 422(3422), Analysis of Educational Issues**

**Sec Ed 416(6416), 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(6990), Internship (in adult education)**

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

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

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

**Degree Requirements (32 hours)**

1) Core requirements (9 hours as specified above)

2) Curriculum/instruction core (8 hours) Courses are to be selected in consultation with an adviser in the curriculum/instruction field from among the following:  
**Sec Ed 315(4315), The Middle Level School**

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

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

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

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

Phy Ed 462(6462), The Physical Education Curriculum

**3) Teaching field core (8 hours)**

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

**4) Electives**

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

**Master of Education: Secondary Education with Emphasis in 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 8 hours of elective work appropriate to the candidates' particular needs. Adult basic education 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)**

A course in educational foundations (3 hours)

A course in curriculum (3 hours)

A course in improvement of instruction (3 hours)

**2) Adult education core (8 hours)**

Courses are to be selected in consultation with an adviser in the adult education-teaching field including but not limited to:

Adu Ed 404(6404), Seminar in Adult Education Research

Adu Ed 410(6410), The Adult Learner

\*Ed Adm 480, Administration of Adult and Community Education

Adu Ed 490(6376), Internship, or

Adu Ed 497(6497), Problems in Adult Education

**3) Electives**

Following is a list of possible elective courses. Other courses may be selected after conferring with an adviser in adult education.

Ed Fnd 421(6421), Philosophy of Education

Sec Ed 415(6415), The Secondary School Curriculum

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

**4) Exit Requirement (3 hours as specified above)**

Total: 32 hours

**Adult Basic Education Certification**

\*Adu Ed 311(4311), Teaching Basic Reading Skills to Adults

\*Ele Ed 445(6455), Problems of Teaching Arithmetic in the Elementary School, or Ele Ed 346(4346), Advanced Methods in Elementary School Mathematics

\*Eight semester hours from these six courses, and 3 hours of adult education electives, in addition to Spc Ed 313(3313), Psychology and Education of Exceptional Individuals, are required for five-year certification from the Missouri Department of Elementary and Secondary Education.

**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. Hold 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 (2) ABE teachers with bachelor's degrees who have experience teaching adult, but 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(4391), Teaching Reading in Secondary School Content Areas

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

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

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

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

Ele Ed 482(6482), 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(4315), Speech and Language Problems of Exceptional Children, or

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

Spc Ed 320(4320), Behavior Management

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

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

Ed Psy 418(6225), Psychology of Adolescence

3) The same exit requirement exists as outlined above for all students in the master of education degree program in secondary education.

### Master of Education: Secondary Education and Certification

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

### Degree Requirements

#### Required and recommended courses:

#### 1) Professional requirements

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

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

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

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

Ed Psy 418(6225), The Psychology of Adolescence

Ed Fnd 421(6421), Philosophy of Education

Sec Ed 415(6415), The Secondary School Curriculum

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

#### Electives

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

### Career Outlook

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

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

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

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

### Graduate Certificate in the Teaching of Writing, Gateway Writing Project

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

The Certificate is an 18-hour program through the Gateway Writing Project (GWP); it may also be

coordinated with other graduate programs. Certificate courses may be applicable to the M.A. in English with emphasis in composition or to various M.Ed. programs. The GWP Certificate is especially appropriate for post-master's candidates who wish to pursue a specialization in teaching writing. The Graduate Certificate in the Teaching of Writing requires a 12 semester-hour core of courses developed by the Gateway Writing Project: The GWP invitational institute (6 hrs.), a designated "topics" course (3 hrs.), and an exit course (3 hrs.). The Certificate requires a minimum of 12 semester hours at the 400 level or above. Electives (6 hrs.) may be chosen from approved offerings in English or Education.

**Admission:**

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

**Prerequisites:**

- **Eng/SecEd305(4880)**, "Writing for Teachers" or an equivalent course in teaching writing
- Coursework or competency in basic computer application.

**Required Core Courses (12 semester hours)**

- **Eng317(4850)/TchEd 317(5850)**, Topics in the Teaching of Writing (designated topics, 3 sem. hrs.)
- **Eng 490(5880)/SecEd 436(6880)**, future TchEd(6880), Gateway Writing Project (Invitational Institute, 6 sem. hrs.)
- **TchEd. 446(6890)**, Seminar in Professional Writing for Teachers (exit course, 3 sem. hrs)

**Electives (6 semester hours)**

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

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

- Eng. 485(5840), Theories of Writing
- Eng. 487(5860), Writing/Reading Theory
- Eng. 488(5870), Composition Research
- Eng. 489(5890), Teaching College Writing
- Eng. 410(5800), Modern Linguistics

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

- El. Ed. 387(4387), Lang. & Literacy Needs of Diverse

- Children
- El. Ed. 430(6430), Problems in Teaching Language
- Arts
- Sec. Ed. 430(6430), Problems in Teaching English in Sec. School
- El. Ed. 432(6432), Research in Language Arts
- El. Ed. 482(6482), Problems & Research in Elementary Reading
- Ed. REM 441(6714), Action Research

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

**Special Education (Spc Ed)**

**Undergraduate Studies**

**Bachelor of Science in Education: Special Education**

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

**English and Communication (9 hours)**

English 10(1100) Composition

**Communication 30(1030) or Communication 40(1040)**

English 210(3100)

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

**Science (8-9 hours)**

Biology (Laboratory)

Physical Science (Laboratory)

**Humanities (8 hours)**

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

**Social Science (18 hours)**

Psych 3(1003), General Psychology

History 3, American Civilization, or

History 4(1002), American Civilization

PolSci 11(1100), Introduction to American Politics

Econ 306(3052), Microeconomics for the School Curriculum

Sociology 10(1010), Introduction to Sociology, or any Anthropology course

Geography 101(1001) or 102(1002)

**Related Area Requirements (6 hours)**

Phy Ed 130(3430), Elements of Health Education

Phy Ed 261(3261), Physical Activity of the Exceptional Learner

**Program Requirements (24 hours)**

**Level I: Exploring Education as a Profession**

Tch Ed 210(2210), Introduction to Teaching

Tch Ed 211(2211), Introduction to Schools

Tch Ed 212(2212), Introduction to Learners

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

Tch Ed 310(3310), Introduction to Instructional Methods

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

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

Tch Ed 315(3315), Literacy Learning and Instruction

Ed Rem 321(3721), Interpretation of Educational Tests and Measurements

Cns Ed 331(3220), Counseling Individuals with Special Needs

Spc Ed 315(4315), Speech and Language Problems Exceptional Children

Spc Ed 342(4342), Career Education for the Special Needs Individual

Spc Ed 345(3345), Introduction to Mild/Moderate Disabilities

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

Ele Ed 246(4246), Teaching Mathematics in the Elementary School

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

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

Ele Ed 342(4342), Teaching Remedial Mathematics

Spc Ed 320(4320), Behavior Management

Ele Ed 389(3389), The Analysis and Correction of Reading

Ele Ed 341(4341), Teaching Science in the Elementary School

Ele Ed 253(4253), Teaching Social Studies in the Elementary School

Must take one or more of following three courses (depending on certification area desired):

Spc Ed 347(3347), Teaching Learners with Learning Disabilities

Spc Ed 350(3350), Teaching Learners with Emotional-Behavioral Disorders

Spc Ed 332(3332), Educating Learners with Developmental Disabilities, Physical or Other Health Impairments

Internship hours are met through special methods courses in Level 3.

**Student Teaching**

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

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

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

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

**Total: Minimum of 120 hours**

**Graduate Studies**

**Master of Education: Special Education**

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

Following is the recommended curriculum for students enrolled in the learning disabilities, mental retardation, behavioral disorders, or early childhood-special education options.

**Areas of specialization** Students are required to complete 9-18 hours from the following areas:

**Knowledge base (3-6 hours) (Spc Ed)**

497(6497), Problems

443(6443), Introduction to Learning Disabilities

450(6450), Introduction to Emotional Behavioral Disorders

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

430(6430), Introduction to Developmental Disabilities

**Curriculum (3-6 hours) (Spc Ed)**

415(6415), The Secondary School Curriculum

416(6416), Curriculum Construction for Secondary Schools

Ele Ed 410(6410), Current Research in the Elementary School Curriculum

413(6413), Organizational Foundations for Special Education

421(6421), Prescriptive Teaching of Exceptional Children

431(6431), Education of the Learners with Developmental Disabilities

444(6444), Education of Learners with Learning Disabilities

452(6452), Education of Learners with Emotional Behavioral Disorders

**Educational Research and Evaluation Methods (3-6 hours) (Ed Rem)**

330(3720), Educational Statistics

420(6707), Classroom Measurement and Evaluation  
421(6714), Educational and Psychological Measurement  
422(6716), Individual Assessment of Cognitive Abilities

**Psychological foundations and human development  
(3-6 hours) (Ed Psy)**

411(6111), Psychology of Education  
417(6220), Psychology of the Elementary School Child  
418(6225), The Psychology of Adolescence  
412((6310), Psychology of Exceptional Children.

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

**Career Outlook**

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

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



### **Course Descriptions**

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

Prerequisites may be waived by consent of the department.

### **Early Childhood Education (Ech Ed)**

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

Prerequisites: Ed Fnd 111(111), Psychology 270(2270), Ech Ed 312(3312), Ech Ed 333, Ele Ed 385, Ele Ed 336(3336), Communication 40(1040), English 210(3100), Ed Psy 312(3312), Ele Ed 330(3330), Ele Ed 389(3389), Ech Ed 314(3314); and admission to student teaching. Must be taken with Ech Ed 291(3291), and must immediately precede Ech Ed 291(3291) 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(3291) Student Teaching in Early Childhood Education II (6)**

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

#### **303(3303) 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(3313), Curriculum and Practice: Infant/Toddler.

#### **304(3304) 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(3305) Curriculum and Practice Laboratory: Primary (1)**

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

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

Prerequisites: Ed Fnd 111(1111) and Ed Psy 312(3312). 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(3313) Curriculum and Practice: Infant/Toddler (2)**

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

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

Prerequisite: Ech Ed 312(3312). 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(4315) Curriculum and Practice: Primary Education (2)**

Prerequisite: Ech Ed 312(3312). 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(4317) Assessing Individual Needs for Early Childhood Instruction (3)**

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

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

Prerequisite: Admission to the College of Education or graduate status. Competencies for working with parents and community agencies will be developed through a study of community and community resources. Procedures for parent participation and use of service agencies in the education of all young children, including those with special needs, will be examined.

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

Prerequisite: Ed Psy 312(3312). Development of language and the effects environmental and cultural factors have on the acquisition process. Identification of language problems for purpose of referral. Includes preschool classroom practices to support language development. Practicum experiences included.

**332(3332) Early Literacy (3)**

Prerequisites: Ech Ed 312(3312) and Ech Ed 331(4331). 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.

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

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

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

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

**412(6412) Foundations of Early Childhood Education (3)**

Prerequisite: A course in child psychology or equivalent. A study of the various types of early childhood programs and the philosophy upon which they are based. Attention will also be directed to the implementation of such programs, problems of parent involvement, and the social environment of the children.

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

Prerequisite: Ech Ed 312(3312) or equivalent. Emphasizes play as a constructive process with applications to

cognitive and social development. Special attention to facilitating play in early childhood classrooms.

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

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

**490(6490) 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(6497) Problems (1-10)**

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

**Educational Foundations (Ed Fnd)**

**330(4330) 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.

**421(6421) Philosophy of Education (3)**

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

**422(6422) Analysis of Educational Issues (3)**

Prerequisite: A course in philosophy of education or a course in history of education, or consent of instructor. A critical examination of issues about the elementary and secondary schools. This is done through the analysis of the procedures, resources, and goals that guide school policies and practices.

**435(6435) History of Western Education (3)**

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

**Educational Technology (Ed Tec)**

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

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

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

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

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

Prerequisites: Ed Tec 246(2246), and for secondary Education students, Sec Ed 213(3213). 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(2246) must be taken prior to, or concurrently with, this course.

**248(2248) 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.

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

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

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

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

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

Prerequisite: Ed Tec 340(5340) 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(5346) Instructional Television (3)**

Prerequisite: Ed Tec 340(5340) 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.

**404(6404) Seminar (1-10)**

Prerequisites: ED TEC 340 or consent of instructor. Seminar in educational technology addressing special issues and topics not normally included in the regular educational technology courses.

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

Prerequisite: Education 301(4301) or permission of the instructor. A lecture-demonstration-laboratory course that emphasizes the theoretical and practical design of graphic and textual material through the use of computer-based graphics programs. Emphasis will be placed on the utilization of commercial software to produce graphic designs and desktop publishing projects such as newsletters, workbooks, and other textual materials.

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

Prerequisite: Educ 301(4301) 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(6415) Teaching and Learning with Technology: Authoring Tools (3)**

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

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

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

**433(6433) Educational Technology Systems Management (3)**

Prerequisite: Ed Tec 340(5340). 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(6435) Instructional Technology and Education Reform (3)**

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

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

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

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

Prerequisite: Graduate standing. This course is an investigation in the ways the learning and teaching across the barriers of time and distance are similar to and different from face to face learning and teaching. Students

will study the influence of interactive media: Videoconferencing, asynchronous discussions and other commonly used methods.

**446(6446) Advanced Instructional Television Production (3)** Prerequisite: Ed Tec 340(5340) and Ed Tec 346(5346). 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.

**448 Technology-Supported Inquiry Learning (3)** Prerequisites: Ed Tec 340(5340) and Ed Psych 412(6310), or consent of instructor. Educational technology such as networked computers and software can play a supportive role in inquiry-based learning. Students will explore the theoretical background, design issues, and pragmatic realities of technology-supported inquiry learning environments. Such learning environments are best understood as systems involving social, cultural, material and psychological aspects. Consideration will be given to the important properties of settings, activities and technologies, as well as to the role of instructors.

**452(6452) Educational Multimedia Design (3)**

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

**454 Instructional Video Production (3)**

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

**460 Technology Coordination in Schools (3)**

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

**490(6490) 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(6497) Problems (1-10)**

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

**Elementary Education (Ele Ed)****82(1082) 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(2177) 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(2179) 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. Lab fee required. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies.

**192(2192) 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(4246) Teaching Mathematics in the Elementary School (3)**

Prerequisites: Ed Fnd 111(1111), 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(4253) Teaching of Social Studies in the Elementary School (3)**

Prerequisites: Ed Fnd 111(1111), junior standing, and completion of social science requirements in general education. Study of elementary school social studies emphasizing the current social studies curricular content, methods of teaching, and instructional materials. Analysis of forces affecting objectives, materials, and teaching techniques.

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

(Same as Music Education 257(3570).) Prerequisites: Music 131(2311) and Ed Fnd 111(1111). For the music education major. A study of the elementary school music curriculum emphasizing the objectives, methods of teaching and staffing music classes, and analysis of instructional materials and resources. This course must be completed in residence.

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

Prerequisites: TchEd 210(2210), 211(2211), 212(2212), 310(3310), 312(3312), 313(3313), and 315(3315) Ele Ed 230, 246(4246), 253(4253), 336(3336), 341(4341), 385, 389(3389), Psy 3(1003), Comm40(1040), Eng 210(3100) and admission to student teaching. Must be taken with Ele Ed 291 and must immediately precede Ele Ed 291 in the same semester. Clinical teaching experience in elementary school classrooms under university and school supervision. Required for all majors in elementary education.

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

Prerequisite: Ele Ed 290(3291). Must be taken "in block" with Ele Ed 205 and Ele Ed 290(3290), and must immediately follow Ele Ed 290(3290) in the semester. Clinical teaching experiences in elementary school classrooms under university and school supervision. Required for all majors in elementary education.

**310(4310) Elementary School Curriculum (3)**

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

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

Prerequisites: Sec Ed 315(4315). Preparation for teaching and learning in a middle school, grades 5B9. Content focuses on curriculum development, methods, techniques, materials, planning, organization, and assessment in middle level education for early adolescents.

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

Prerequisite: Sec Ed 315(4315) and Ed Psy 312(3312). Developmental characteristics and needs of early adolescents are studied through field experience in middle school classrooms. The relationship between needs and behavior is explored and skills for effective student teacher relationship are highlighted.

**330(3330) 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(3336) Teaching Language Arts and Reading N-9 (3)**

Prerequisites: Six hours of English/Communication; Ed Psy 312(3312). 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(4341) Teaching Science in the Elementary School (3)**

Prerequisites: Completion of science requirements in general education, Ed Fnd 111(1111), 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(4342) Teaching Remedial Mathematics (3)**

Prerequisite: Ele Ed 246(4246). 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(4346) Advanced Methods in Elementary School Mathematics (3)**

Prerequisites: Ele Ed 246(4246) 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.

**387(4387) Language and Literacy Needs of Culturally and Linguistically Diverse Children (3)**

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

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

Prerequisites: Ele Ed 385 or Sec Ed 386(4391), 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(3390) Elementary School Student Teaching III (6)**

Prerequisites: Ele Ed 291(3291) or equivalent and admission to student teaching. Clinical teaching experience in elementary school classrooms under university and school supervision with seminar included. For students who wish an additional student teaching experience.

**405(4405) Seminar (1-10)**

**410(6410) Current Research in Early Childhood and Elementary Program (3)**

Prerequisite: Graduate admission. A systematic examination of research related to early childhood and elementary school programs. Students will be expected to become effective consumers of educational research and to utilize appropriate research findings in their decision-making processes when planning instruction. This course should be taken as the first course in the M.Ed. in Elementary Education degree program.

**411(6411) Curricular Issues in Early Childhood and Elementary Programs (3)**

Prerequisite: Ele Ed 410(6410). Selected contemporary problems that affect classroom decisions. Technology, literacy, meeting individual needs, diversity, and dealing with discipline are studied through investigative discussions, reading, and a research paper.

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

**422(6422) Curriculum Construction in Early Childhood and Elementary Programs (3)**

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

**423(6423) Curricular Implementation in the Early Childhood and Elementary Programs (3)**

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

**425(6425) Elementary School Supervision (3)**

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

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

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

**427(6427) 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.

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

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

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

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

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

Procedures used in teaching integrated language arts in elementary schools.

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

Prerequisites: Ele Ed 430(6430), Ed Rem 431(6710), 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(6436) Children's Literature I: Survey and Analysis (3)**

Prerequisite: Ele Ed 330(3330) 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(6437) Children's Literature II: Selection and Functions (3)**

Prerequisite: Ele Ed 330(3330) 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(6441) Problems and Research in Teaching Elementary School Science (3)**

Prerequisites: Eight hours of science, Ele Ed 341(4341), and Ed Psy 411(6111). 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.

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

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

**443(6443) 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(6444) Environmental Studies for Elementary Teachers (3)**

Activity-oriented training in developing environmental awareness, field and/or laboratory skills and techniques, and the use of elementary environmental curricula. Materials and activities appropriate for one's students and locale will be developed.

**445(6455) Problems of Teaching Mathematics in the Elementary School (3)**

A study of the mathematics program in the elementary school from the viewpoint of goals, content, techniques, and evaluation.



**446(6446) Curriculum and Methods of Teaching Measurement in Mathematics: Metric and Standard Systems (3)**

Prerequisite: Ech Ed 346(4346) or Ele Ed 246(4246). 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(6447) Problems and Research in Teaching Elementary School Mathematics (3)**

Prerequisite: Ele Ed 445(6445). 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(6448) Diagnosis and Remediation of Disabilities in Learning Mathematics (3)**

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

**450(6450) 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(6452) 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(6482) 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(6484) Developmental Reading (K-13) (3)**

Prerequisite: Ele Ed 385 or Sec Ed 386(4391) 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.

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

Prerequisites: Field-based experiences in improving the district-level K-12 school science program, with special attention to the physical sciences. Emphasis is given to

planning and implementing standards-based secondary school physical science activities that build on the district K-6 school science program.

**486(6486) 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(6488) Supervision of School Reading Programs (3)**

Prerequisite: Ele Ed 385 or Sec Ed 386(4391). 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(6490) 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(6493) Clinical Methods in Child Study I (3)**

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

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

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

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

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

**497(6497) Problems (1-10)**

Selected problems to meet the needs of individual students.

**Physical Education (Phy Ed)**

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

**124(1124) 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(3430) Teaching Health in the Elementary School****(3)**

Prerequisites: Ed Fnd 111(1111) and admission to the College of Education. A study of health programs in the elementary school. Emphasis is given to the teacher's responsibilities in the areas of health services, healthful school environment, and instruction in a comprehensive school health program.

**132(2132) 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(2134) 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(3465) 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(1190) Clinical Experience in Physical Gerontology (3)**

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

**193(1193) Clinical Experience in Youth Sport Programs (3)**

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

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

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

**220(3420) Teaching of Skills: Movement and Rhythms (3)**

Prerequisite: Junior Standing and Phy Ed 283(3283). Study of skill analysis and techniques of teaching fundamental movement skills and rhythmical activities. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

**221(3421) Teaching of Skills: Dance (3)**

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching dance in school physical education

programs. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials. Dance forms studied will be folk, square, ballroom, modern, jazz and creative.

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

Prerequisite: Phy Ed 282(3282) and admission to Teacher Education Program. Study of skill analysis and techniques of teaching developmental games, education gymnastics and perceptual-motor activities. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

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

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching track and field, outdoor education, soccer, softball, flag football, basketball, and volleyball. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

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

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching racquet sports, aquatics, bowling, golf, archery and team handball. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

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

Prerequisite: Phy Ed 280(3280) or the equivalent, or consent of the instructor. Study and techniques of teaching wellness and health-related physical fitness concepts across the life span. Evaluation, interpretation, and application of wellness concepts to the individual and groups.

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

Prerequisites: Spc Ed 311(3311) and Spc Ed 313(3313). 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(3267) 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(3468) Curriculum and Methods of Teaching Physical Education (3)**

Prerequisite: Phy Ed 101 or Sec Ed 213(3213). 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(3275) Psychological Aspects of Physical Education (3)**

Prerequisites: Psychology 3(1003). 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(3276) Sociocultural Aspects of Physical Education and Sport (2)**

Prerequisite: Junior standing. Study of the theoretical, methodological, experimental, and applied foundations of sport and physical activity programs in society and the schools. Applied issues included cultural, political, economical, legal, and educational aspects of sport and physical activity programs.

**277(3277) Historical and Philosophical Foundations of Physical Education and Sport (2)**

Prerequisite: Junior Standing. A study of the history of physical education and sport programs, philosophical influences and issues related to the programs and applications of the knowledge base to current programs.

**280(3280) Human Anatomy and Physiology (5)**

Prerequisite: Bio 1(1012) and 3(1013) 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(3282) Physical Growth and Motor Development (3)**

Prerequisite: Psychology 270(2270) 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(3283) Kinesiology (3)**

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

**284(3284) Physiology of Human Exercise (3)**

Prerequisite: Phy Ed 280(3280). Study of the physiological effects of human exercise, training, and sport activities upon the human body; understanding and evaluation of physical fitness components, with consideration given also to areas including work, fatigue, nutrition, age, sex, and environment.

**285(3285) Sports Medicine (3)**

Prerequisite: Phy Ed 280(3280) or equivalent. A study of the prevention and care of athletic/sport participation injuries. Emphasis is given to proper conditioning and training of the sport participant and on emergency responses, including CPR certification.

**287 Seminar in Exercise Science (3)**

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

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

Prerequisites: Admission to Student Teaching. Clinical teaching experience in physical education settings in the schools under university and school supervision. Required for all majors in physical education receiving certification in physical education, Grades PK-5.

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

Prerequisite: Admission to Student Teaching. Clinical teaching experience in physical education settings in the schools under university and school supervision. Required for all majors in physical education, Grades 5-9.

**292(4992) Student Teaching in Physical Education: 9-12 (5)**

Prerequisite: Admission to Student Teaching. Clinical teaching experience in physical education settings in the schools under university and school supervision. Required for all majors in physical education receiving certification in physical education, Grades 9-12.

**312(5312) 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(5330) Prescribing Physical Activity (3)**

(Same as Gerontology 330(5330)). Prerequisite: Phy Ed 280(3280) 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.

**331(5931) Adult Exercise Leadership (3)**

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

**340(5240) Community Health Education (3)**

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

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

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

**380(5380) 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(5990) Student Teaching in Physical Education III**

(5) Prerequisites: Phy Ed 291(3991) or equivalent and admission to student teaching. Clinical teaching experience in physical education settings in the school under university and school supervision with seminar included. For students who wish an additional student teaching experience.

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

Prerequisites: Phy Ed 190(1190) or consent of instructor. (Same as Gerontology 392(5992)) Supervised clinical experience in selected gerontological settings as a physical education practitioner under the supervision of university and program professionals. Internship may include two or more separate experiences completed concurrently or sequentially and involve planning of instruction, participant and program evaluation, research, and related activities.

**462(6462) 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(6464) 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(6474) Psychological Dynamics of Sport Performance (3)**

Prerequisite: Phy Ed 275(3275) or consent of instructor. Application of specific principles of social psychology to the teaching of physical education and sport and of mental aspects of peak physical performance. Explores the techniques of improving team and individual performance in interscholastic and elite competition through sport psychology. Attention is given to motivation, competitive anxiety, attitude, aggression, team cohesion and leadership, exercise adherence, personality, individual differences, and gender roles as they pertain to sport performance.

**475(6475) Motor Learning and Control (3)**

Prerequisite: Phy Ed 275(3275) 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(6476) Social Inquiry of Sport (3)**

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

**478(6478) 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(6482) Life Span Perceptual and Motor Development (3)**

Prerequisite: Phy Ed 282(3282) 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(6483) Biomechanics of Sport Techniques (3)**

Prerequisite: Phy Ed 283(3283) 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(6484) Physiological Bases of Physical Performance (3)**

Prerequisites: Phy Ed 280(3280) and Phy Ed 284 (3284) 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(6485) Theory of Exercise and Cardiovascular Disease Risk Factor Management (3)**

Prerequisite: Completion of Phy Ed 484(6484) 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(6990) 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(7492) Directed Readings in Curriculum and Instruction (1-6)**

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

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

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

**497(6497) Problems (1-10)**

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

**Secondary Education (Sec Ed)**

**162(2162) 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(3204) 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(3208) Mathematics Teaching Intern Seminar (1)**

Prerequisite: Concurrent enrollment in Sec Ed 290(3290). 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.

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

Same as POL SCI 209(3090). Prerequisites: Sec Ed 213(3213) and POL SCI 11(1100), graduate standing or consent of instructor. Adapts the themes and subject matter of American government to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting themes of American government, on expanding bibliography, and on choosing methods of inquiry for use in an interactive classroom. Either History/Sec Ed 257(3257) or 258(3258) or Political Science/Sec. Ed. 209(3209) must be taken the same semester as History/Sec Ed 255(3255) except with special consent of the Social Studies Coordinator. Can be counted towards the Political Science major requirement, but not the American Politics subgroup. Counts towards Social Studies Certification.

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

Prerequisites: Completion of Level II courses and a near major in the subject area. (Same as Eng 262(3600)). A study of the scope sequence of the English course in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Includes field experiences. The course prepares students for reflective teaching by relating course reading to field experiences and theory to practice. To be taken prior to student teaching and concurrently with Sec. Ed 290(3290), Internship. This course must be completed in residence

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

(Same as Chemistry 280(4802) and Physics 280.)

Prerequisite: Sec Ed 213(3213) and a near major in the subject matter. A study of the scope and sequence of the physical science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of science. To be taken prior to student teaching. This course must be completed in residence.

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

Prerequisites: Sec Ed 213(3213) and a near major in the subject matter. A study of the scope and sequence of the mathematics courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of mathematics. To be taken prior to student teaching. This course must be completed in residence.

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

(Same as History 255(3255)). Prerequisite: Junior standing and Sec Ed 213(3213). A study of the scope and sequence of history and social studies courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is directed also toward learning the techniques and research tools of the scholar in the fields of history and social studies. May not count toward history hours required for history major. Must be completed prior to student teaching. This course must be completed in residence.

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

(Same as History 256(3256)). 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.

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

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

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

Prerequisite: Sec Ed 213(3213), Graduate standing or consent of instructor. (Same as History 258(3258)). Adapts the themes and subject matter of World history to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting themes of World history, on expanding bibliography, and on choosing methods of inquiry for use in an interactive classroom. Cannot be counted towards the minimum 38-hour history major requirement, but can be counted towards the 45-hour maximum and for Social Studies Certification.

**261(3261) 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(3263) Methods of Teaching Accounting (3)**

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

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

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

**267(3267) The Secondary Business Curriculum (3)**  
Prerequisite: Ed Fnd 111(1111) 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(3700) English Student Teaching Seminar (2)**  
(Same as English 270(3700).) Prerequisite: Sec Ed 290(3290). A seminar in the integration of English curricula, educational philosophy, teaching strategies, and instructional technology in the classroom setting. To be taken concurrently with Secondary Student Teaching, Sec Ed 291(3291).

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

Prerequisites: Sec Ed 213(3213) 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(3274) Curriculum and Methods of Teaching Foreign Language (3)**

(Same as FLL 264(3264).) Prerequisites: Sec Ed 213(3213) and passing the departmental language skill test. A study of the scope and sequence of the foreign language courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of foreign language. To be taken prior to student teaching. This course must be completed in residence.

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

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

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

(Same as Music 268.) Prerequisites: Music 131(2311/2312), 145, 151(2510), 161(2610), Ed Fnd 111(1111), two of the following: Music 25(1250),

26(1260), 27(1270), and 28(1280). Concurrent registration in Music 257(3570)/Ele Ed 277(3277). A study of the teaching techniques, materials, curriculum, and organization of the beginning instrumental music Education program. Topics include student recruitment, the elementary band/orchestra, small group instruction, jazz ensemble, and marching band. This course must be completed in residence.

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

Prerequisites: Music 131(2311/2312), Music 257(3570)/Ele Ed 277(3277), and Ed Fnd 111(1111). (Same as Music 269(3690).) Concurrent registration in Music 267(3670)/Sec Ed 275(3275) and Music 271(3710)/Sec Ed 279(3279). For the music Education major. A study of the middle school/ junior high school general music program emphasizing a conceptually based curriculum, objectives, methodologies, materials, innovations, classroom organization, and management. This course must be completed in residence.

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

Prerequisites: Music 131(2311/2312), 152a(3521), 162(3620), Music 257(3570)/Ele Ed 277(3277)c 268(3680)/Sec Ed 276(3276) and 111(1111), three of the following: Music 25(1250), 26(1260), 27(1270), 28(1280). (Same as Music 270(3700).) Concurrent registration in Music 267(3670)/Sec Ed 275(3275) Continuation of Music 268(3680)/Sec Ed 276(3276) Topics include large group rehearsal techniques, program development, administrative procedures, and evaluation. This course must be completed in residence.

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

(Same as Music 271(3710).) Prerequisites: Music 131(2311/2312), Music 257(3570)/Ele Ed 277(3277), and Ed Fnd 111(1111); concurrent registration in Music 261, Music 267(3670)/Sec Ed 275(3275), Music 269(3690)/Sec Ed 277(3277). For the music Education major. A study of the secondary school choral music program: curriculum, methods, teaching techniques, organization, and administrative procedures for choral performance classes. This course must be completed residence.

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

(Same as Biology 285(4985).) Prerequisites: Sec Ed 213(3213) and a near major in biology. A study of the scope and sequence of the life science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. The analysis of teaching/learning and field experience observations in secondary school classrooms will be integrated into classroom activities and discussions. This course must be completed in residence.



**286(4986) Laboratory in Teaching Life Sciences (2)**  
(Same as Biology 286(4986).) Prerequisite: Sec Ed 213(3213). Discussion, development, utilization, and evaluation of equipment, materials, and techniques applicable to instruction in the life sciences. Must be taken concurrently with Biology 285(4985)/Sec Ed 285(4985).

**290(3290) Secondary School Student Teaching (12)**  
Prerequisites: Sec Ed 213(3213) 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(3293) Student Teaching in Music Education, K-6 (5)**  
Prerequisites: Ele Ed 210(3210), Sec Ed 213(3213), Music 257(3570)/(Ele Ed 277, Music 267(3670)/Sec Ed 275(3275), Music 118(2180), Music 268(3680)/Sec Ed 276(3276), Music 270(3700)/Sec Ed 278(3278) (instrumental emphasis majors); Music 120(3290), Music 269(3690)/Sec Ed 277(3277), Music 271(3710)/Sec Ed 279(3279) (Choral/vocal emphasis majors); and admission to student teaching. Must be taken "in block" with Sec Ed 294(3294) 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(3294) Student Teaching in Music Education, 7-12 (5)**  
Prerequisite: Sec Ed 293(3293). Must be taken "in block" with Sec Ed 293(3293) 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(3293). Required of all majors in music education.

**305(4880) Writing for Teachers (3)**  
(Same as English 305(4880).) Prerequisite: English 210(3100) 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.

**315(4315) The Middle Level School (3)**  
Prerequisites: Ed Fnd 111(1111) 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(4360) Administration and Supervision of Office Personnel (3)**  
Prerequisite: Consent of instructor. An advanced course in office administration and supervision designed to meet the needs of business personnel involved in administrative office management work; emphasis on updating leadership and human relations skills, organizing, planning, controlling office services, and business data processing systems.

**361(4361) Information Processing: Applications and Techniques of Teaching (3)**  
Prerequisite: Sec Ed 162(2162) Sec Ed 261(3261), or equivalent, or consent of instructor. The course will focus on the needs of pre-service and in-service teachers who instruct courses in information processing. Special emphasis placed on organizing and managing an information processing lab, software applications, integration of information processing concepts into existing courses, teaching strategies, and current information processing research.

**362(4362) 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(4367) Methods of Teaching Desktop Publishing Concepts and Procedures (3)**  
Prerequisite: Sec Ed 162(2162); Sec Ed 261(3261) 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(4374) Foreign Language Teaching Seminar (2)**  
(Same as FLL 364(4364).) Prerequisite: Concurrent enrollment in Sec Ed 290(3290) 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(3274), Curriculum and Methods, with an emphasis on specific practical skills. To be taken concurrently with Sec Ed 290(3290), Student Teaching.

**386(4391) Teaching Reading in Secondary School Content Areas (3)**  
Prerequisite: Tch Ed 310(3310) and 312(3312), or consent of instructor or equivalent. Methods and materials for improving reading and study strategies in content area classes in upper grades.

**391(4393) Field Study in Secondary Education (1-10)**  
Identification of specific problems in the area of secondary education. Course is conducted as a field study in the public schools. A maximum of 8 credit hours may be applied toward an advanced degree contingent upon adviser approval.

**393(4399) Student Teaching in Music Education, K-12 (5)**  
Prerequisite: Sec Ed 294(3294) 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(4999) Science Teaching Intern Seminar (3)**  
(Same as Biology 399(4999). Prerequisites: Sec Ed 285(4985) and Sec Ed 286(4986). 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(3290).

**404(6404) Seminar (1-10)**

**413(6413) Secondary Teaching with Microcomputers (3)**  
Prerequisite: Educ 301(4301) 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(6414) Teaching the Gifted/Talented Student in Secondary School (3)**  
A survey of research and theory on teaching the gifted/talented student in secondary school. Ways to identify the gifted/talented with emphasis on teaching the gifted/talented in both heterogeneous and homogenous secondary classrooms. Models of gifted/talented programs in a school setting.

**415(6415) The Secondary School Curriculum (3)**  
For secondary school principals, teachers, and superintendents. Present methods in curricular change and methods of curricular investigation.

**416(6416) Curriculum Construction for Secondary Schools (3)**  
Prerequisite: Sec Ed 415(6415) or consent of instructor. Designed for those engaged in curriculum revision work and construction of new secondary school courses.

**420(6420) 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(6422) Individualizing Instruction in Secondary Schools (3)**  
This course surveys a variety of theoretical models and research findings related to individualized instruction in the secondary school and are designed for teaching and administrative personnel.

**426 Secondary School Curriculum Reform in the Earth/Space Sciences (4)**  
Prerequisites: Graduate standing. Field-based experiences in improving the district-level K-12 school science program, with special attention to the earth/space sciences. Emphasis is given to planning and implementing standards-based secondary school earth/space science activities that are built on the district K-6 science program.

**427(6427) 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.

**428 Secondary School Curriculum Reform in the Life Sciences (4)**  
Prerequisites: Graduate standing. Field-based experiences in improving the district-level K-12 school science program, with special attention to the life sciences. Emphasis is given to planning and implementing standards-based secondary school life science activities that build on the district K-6 science program.

**429(6429) 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(6430) Systems of Teaching English in the Secondary School (3)**  
A review of recent developments in the teaching of secondary English. Special attention is given to research involving instructional problems in urban and suburban schools. The course is designed for teachers, department heads, and supervisors in secondary English programs.

**452(6452) Systems of Teaching Social Studies in the Secondary Schools (3)**

A review of recent developments in the teaching of secondary school social studies. Special attention is given to research and scholarship involving instructional and curricular problems, especially in the metropolitan St. Louis area. Emphasis is placed upon development of effective materials, techniques, and resources. The course is designed primarily for teachers and supervisors in secondary school social studies programs.

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

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

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

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

**486(6986) 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(6490) 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(6497) Problems (1-10)**

**Special Education (SpEd)**

**192(3192) 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(3242) 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(3290) Student Teaching in Special Education I (6)**

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

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

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

**301 Special Education Orientation (2)**

Prerequisites: Admission to Special Education Transition Program or consent of instructor. This course examines characteristics of students in cross-categorical placements. Examination of special education philosophy, historical and legal issues, special education process, and personal traits.

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

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

**303 Instructional Practices (3)**

Prerequisite: SPC ED 301 or consent of instructor. This course provides an in-depth examination of methods and techniques for use in the education of students in cross-categorical placements.

**304 Structure of Teaching and Communication**

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

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

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

**306 Research Into Practice (4)**

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

**307 The Reflective Practitioner (4)**

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

**311(3311) 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(3313) Introduction to Learners with Disabilities and Inclusive Education (3)** Prerequisite: Psychology 270(2270) 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(4315) Speech and Language Problems of Exceptional Children (3)**

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

problems associated with speech and language development and the techniques employed by classroom teachers to lessen these problems for children. Required for all majors in special education.

**320(4320) Behavior Management (3)**

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

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

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

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

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

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

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

**342(4342) Transitions Issues and Planning**

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

**345(3345) Introduction to Learners with Mild/Moderate Disabilities (3)**

Prerequisites: SPC ED/TCH ED 313(3313) or equivalent or consent of instructor. Introduction to the history, etiologies, definitions, characteristic with mild/moderate Emotional/Behavioral Disorders, prevalence, and service delivery systems for learners with Learning Disabilities, Developmental Disabilities, and Physical/Other Health Impairments.

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

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

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

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

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

Prerequisite: Spc Ed 330(3330) 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(4371) Methods and Curricula for Severely Handicapped (3)**

Prerequisite: Spc Ed 370(4370) 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(4372) Screening and Diagnosis of the Developmentally Delayed (3)**

Prerequisites: Ed Rem 310 or equivalent and Spc Ed 313(3313). 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(4382) An Introduction to Gifted Children (3)**

Prerequisite: Spc Ed 313(3313). 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(4384) The Education of Gifted Children (3)**

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

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

Prerequisites: Spc Ed 291(3291) 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.

**405(6405) Introduction to Braille (4)**

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

**412(6412) 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(6413) Organizational Foundations for Special Education (3)**

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

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

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

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

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

**430(6430) Introduction to Developmental Disabilities (3)**

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

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

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

**443(6443) Introduction to Learning Disabilities (3)**

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

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

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

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

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

**452(6452) Education of Learners with Emotional/Behavioral Disorders (3)**

Prerequisite: Spc Ed 450(6450). Systematic study of current educational practices for learners with emotional/behavioral disorders. Methods and materials are stressed.

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

Prerequisite: Spc Ed 313(3313) or equivalent. A study of issues and concepts central to special Education of young

children with disabilities, and at-risk for disabilities, and their families. Focus on program models, screening and assessment procedures, and curriculum concepts. An ecological perspective is emphasized.

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

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

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

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

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

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

**490(6490) Internship (1-10)**

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

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

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



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

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

**497(6497) Problems (1-10)**

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

**Teacher Education (Tch Ed)**

**210(2210) Introduction to Teaching (3)**

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

**211(2211) Introduction to American Schools (3)**

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

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

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

**310(3310) Introduction to Instructional Methods (3)**

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

**311 Foundations of Education (4)**

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

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

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

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

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

**315(3315) Literacy Learning and Instruction (3)**

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

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

(Same as English 490(5880).) 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.



**446 Seminar in Professional Writing for Teachers (3)**

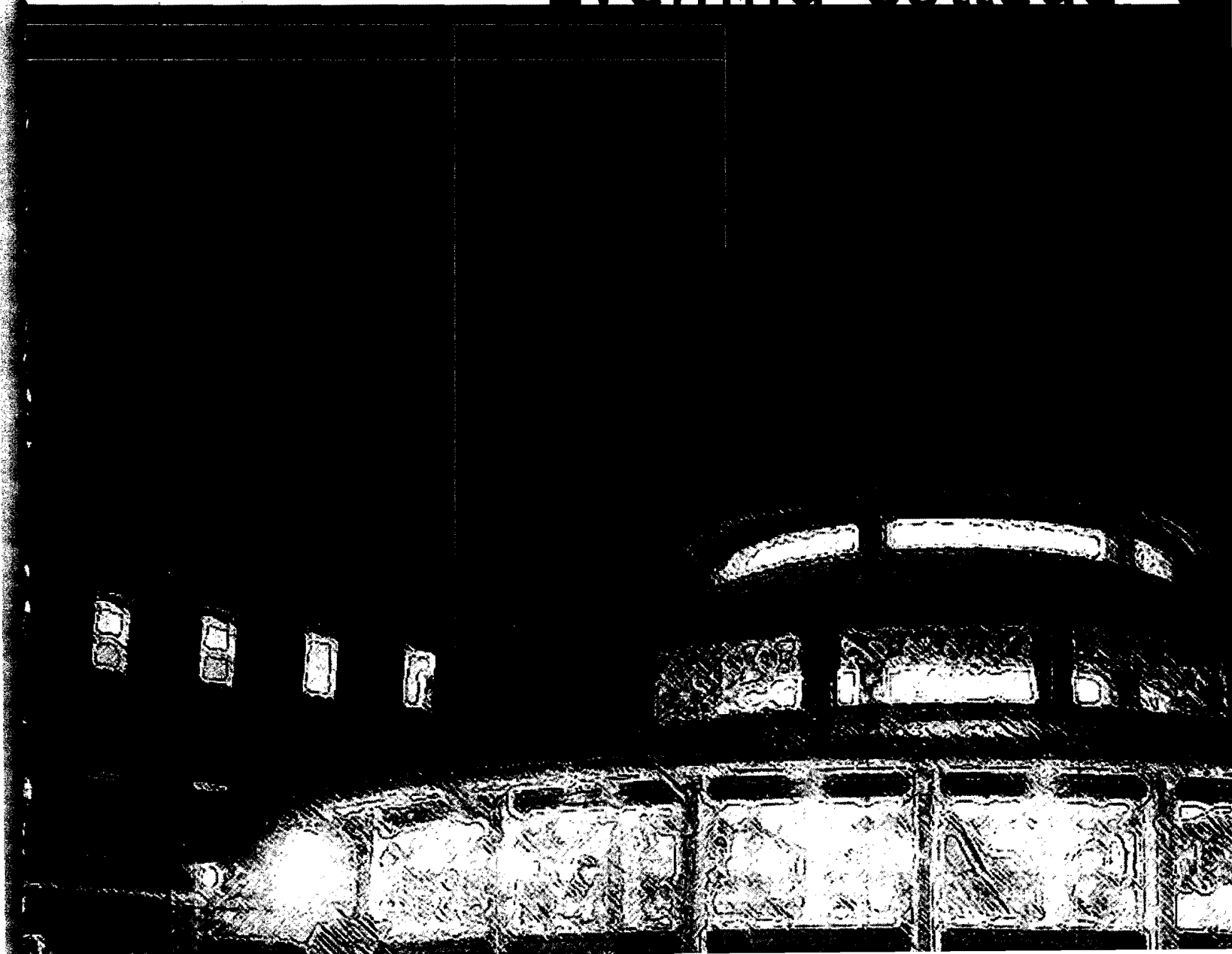
Prerequisite: Tech. Ed. 436, Eng. 490(5880), and near-completion of Graduate Certificate in the Teaching of Writing. Capstone seminar for the Graduate Certificate in the Teaching of Writing. Participants will pursue the dual role of writer/writing teacher by designing individual projects with one of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

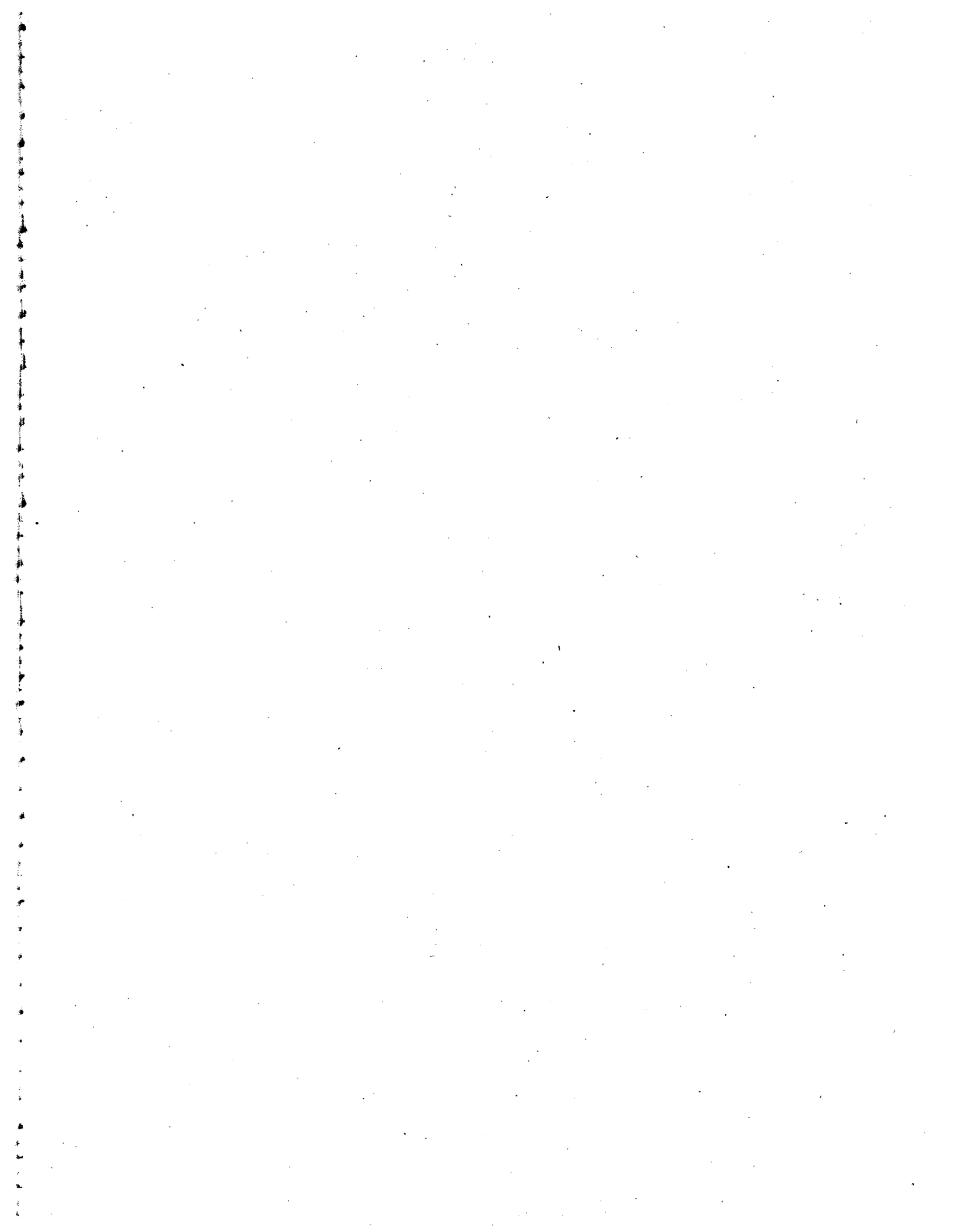
**454(5454) Cultural Diversity in Teaching (3)**

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



# Evening College





## Evening College

The Evening College provides undergraduate degree programs for students who, for various reasons, choose to attend evening classes. Thirty-one degree programs are offered through the Evening College. Courses needed as prerequisites for graduate programs are available. In addition, persons who want to maintain their professional competence or broaden their educational background without pursuing degree work will find a broad array of courses which may be taken for credit or on an audit basis.

Recognizing the value of continuing education and career advancement, many St. Louis institutions, businesses, and industries encourage their employees to avail themselves of the educational opportunities offered by the Evening College. The Veterans Administration has approved full-time and part-time study for educational benefits.

Since most Evening College students are employed full time, they normally carry less than a full academic load. To enable students to carry as many courses as they wish, the Evening College schedules classes after 5 p.m. and limited offerings on Saturday mornings. Classes and degree programs are conducted according to the same standards as the day program.

**Course Areas** The Evening College offers courses in the following areas: anthropology, art, astronomy, biology, business administration, chemistry, communication, computer science, criminology and criminal justice, economics, education, English, French, geography, geology, German, history, mathematics, music, philosophy, physics, political science, psychology, sociology, social work, and Spanish.

### Academic Advising and Program Planning

New students are encouraged to consult with an academic adviser to develop programs appropriate to their needs. Students can see an academic adviser by calling or stopping by the University Advising Center, 225 Millennium Student Center, (314) 516-5161. All students may come to the University Advising Center for advising, see a faculty adviser in their department, or see a professional adviser in their college, school or professional school.

**Facilities** The facilities of the University of Missouri-St. Louis, including the computer center, library, laboratories, cafeteria, cashiers, bookstore, financial aid, health service, and admissions office, are open in the evening. Evening College students are also eligible to participate in any of the university sports programs that interest them. The athletic facilities of the Mark Twain Building are available.

**Alpha Sigma Lambda** The Beta Epsilon Chapter of Alpha Sigma Lambda is a national honorary scholastic

society for Evening College students. To be eligible for membership, a student must have completed at least four semesters of college or university work, completed a minimum of 24 semester hours in the Evening College, have a cumulative grade point average of 3.2, and be enrolled in the Evening College.

## Degree Programs

### General Education Requirements

All candidates for a degree through the Evening College must meet the university general education requirements.

### Bachelor of Arts

Majors available for the B.A. degree are biology, chemistry, communication, economics, English, history, mathematics, physics, political science, psychology, and sociology. For further information, consult the appropriate departmental section of the College of Arts and Sciences or College of Fine Arts and Communications portion of this *Bulletin*.

### Bachelor of Science

The B.S. degree is available in applied mathematics, biology, chemistry, computer science, criminology and criminal justice, economics, mathematics, physics, and sociology. For further information, consult the appropriate departmental section of the College of Arts and Sciences portion of this *Bulletin*.

### Specialized Bachelor's Degrees

Also available are the bachelor of science in accounting (B.S.A.), bachelor of science in business administration (B.S.B.A.), the bachelor of science in management information systems (B.S.M.I.S.), the bachelor of science in education (B.S.Ed.), and the bachelor of science in public policy and administration (B.S.P.A.). The B.S. in education offers specialization in any of the following: early childhood education, elementary education, middle school/junior high school, special education, and secondary education. Students should consult the appropriate departmental section of the College of Arts and Sciences, the College of Business Administration, or the College of Education of this *Bulletin*.

**Bachelor of Social Work** The B.S.W. degree program is designed to prepare persons for employment in social welfare agencies, schools, hospitals, correctional institutions, or day care, geriatric, or rehabilitation centers. Individuals currently working in social welfare settings can improve their skills and increase their opportunities for job advancement. For further information, consult the Social Work section of this *Bulletin*.

The Bachelor of General Studies degree (B.G.S.) is also offered through the Evening College. It is designed to provide mature students with a meaningful alternative to traditional degree programs. It appeals to a variety of students whose circumstances, goals, and aspirations are

different from those of the "typical" college student. The B.G.S. program provides the flexibility needed to enable students, with careful advisement, to develop individualized programs of study.

#### **Admission Requirements for the B.G.S. Program**

Candidates for the B.G.S. degree must be admitted to the Evening College and must complete an application for admission to the program. Applications must be approved by the General Studies Committee and the Evening College dean. The criteria for admission are:

- Students must have reasonable programs of study, and be in good academic standing.
- Students must have demonstrated the equivalent of academic proficiency required for any other undergraduate degree at UM-St. Louis.
- Study programs should be structured to meet students' unique educational goals and should not be readily available under any other UM-St. Louis degree program.

#### **Degree Requirements for the B.G.S. Program**

##### **General Education Requirements**

Students must complete the university's general education requirements. For details refer to the general education requirements section of this *Bulletin*.

**Personal Emphasis Area** In consultation with a faculty adviser, students shall develop a personal emphasis area of at least 36 advanced semester hours of graded credit that meets their educational goals. Graded credit consists of degree credit courses in which the student received a letter grade of A, A-, B+, B, B-, C+, C, C-, D+, D, D-. Regardless of the focus, theme, or purpose, the personal emphasis area should result from self-examination and contribute to self-realization and an advanced level of academic competence and achievement. The program must be approved by the faculty adviser, dean, and General Studies Committee. Students and advisers periodically review the program and make appropriate modifications where necessary, subject to the dean's approval.

**Hour and Grade Requirements** The degree requires completion of 120 semester hours with a 2.0 campus grade point average overall and in the personal emphasis area. No more than 30 hours may be taken in any one department. At least 45 hours must be earned in courses beyond the introductory level. A minimum of 24 hours of graded credit must be completed in residence at UM-St. Louis, of which 18 hours must be in the personal emphasis area and completed after admission to the B.G.S. program. No more than 18 hours may be taken on a satisfactory/unsatisfactory basis. Each candidate must be in residence for 24 of the last 30 hours of graded credit (exclusive of courses taken on a satisfactory/unsatisfactory basis).

**Credit for Experience, Special Projects, Examinations, and Nontraditional Forms of Study** Credit may be earned through the College Level Examination Program in accordance with university policy or through examinations proposed or approved by university departments. Credit also may be earned through correspondence study, supervised independent research study, and college-level courses offered by television or similar education media. Students are responsible for obtaining approval for credit applied under this option.

Students may receive credit for vocational experience, community service projects, or cultural activities after they have completed 24 hours of course work in residence.

**Vocational Experience** Credit may be granted for vocational experience when related to the personal emphasis area. Credit cannot exceed 3 semester hours for each year of experience with a maximum of 12 hours allowed only in exceptional circumstances. Petitions for vocational experience credit must be accompanied by a job description verified by the employer or similar appropriate evidence. Credit may be granted only upon recommendation of the faculty adviser and approvals of the dean and the General Studies Committee.

**Community Service Projects/Cultural Activities** Credit not exceeding 6 hours may be earned for participation in approved community service projects or cultural activities. The projects or activities must be formulated by the student and carried out under the supervision of a faculty member with the approval of the adviser, dean, and General Studies Committee. Students must submit a written report approved by the supervisor upon completion of the projects or activities. Credit for vocational experience or community service/cultural activities may be applied toward the elective credits required for the degree but may not be used to complete the personal emphasis area or general education requirements.

Students must file a degree application form in the Evening College at least one year before the expected graduation date.

#### **Minors**

**Minor in Employee Training and Development** The Evening College and the College of Business Administration offer a minor in employee training and development. The requirements are:

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

One additional course selected from these approved electives:

BA 309(3621), Human Resources Management  
Comm 141(1141), Business and Professional Speaking  
Sociology 354(4354), Sociology of Business Work Settings

Students should consult with an adviser when planning their programs. A 2.0 grade point average is required for the minor. No courses may be taken on a satisfactory/unsatisfactory basis. At least 12 credits of those required must be completed in residence at UM-St. Louis.

This minor is designed for human resources managers in small companies and training managers or human resources specialists in larger companies. The required 18 hours, including the approved elective course, enable the student to be exposed to different skills essential for the occupational area.

Other minors in business administration include accounting, finance, general business, logistics and operation management, management and organizational behavior, marketing, and management information systems.

#### **Other Minors**

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

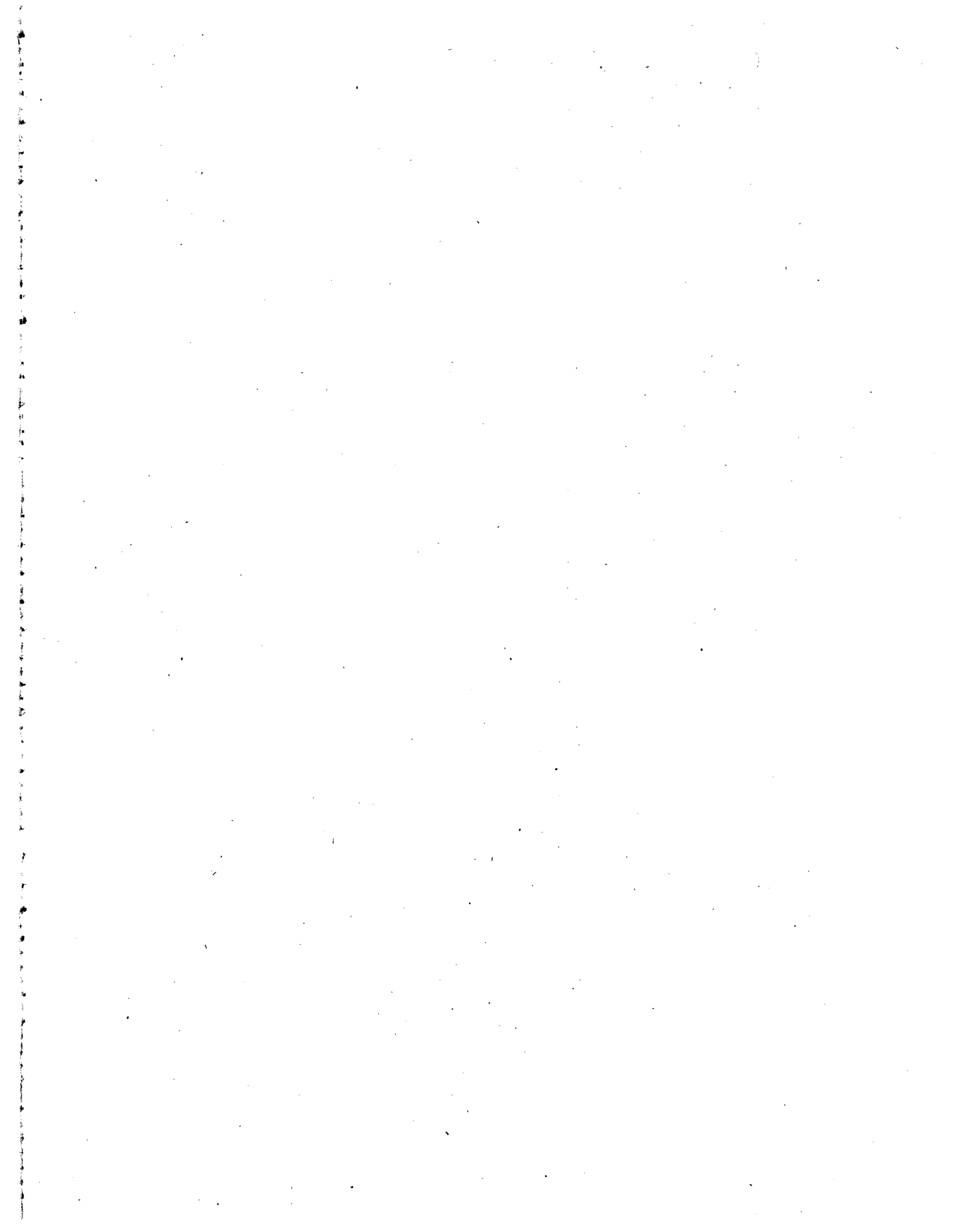
#### **Certificates**

Certificate programs are available in various areas of study. For more information, consult the Certificate Programs section of this *Bulletin*.

#### **Career Outlook**

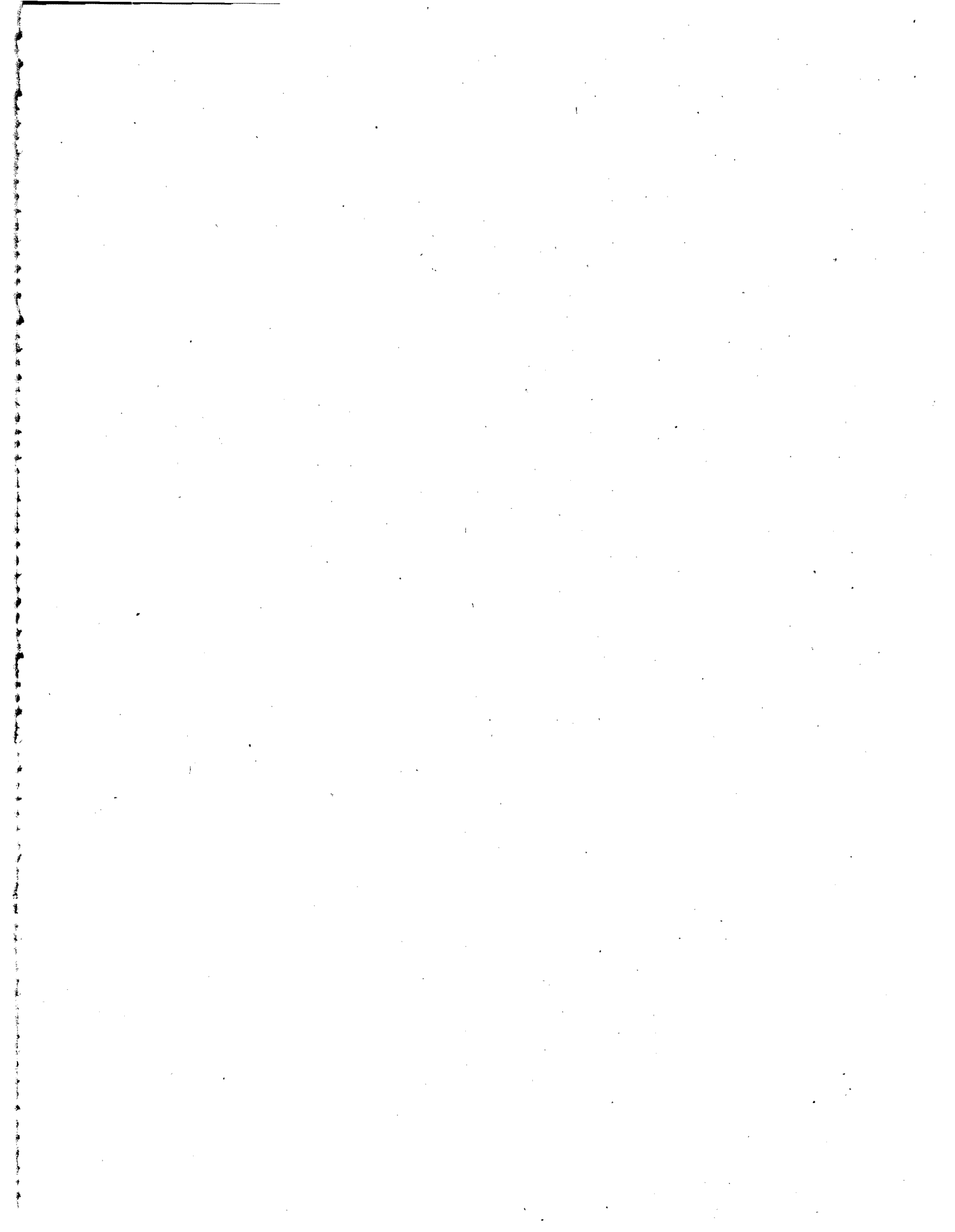
Many graduates of the Evening College have found their careers advanced upon obtaining their degree. Some have entered new careers in midlife, and others have found personal satisfaction in the acquisition of knowledge for its own sake. The Evening College staff consists of advisers with extensive experience concerning adult students' needs. Call the Evening College office, (314) 516-5161 for more information.





# College of Fine Arts and Communication





## College of Fine Arts and Communication

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

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

### General Information

The College of Fine Arts and Communication consists of some 75 full-time faculty members in the following departments, each offering work in specific undergraduate degree programs: art and art history, communication and music. In addition, the Theatre and Dance Department has begun to offer classes in theatre during the 2002-2003 academic year.

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

### Requirements for Undergraduate Study

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

#### Cultural Diversity Requirement

To expand cultural awareness, all students are required to complete a course that emphasizes Asian, African, Middle Eastern, Latin American, Pacific aboriginal, Native American, or a comparable culture. Courses that satisfy this requirement involve substantial material independent

of the cultures' interactions with European cultures. If a course focuses on one facet of a culture, it must treat the topic within the context of the culture as a whole. A list of courses which fulfill the Cultural Diversity requirement may be found elsewhere in this bulletin.

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

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

## Academic Policies

### Grade Requirements

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

- Earn 120 hours with a C grade or better, which constitutes a complete degree program. Neither a grade of C- nor a satisfactory grade may be counted.
- Have a minimum UM-St Louis Campus grade point average of 2.0 and have met all the other Grade Point restrictions that are required for the degree program and the major.

### Residency Requirements

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

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

### Specific Baccalaureate Degree Requirements

#### Course Requirements

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

Other areas or courses not listed require approval by the chair of the student's department.

#### **Bachelor of Arts (B.A.)**

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

#### **Foreign Language Requirement**

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

- 1) Students entering with no high school language units must enroll in Language or may enroll in the 115 series.
- 2) Students with the degree of proficiency equivalent to 13 hours of college-level work may obtain exemption by passing the department's placement exam. The specific dates for the exam are announced in the Schedule of Courses or may be obtained from the admissions office or the Department of Foreign Languages and Literatures.
- 3) Native speakers of language other than English may meet the foreign language requirement by presenting a transcript from a university or secondary school of their native country. The department will certify native speakers of those languages which are taught at the university. Those who are proficient in other languages must submit certification of competence to the college.
- 4) Language 115 a, b, and c (Intensive) will satisfy the foreign language requirement. 115a, 115b and 115c are co-requisites and must be completed with a grade of C or better, to satisfy the foreign language requirement.
- 5) Students may not repeat for credit an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent is a prerequisite.

#### **Applied Music and Studio Art**

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

#### **Bachelor of Music (B.M.)**

The requirements are the same as for the B.A. degree with the addition of music education and education courses for music majors seeking state teacher certification. Although

foreign language proficiency is not required, foreign language study is required for applied voice students.

#### **Certificate Program**

A certificate program is offered in photographic studies.

#### **Department Honors**

Majors in the music department may pursue department honors.

#### **Minors**

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

## **Department of Art and Art History**

### **Faculty**

**Ruth L. Bohan**, Associate Professor\*, Chairperson  
Ph.D., University of Maryland  
**Glen P. Gentile**, Aronson Endowed Professor of Modern  
and Contemporary Art History, Director of Laumeier  
Sculpture Park  
M.F.A., Maryland Institute, College of Art  
**E. Louis Lankford**, Professor, Des Lee Foundation  
Endowed Professorship in Art Education\*  
Ph.D., Florida State University  
**Jay Rounds**, Professor, Des Lee Foundation Endowed  
Professorship in Museum Studies and Community  
History\*  
Ph.D., University of California, Los Angeles  
**Kenneth Anderson**, Professor\*  
M.F.A., Southern Illinois University, Edwardsville  
**Jeanne Morgan Zarucchi**, Professor\*  
Ph.D., Harvard University  
**Yael Even**, Associate Professor\*  
Ph.D., Columbia University  
**Dan Younger**, Associate Professor,\* B.F.A. Coordinator  
M.F.A., University of Iowa  
**Marian Amies**, Assistant Professor\*  
M.F.A., Southern Illinois University, Edwardsville  
**Phillip E. Robinson**, Assistant Professor\*  
M.F.A. University of Illinois, Chicago  
**Gretchen Schisla**, Assistant Professor  
M.F.A., Boston University  
**Jeffrey L. Sippel**, Assistant Professor\*  
M.F.A., Arizona State University  
**Terry L. Suhre**, Assistant Professor, Gallery Director\*  
M.F.A., Southern Illinois University, Carbondale  
**Susan Waller**, Assistant Professor  
Ph.D. Northwestern University  
**Luci Mauricio-McMichael**, Lecturer  
M.A., Webster University  
\*members of Graduate Faculty

The Department of Art and Art History represents a diverse faculty actively engaged in the production of art and in its historical and critical evaluation. The department prides itself on its commitments to high standards of teaching and sound research achievements. Individual faculty has been cited for their teaching excellence. Art history faculty members have written books, articles, and critical reviews and regularly participate in national and international conferences. For their research art history faculty have received research grants from such major institutions as the J. Paul Getty Foundation, the National Endowment for the Humanities, the Andrew W. Mellon Foundation, and the American Philosophical Society. Studio art faculty exhibit nationally and internationally in group- and solo-juried and invited exhibitions. Their work has been accorded various show awards and received

financial support from the National Endowment for the Arts, the Ford Foundation, and University Research grants.

### **General Information**

#### **Degrees and Areas of Concentration**

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

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

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

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

#### **Gallery 210**

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

#### **Gallery FAB**

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

#### **Gallery Visio**

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

### Scholarships/Internships

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

### Undergraduate Studies

#### General Education Requirements

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

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

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

#### Degree Requirements

##### Bachelor of Arts in Art History

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

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

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

##### Ancient and Medieval

- 111(2211), Art and Archaeology of the Ancient World
- 112(2212), Greek Art and Archaeology
- 113(2213), Roman Art and Archaeology
- 114(2214), Early Christian and Byzantine Art
- 125(2225), Medieval Art

##### Early Modern

- 135(2235), Italian and Northern European Renaissance Art
- 137(2237), Northern European Renaissance Art
- 138(2238), Italian Renaissance Art

- 140(2240), French Art and Architecture 1400-1715
- 145(2245), Baroque Art and Architecture

##### Modern and American

- 155(2255), Modern Art
- 158(2278), American Art
- 159(2279), American Architecture
- 165(2265), History of Photography
- 191(2281), Art Since 1945
- 263(2267), Photography Since 1945

##### Non-European

- 8(1108), Survey of Asian Art
- 15(1102), Art of Africa, Oceania, and the Americas
- 107(1109), Chinese Art
- 108(1110), Japanese Art
- 116(1104), North American Indian Art
- 117(1105), African Art
- 119(1103), Pre-Columbian Art

Students must take four upper-division courses. Two of these courses should be chosen from the following list:

- 205(3391), Advanced Issues and Ideas in Art History
- 274(3374), Philosophy of Art
- 275(3375), The Art of the Print
- 276(3376), Women and the Visual Arts
- 285(3385), Studies in Architectural History
- 294(3394), Art Criticism
- 295(3365), The Artist and the City
- 296(3396), The Nude in Art
- 297(3397), Landscape Perspectives in Art
- 298(3398), The Portrait

The remaining two upper-division courses must be chosen from two of the following four categories:

##### Ancient and Medieval

- 212(4411), Topics in Ancient Art
- 225(4425), Topics in Medieval Art

##### Early Modern

- 235(4435), Topics in Renaissance Art
- 245(4445), Topics in Baroque Art

##### Modern and American

- 255(4455), Topics in Modern European Art
  - 258(4475), Topics in American Art
  - 265(4465), Topics in Photographic Studies
  - 291(4481), Topics in Contemporary Art
- ##### Non-European
- 208(4408), Topics in Asian Art
  - 215(4402), Topics in Tribal Art
  - 217(4405), Topics in African Art

Students must also take one course in studio art. Up to nine hours in studio art may be applied toward the B.A. in art history. Art 134(1134), Art Activities for Elementary Schools, does not fulfill this requirement.



To complete the 36-45 hours for the degree, art history majors may take additional courses from those previously noted or any of the following:

65(1165), Photography and Society  
105(2291), Issues and Ideas in Art History  
179(2295), Special Topics in Art History  
287(3387), Professional Internship  
288(3388), UM-St. Louis-Saint Louis Art Museum Internship  
289(3389), Visual Resource Management  
290/390(3390/4490), Special Study  
292(3392), Museum Studies  
293(3393), Art Gallery Management

Note: Art history majors who began in the program before 1991 have their choice of completing the major under the old requirements or the new. Consult with your advisor for details.

#### Bachelor of Fine Arts in Studio Art

Candidates for the B.F.A. degree must complete a Foundation Art Program (which is largely satisfied by the A.F.A. degree) and an emphasis area in one of the following: drawing, graphic design, painting, photography, printmaking or general fine arts. An art education emphasis may be taken in combination with one of the studio art emphasis areas. Studio art majors are required to take 75 hours in studio art (this includes 30 hours in the foundation art program) and 15 hours in Art History. Art 134(1134), Art Activities for Elementary Schools, cannot be applied toward this degree. The final 24 hours must be completed in residence at UM-St. Louis. Graduating students must also pass a faculty portfolio review.

Advanced Placement in Studio Art Classes: Studio Art Majors who have professional Graphic Design or Photographic experience may wish to submit a portfolio review to a committee of studio art faculty. Depending on the nature and the quality of the student's portfolio, they may be able to obtain exemptions from selected lower level division studio art courses. Students applying for these exemptions must submit their portfolios prior to the first day of class of their first semester at the University. A handout detailing the submission procedures and requirements can be obtained from the Studio Arts office. Students will be notified in writing if an exemption is granted. Students informed of these waivers will be advised of their requirements in the studio art major. All decisions of the portfolio reviews are final. No credit is granted for classes that have been waived.

#### Foundation Art Program

The following courses are required for the Foundation Art Program:

40(1140), Drawing I  
42(1142), Figure Drawing I

50(1150), Design I  
140(1141), Drawing II  
150(1151), Design II  
240(2240), Drawing III or  
142(1143), Figure Drawing II\*  
250(2250), Composition  
9 hours of Studio Art Electives  
\*Those planning an emphasis in drawing or painting must take Art 142(1142).

Students must complete 45 hours in one of the following emphasis areas:

#### Drawing

240(2240), Drawing III  
242(2243), Figure Drawing III  
340(2241), Drawing IV  
342(2243), Figure Drawing IV  
350(2251), Design III  
387(3340), Advanced Problems in Drawing I  
388(3341), Advanced Problems in Drawing II  
396(4495/4496), Senior Studio Seminar (6 hours)  
6 hours of Painting or Printmaking  
12 hours of Studio Art Electives

#### Graphic Design

Note: Enrollment in upper level graphic design courses beginning with Graphic Design III is limited to students who have been admitted to candidacy for the Bachelor of Fine Arts with Graphic Design emphasis  
210(1210), Graphic Design I  
211(1220), Graphic Design II  
220(2220), Computer Art I or Studio Art Elective  
221(2221), Computer Art II or Studio Art Elective  
310(3310), Graphic Design III  
311(3311), Graphic Design IV  
312(3312), Special Techniques in Illustration and Graphic Design or Studio Art Elective  
383(3383), Advanced Problems in Graphic Design I  
384(3384), Advanced Problems in Graphic Design II  
389(3389), Graphic Design Studio or Studio Art Elective  
397(4497), Senior Seminar in Graphic Design I  
398(4498), Senior Seminar in Graphic Design II  
9 hours of Studio Art Electives

#### Painting

180(1180), Painting I  
280(2280), Painting II  
350(2251), Design III  
380(2280), Painting III  
381(2281), Painting IV  
385(3380), Advanced Problems in Painting I  
386(3381), Advanced Problems in Painting II  
396(4495/4496), Senior Studio Seminar (6 hours)  
6 hours from the following list:  
240(2240), Drawing I  
242(2243), Figure Drawing III  
340(2240), Drawing IV  
342(2243), Figure Drawing IV

12 hours of Studio Art Electives

**Photography**

260(3363), Digital Photography II  
261(2262), Color Photography I  
350(2251), Design III  
360(3260), Photography III  
361(3362), Color Photography II  
391(3391), Advanced Problems in Photography I  
392(3392), Advanced Problems in Photography II  
396(4495/4496), Senior Studio Seminar (6 hours)  
12 hours of Studio Art Electives  
6 hours of Photography electives

**Printmaking**

270(1170), Printmaking I  
271(2271), Printmaking II  
340(2241), Drawing IV  
342(2243), Figure Drawing IV  
350(2251), Design III  
370(2274), Printmaking and Relief  
393(3370), Advanced Problems in Printmaking I  
394(3371), Advanced Problems in Printmaking II  
396(4495/4496), Senior Studio Seminar (6 hours)  
6 hours from the following list:  
272(2272), Printmaking: Lithography I  
273(1173), Printmaking: Screenprinting I  
277(2277), Printmaking: Photolithography  
372(3372), Advanced Lithography  
9 hours of Studio Art Electives, including one course in photography

**General Fine Arts**

30 hours of studio art electives must be taken at the 200 level or above.

The following courses are required:

350(2251), Design III  
396(4495/4496), Senior Studio Seminar (6 hours)  
Select 6 hours from the following:  
387(3340), Advanced Problems in Drawing I and  
388(3341), Advanced Problems in Drawing II or,  
385(3380), Advanced Problems in Painting I and  
386(3381), Advanced Problems in Painting II or,  
391(3391), Advanced Problems in Photography I and  
392(3392), Advanced Problems in Photography II or,  
393(3370), Advanced Problems in Printmaking I and  
394(3371), Advanced Problems in Printmaking II

Students must complete 15 hours of Art History, with at least 9 hours taken in residence at UM-St. Louis.

Students choosing a double major in two studio art emphasis areas must complete all the requirements for each emphasis area. If the double major includes Graphic Design, students must take four semesters of Senior Studio Seminar. This includes Art 397(4497), Art 398(4498), Art 396a(4495), and Art 396b(4496).

**Minors**

**Minor in Art History**

A minor in art history requires the completion of at least 18 hours in art history courses. Students must take Art 5 and at least one course in non-Western art. They must also take at least 2 courses at the 300-level or above. A maximum of 3 hours of internship can be applied toward a minor in art history. The GPA for the courses for the minor must be 2.0 or better. Nine of the 18 hours must be taken in residence at UM-St. Louis.

**Minor in Studio Art**

Students who wish to minor in studio art must take a minimum of 18 hours with a grade point average of 2.0 or better. The requirements for the minor are as follows:

40(1140), Drawing I

140(1141), Drawing II

50(1150), Design I

and two consecutive courses (6 hours) in any single area to be selected from the following (students should be aware that courses are not always available in all areas):

Painting

Printmaking (any one subfield)

Photography

Graphic Design

Advanced Drawing

plus a studio art elective: one three-hour course.

**Photographic Studies Certificate**

UM-St. Louis students, graduates, and post-baccalaureate candidates may obtain a certificate in photographic studies by coordinating courses in and related to photography. To be eligible for the certificate, undergraduates must complete a degree in a chosen major field. A faculty member of the Interdisciplinary Photographic Studies Committee will act as adviser to all students and will consult with the faculty adviser in the student's major to plan appropriate credits.

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

**Requirements**

The following courses are required:

Art 60(1060), Photography I

Art 160(2160), Photography II

Art 165(2265), History of Photography

Interdisciplinary 65(1165)/Art 65(1165), Photography and Society

Art 360(3260), Photography III, or

**Interdisciplinary 390, Independent Studies in  
Photographic Studies**

Students must also take at least one 3-hour course selected from the following departmental offerings. New courses will be reviewed periodically for inclusion:

Art 5(1100), Introduction to Art  
Art 161(2263), Introduction to Digital Photography  
Art 261(2262), Color Photography I  
Art 262(2264), Non-Silver Photography  
Art 263(2265), Photography Since 1945  
Art 264(2264), Video Art I  
Art 274(3374), Philosophy 274(3374), Philosophy of Art  
Art 277(2277), Printmaking: Photolithography  
Art 360(3260), Photography III  
Art 361(3362), Color Photography II  
Art 364(3364), Video Art II  
Art 390(3390), Special Studies  
Art 391(3391), Advanced Problems in Photography I  
Art 392(3392), Advanced Problems in Photography II  
Biology 360(4784), Techniques in Electron Microscopy  
Comm. 50(1050), Introduction to Mass Media  
Comm. 70(1070), Introduction to Cinema  
Comm. 210(2210), Television Production  
English 214/Comm 214(3140/3214), News Writing  
English 215(3150), Feature Writing  
Interdisciplinary 40, The Black World  
Interdisciplinary 365, Seminar in Photographic Studies  
Interdisciplinary 390, Independent Studies in  
Photographic Studies  
Psych 213(2213), Principles of Perception

**Pre-Professional Graduation: Architecture**

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

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

The requirement that 24 of the last 30 hours of course work for a degree be taken at UM-St. Louis shall be waived where necessary for students graduating under this procedure.

**Career Outlook**

Study in art history broadens and enriches a general education, offering insight into the visual, architectural, and cultural artifacts left by earlier, as well as modern, civilizations. Art history graduates have found career opportunities in teaching, museums, galleries, libraries, historical societies, sales and auction houses, and historic preservation, and as travel guides, art administrators, and editors and in art restoration.

Students with degrees in studio art find careers in teaching, advertising, public relations, graphic design, illustration, film and video production, art administration, art restoration, product and industrial design, framing, and commercial photography.

## Course Descriptions

Courses in this section are grouped as follows: Art History and Studio Art. Prerequisites may be waived by consent of instructor. For the nonmajor, any number of studio courses will be accepted as electives.

Students who have earned 24 or more semester hours of credit at any accredited post-secondary institutions(s) before the start of the fall 2002 semester must meet the general education requirements stipulated in the UM-St Louis 2001-2002 Bulletin. The following courses fulfill the Humanities breadth of study requirements as described in that Bulletin:

ART HISTORY 5(1100) 8(1108), 15(1102), 65(1165), 105(2291), 107(1109), 108(1110), 111(2211), 112(2212), 113(2213), 114(2214), 116(1104), 117(1105), 119(1103), 125(2225), 135(2235), 137(2237), 138(2238), 140(2240), 145(2245), 155(2255), 158(2278), 159(2279), 165(2265), 179(2295), 191(2281), 195(3395), 203(3303), 205(3391), 208(4408), 212(4411), 215(4402), 217(4405), 225(4425), 235(4435), 245(4445), 255(4455), 258(4475), 263(2267), 265(4465), 274(3374), 275(3375), 276(3376), 285(3385), 290(3390), 291(4481), 292(3392), 293(3393), 294(3394), 295(3365), 296(3396), 297(3397), 298(3398), 390(4490), 395(4495).

The following courses meet the Cultural Diversity requirement: ART HISTORY 8(1108), 15(1102), 107(1109), 108(1110), 116(1104), 117(1105), 119(1103), 208(4408), 215(4402), and 217(4405).

## Art History

### 5(1100) Introduction to Art (3) [H]

An introduction to major historical movements in Western art.

### 8(1108) Introduction to Asian Art (3) [H, CD]

A survey of the major achievements in architecture, sculpture, and painting of India, China, Japan and Southeast Asia. Emphasis on religious, historical, and social context of the arts.

### 15(1102) Art of Africa, Oceania, and the Americas (3) [CD]

A survey of the art of tribal people of Africa, Oceania, and the Americas from prehistoric times through the present. The relationship of art to religion, myth, festival, and social life will be considered, as well as the effects of acculturation on the arts.

### 65(1165) Photography and Society (3)

(Same as Interdisciplinary 65(1165).) A study of photography as a means of information and expression, as an influence on culture, and as a reflection of concepts in politics, science, morality, and art. This course counts toward the major.

### 105(2291) Issues and Ideas in Art History (3)

Prerequisite: Art 5(1100) or permission of instructor.

Intensive studies of a few selected works from various eras and cultures, with special attention to the particular social and cultural factors surrounding their creation. May be repeated for credit with change of topic and permission of adviser.

### 107(1109) The Arts of China (3) [CD]

A survey of the major achievements in the history of Chinese art. Bronzes, sculpture, painting, calligraphy, ceramics, and jades will be considered within their historical, philosophical, and social context.

### 108(1110) The Arts of Japan (3) [CD]

A survey of the art and architecture of Japan from prehistory to the present. Topics will include sculpture, architecture, pottery, gardens, Japanese prints and paintings in their various forms, i.e. Chinese style, purely Japanese style, narrative scrolls, Zen, and Rimpa.

### 111(2211) Art and Archaeology of the Ancient World (3) [H]

Prerequisite: Art 5(1100). A survey of art in Egypt, the Ancient Near East, Greece, and Rome, beginning in the Neolithic era (8000-4000 BC) and ending with the Barbarian invasions of Italy in the fifth century A.D. The major highlights of architecture and city planning, sculpture, painting, pottery, and the minor arts will be covered.

### 112(2212) Greek Art and Archaeology (3)

Prerequisite: Art 5(1100). General survey of material culture in the Aegean basin, beginning with the Bronze Age (third millennium BC), and terminating in the late Hellenistic period (second century BC). For the Hellenistic period the course will trace Greek developments and influences outside of the Aegean, for example, in Italy and in Egypt.

### 113(2213) Roman Art and Archaeology (3)

Prerequisite: Art 5(1100). General survey of material culture in Italy and its dependencies beginning with prehistoric Italy (ninth and eighth centuries B.C.) and terminating in late antiquity (the fifth century A.D.). The course will focus on the regional variants of Roman art in such places as Gaul, Spain, Great Britain, North Africa, and the Greco-Roman East.

### 114(2214) Early Christian and Byzantine Art (3)

Prerequisite: Art 5(1100). Survey of the development of Christian imagery during the Late Antique period, the Constantinian epoch, the development of the early Byzantine style during the sixth century, and later innovations in style and subject matter in later Byzantine art until AD 1453.

**116(1104) North American Indian Art (3) [CD]**

A detailed survey of the arts of North America from prehistoric times to the present. Cultures to be covered include: Mound builders, Northeast, Navajo, Pueblo peoples, Northwest Coast, and Eskimo. The relationship of art to religion, dance, philosophy, and social life will be explored.

**117(1105) African Art (3) [H, CD]**

A survey of the major achievements in painting, sculpture, and architecture of the continent of Africa, with an emphasis upon the religious and social contexts of the arts.

**119(1103) Pre-Columbian Art of Mexico and Central America (3) [CD]**

A survey of the arts of native peoples of Middle America before the coming of the Spaniards in 1519. The cultural context and meaning of sculpture, painting, architecture, and ritual among the Olmec, Maya, Aztec, and other tribes.

**125(2225) Medieval Art (3)**

Prerequisite: Art 5(1100). A survey of the art and architecture of the Mediterranean World and northern Europe from late antiquity to the Late Gothic period (300-1300 A.D.). Focus on new styles and subject matter in painting, sculpture, and architecture.

**135(2235) Italian and Northern European Renaissance Art (3) [H]**

Prerequisite: Art 5(1100) or permission of instructor. An introduction to selected artworks, artists and patrons in Italy and Northern Europe throughout the fifteenth and sixteenth centuries, beginning with Ghiberti and Van Eyck and ending with Michelangelo and Brughel.

**137(2237) Northern European Renaissance Art (3)**

Prerequisite: Art 5 (1100). A review of Flemish, so called Franco-Flemish, and German paintings, illuminations, and prints during the fifteenth and sixteenth centuries, before and after Luther.

**138(2238) Italian Renaissance Art (3)**

Prerequisite: Art 5 (1100). The study of sculpture, paintings, and architecture in Florence, Rome, and Venice during the fourteenth, fifteenth, and sixteenth centuries as reflections of cultural, religious, philosophical, and political beliefs.

**140(2240) French Art and Architecture 1400-1715 (3)**

Prerequisite: Art 5(1100) or permission of the instructor. A survey of art and architecture in France from the late medieval period to the late baroque. Topics will include the development of French chateaux and gardens, the rise of the Academy, and the influence of royal patronage on the arts.

**145(2245) Baroque Art and Architecture (3)**

Prerequisite: Art 5(1100) or permission of the instructor. A survey of the major paintings, statues, buildings, and their

artists and patrons in seventeenth-century Italy, France, Flanders, Holland, and Spain. Special attention will be given to the study of the city of Rome.

**155(2255) Modern European Art (3) [H]**

Prerequisite: Art 5(1100) A survey of European art of the nineteenth and twentieth centuries.

**158(2278) American Art (3)**

Prerequisite: Art 5(1100). An overview of the major developments of painting, sculpture and the decorative arts in the United States since 1600. Emphasis on the contributions of individual artists and the changing cultural contexts in which they worked.

**159(2279) American Architecture (3)**

Prerequisite: Art 5(1100) or consent of the instructor. A brief history and analysis of American architecture, investigations of technological process, urban planning, and the dominating social attitudes which govern architectural development.

**165(2265) History of Photography (3)**

Prerequisite: Art 5 (1100) or consent of instructor. A study of photography: its historical development, an examination of it as an art medium, and its influence on the development of modern art.

**179(2295) Special Topics in Art History (1-3)**

Prerequisite: Art 5 (1100) or consent of instructor. Selected topics in art history. This course may be repeated for credit.

**191(2281) Art since 1945 (3)**

Prerequisite: Art 5(1100) or consent of the instructor. An overview of the major developments in European and American art since World War II. Topics include abstract expressionism, pop art, conceptual and minimal art, performance and video.

**195(3395) Sophomore/Junior Seminar: The Methods of Art History (3)**

Prerequisites: Art 5(1100) and nine additional hours in art history. An introduction to the methods of art historical analysis. Emphasis on research techniques and writing. This course must be taken before a student's senior year.

**203(3305) Media and Technique in Art History (3)**

Prerequisite: Art 5 (1100), and two other courses in art history. Technical demonstration of and research into various materials and media used by artists. In addition to ancient media such as egg tempera and fresco, it will include modern media such as photography and video.

**205(3391) Advanced Issues and Ideas in Art History (3)**

Prerequisites: Art 5 (1100) and three additional courses in art history, or permission of the instructor. Seminar format. Intensive study of a few objects or issues in the history of art, focusing on issues which crosscut periods or geographic regions.

**208(4408) Topics in Asian Art (3) [CD]**

Prerequisite: Art 8(1108) or permission of instructor. A study of selected topics in Asian art. The content will vary, focusing on topics such as Chinese and Japanese landscape in paintings and in gardens, images of women in Asian art, or the Spirit of the Brush in Chinese and Japanese painting. May be repeated for credit with permission of instructor and adviser.

**212(4411) Topics in Ancient Art and Archaeology (3)**

Prerequisites: Art 5(1100) or Interdisciplinary 10 and one of the following: Art 111(2211), 112(2212), 113(2213), 114(2214), or permission of instructor. Intensive study of some aspect of Classical or Early Christian art. Content will vary. May be repeated for credit with permission of adviser.

**215(4402) Topics in Tribal Arts (3) [CD]**

(Same as Anthropology 225(1025)) Prerequisite: One of the following: Art 15(1102), 116(1104), 117(1105), 119(1103), or consent of instructor. Intensive study of the arts of several tribal groups. Inquiry into relationships between art and culture by means of an examination of myth, literature, festival, and social life. Seminar format. May be repeated for credit with permission of adviser.

**217(4405) Topics in African Art (3) [CD]**

Prerequisite: Art 15(1102) or 117(1105) or permission of instructor. A study of selected topics in the history of African art. The content of the course will vary, focusing upon a single topic, which might include Islam and the arts of Africa, Christianity and the arts of Nubia and Ethiopia, art and festival in West Africa, or women and art in sub-Saharan Africa. May be repeated for credit with permission of instructor.

**225(4425) Topics in Medieval Art (3)**

Prerequisite: Art 125 (2225) or consent of instructor. A study of selected topics in Medieval art. The content of the course will vary, focusing on single topics such as manuscript painting, the Gothic cathedral and its sculptural decoration, or the art of pilgrimage churches. May be repeated for credit with permission of instructor.

**235(4435) Topics in Renaissance Art (3)**

Prerequisite: Art 135(2235), 137(2237) or 138(2238) or consent of instructor. Studies of selected topics, which will vary. Subjects to be considered may include the art of Florence, the role of patronage in Renaissance Italy, and Papal art. May be repeated for credit.

**245(4445) Topics in Seventeenth and Eighteenth-Century European Art (3)**

Prerequisite: Art 145(2245) or consent of instructor. A study of selected topics in Baroque and Rococo art. The content of the course will vary, focusing on single areas, such as the Baroque in Rome; or on major artists, such as Bernini, Rubens, and Rembrandt. May be repeated for credit with permission of instructor and adviser.

**255(4555) Topics in Modern European Art (3)**

Prerequisite: Art 155 (2255) or consent of instructor. Intensive study of selected topics in European art. May be repeated for credit with permission of instructor and adviser.

**258(4475) Topics in American Art (3)**

Prerequisite: Art 158(2278) or 159(2279) or consent of instructor. Intensive study of selected topics in American art from colonial beginnings to the present. Topics may include the image of the family in art, patronage, the relationship between art and literature, and the role of the artist in modern society. May be repeated for credit with permission of instructor and adviser.

**263(2267) Photography since 1945 (3)**

Prerequisites: Art 5(1100) and either Art 65(1165) or 165(2265) or permission of instructor. Seminar on creative photography from postwar period to present. Topics include relation of this medium to other arts, including sculptural and performance art, as well as current modes of photographic depiction in landscape and studio work.

**265(4465) Topics in Photographic Studies (3)**

(Same as Interdisciplinary 265(4465). Prerequisite: Permission of instructor. Advanced study of specific styles, periods, or issues within photographic history.

**274(3374) Philosophy of Art (3)**

(Same as Philosophy 274.(3374)) A study of issues concerning the definition of art, meaning and truth in the arts, aesthetic experience, and criticism.

**275(3375) The Art of Print (3)**

Prerequisite: Art 5(1100) or consent of the instructor. Dealing with the history of print forms: woodcuts, etchings, engravings, lithographs, silk-screens, monotypes, and mixed media. Special emphasis will be given to the importance of prints to the art and artists of our time.

**276(3376) Women and the Visual Arts (3)**

Prerequisite: Art 5(1100) or enrollment in the Women's Studies Certificate Program recommended. Selected topics concerning women as creators, users, and subject matter of art. Great women artists in the Western world will be studied, as well as women weavers, potters, and sculptors in tribal society.

**285(3385) Studies in Architectural History (3)**

Prerequisite: Art 5(1100) or consent of instructor. A study of selected topics in architectural history. The content of the course will vary, and the course may be repeated for credit with permission of the instructor and departmental adviser. Possible topics include the history of the castle, factory architecture, the evolution of the Gothic cathedral, and domestic and vernacular architecture.

**287(3387) Professional Internship (1-6)**

Prerequisites: Junior/Senior standing in art history or studio art and consent of faculty adviser. The internship provides experience in museums, historical societies, galleries, design firms, or visual resource collections. Students will assist in the diverse duties associated with the day-to-day functions of the institution, under the joint direction of a faculty adviser and a supervisor at the institution. Course requirements may include readings, research assignments, and/or a paper. This course may be counted for art history or studio art credit with the department's consent.

**288(3388) UM-St. Louis/Saint Louis Art Museum Internship (3)**

Prerequisites: Art History or Anthropology major, junior/senior standing, and consent of faculty adviser. Student, selected competitively after submitting application to the UM-St. Louis/St. Louis Art Museum Internship Committee, completes 20 hours of work per week under direction of a curator or curators at the Saint Louis Art Museum. The precise schedule and particular projects are to be determined by the curator and the student together. Projects can include research on the Museum collection, research on possible Museum acquisitions, checking label information, research or compilation of bibliography for exhibitions, or other tasks at the discretion of the curator. Each internship runs for the duration of one semester.

**289(3339) Visual Resources Management (3)**

Prerequisites: Art 5(1100) and 3 credit hours in other art history courses, or permission of instructor. This hands-on course in the art department's slide library will consist of the daily operation and management of, as well as technological and theoretical approaches to visual resource collections. The course content relies upon the Art Department's slide library of over 80,000 slides, videotapes, and other visual materials.

**290(3390) Special Study (1-10)**

Prerequisites: Junior or senior standing and consent of department and instructor. Independent study through readings, reports, or field research.

**291(4491) Topics in Contemporary Art (3)**

Prerequisites: Art 5(1100) and Art 191(4481) or permission of instructor. Seminar on particular topics in European or American art since 1945. Topics may include contemporary feminist art, postmodernism, or abstract

expressionism. May be repeated for credit with permission of instructor and adviser.

**292(4492) Museum Studies (3)**

Prerequisites: Art 5(1100) and 6 credit hours in other art history courses. This course is intended as an introduction to the function and operation of the art museum. Sessions will include the history of art museums and collecting policies; the organization of art museums; the tasks of the curator; the registration practices; art conservation; the museum as an educational institution; the organization and planning of permanent galleries; and the planning and installation of temporary exhibitions.

**293(3393) Art Gallery Management (3)**

Prerequisites: Art 5(1100) and 6 credit hours in other art history courses. This course will consider the practical application of professional training in art history as it applies to gallery management. Topics covered will include: grant writing in the arts, the development of art exhibits, the role of the art curator, and the operation of a gallery. All students will get hands-on experience in Gallery 210.

**294(3394) Art Criticism (3)**

Prerequisite: Art 155(2255) or Art 191(2281) or permission of instructor. An overview of the history and function of art criticism, focusing principally on the theory and criticism of twentieth-century art. Students will attempt their own critical writings on contemporary art.

**295(3365) The Artist and the City (3)**

Prerequisite: Art 5(1100). Examines the role of urban centers as a focus for significant artistic activity, as a recurring theme in art, and as a spatial and physical architectural reality. Aspects of urban planning, urban imagery in art, and the social, political, and personal networks artists develop as a result of living in particular urban centers at particular moments in history will be among the topics discussed.

**296(3396) The Nude in Art (3)**

Prerequisites: Art 5(1100) and one other course in art history. An exploration of the various meanings of nudity in art. The cultural, social, and psychological contexts of nudity in art will be examined in different historical periods and geographic regions, both Western and non-Western. Representations of both males and females will be analyzed in terms of gender construction, political authority, and personal identity.

**297(3397) Landscape Perspectives in Art (3)**

Prerequisite: Art 5(1100). This seminar considers the various conventions for representing landscape and nature, and human relationships to landscape, throughout history and across cultures. Issues to be considered may include landscape as metaphor in European painting, contemporary earthworks, landscape photography, and the relationship of artist to landscape in the non-Western world.



**298(3398) The Portrait (3)**

Prerequisite: Art 5(1100) or permission of instructor. An examination of portraiture in its social, economic and political contexts. Group and individual portraits will be analyzed in terms of gender construction, social status, family history and personal and public identity throughout selected periods of Western and non-Western culture.

**390(4490) Special Study (1-10)**

Prerequisites: Junior/senior standing and consent of department chairperson and instructor. Independent study through readings, reports, or field research.

**395(4495) Senior Art History Seminar (3)**

Prerequisite: Art 195(3395), English 210(3100) and senior standing in art history or consent of instructor. Intensive reading, discussion, and writing on topics to be announced.

**435(6035) Foundations of Museology I (3)**

Prerequisite: Consent of Director of Museum Studies Program. (Same as Anthropology 435 (6035) and History 435(6035).) Concepts for understanding museums in their social and cultural context; history of museums; museology and general social theory; information transfer vs. Meaning-making models; museums and communities; the changing role of museums; museums as complex organizations; process models of museology.

**436(6036) Foundations of Museology II (3)**

Prerequisite: Art 435 (6035) and consent of Director of Museum Studies Program. (Same as Anthropology 436(6036) and History 436(6036).) Audience-centered approaches to museology; visitor research and learning theory; philosophical and practical considerations in museum planning; the physical design of museums; creativity; exhibit and program development; collections and curation; the challenge of diversity; the future of museums.

**437(6037) Effective Action in Museums (3)**

Prerequisite: Consent of Director of Museum Studies Program. (Same as Anthropology 437(6037) and History 437(6037).) The nature of the work done in museums; how museums are organized to accomplish this work; professional roles and practices; technology and resources used by museums, skills for creative and effective leadership in project management and administration in museums; planning, flow charting, budgeting, team dynamics, and related skills. The course will include several site visits to area museums and guest lectures by a variety of museum professionals.

**438(6038) Museum Studies Master's Project (4)**

Prerequisite: Consent of Director of Museum Studies Program. (Same as Anthropology 438(6038) and History 438(6038).) Research and writing/exhibit development on a selected topic.

**458(5578) Topics in American Art (3)**

Prerequisite: Graduate standing and consent of instructor. This course examines a discrete aspect of the history of American art within the changing social, cultural and historical contexts of Euro-American and/or Native American experiences and traditions.

**488(5588) Museum Education and Visitor Research (3)**

Prerequisite: Consent of director of Museum Studies Program. Development and operation of museum educational programs: learning theory; program design; relationships with exhibit development; programming for children and adults. Visitor research: theoretical foundations; research design; field experience; impact on programming and strategic planning.

**492(5592) The History of the Visual Arts in American Museums (3)**

Prerequisite: Graduate standing and consent of instructor. This course is an introduction to selected topics in the history of museology, focusing on art and anthropology museums as sites for the interpretations of art and culture, and as contested meeting grounds for various views of history and culture.

**Studio Art****2(1002) Introduction to Studio Art (3)**

An introduction to drawing, painting, and design in a beginning studio environment. This course is designed to provide basic skills and understanding of studio experience for the non-art major. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**30(1030) Ceramics I (3)**

An introduction to basic methods and theory of ceramics including work with hand-built construction, wheel techniques, and glazing. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**40(1140) Drawing I (3)**

An introduction to drawing through the study of figure, object, and environment. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**42(1142) Figure Drawing I (3)**

Basic studies of the human form and anatomy from the model in a variety of drawing media. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**50(1150) Design I (3)**

Studio problems in the creative use and integration of the elements of two-dimensional design: line, form, space, texture. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**60(1060) Photography I (3)**

An introduction to the techniques and aesthetics of black and white photography, the camera and the darkroom. Students must provide a camera with adjustable speeds and aperture. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**74(1074) Special Topics in Studio Art (1-3)**

Selected topics in studio studies. This course may be repeated for credit. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**80(1080) Comics and Cartoon Illustration (3)**

A course in creating and appreciating the world of comics and cartoons. This course will investigate the tools and techniques for creating cartoons, cartoon illustrations and the world of comics. Students will create their own cartoons with traditional media and also with computers. While designed for beginners, experienced artists will be encouraged to perfect their personal styles. The class will create and print its own comic book. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**130(1130) Ceramics II (3)**

Prerequisite: Art 30(1030). A continuation of Art 30(1030). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**132(1132) Sculpture I (3)**

An introduction to traditional and contemporary materials, aesthetics, and theories of three-dimensional art. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**133(1133) Introduction to Fibers and Textiles (3)**

Prerequisites: Art 50 (1150). Exploration of a variety of on – and off – loom weaving and other fiber and textile media and techniques. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies,

**134(1134) Art Activities for Elementary Schools (3)**

(Same as Ele Ed 179(2179) A study of art principles and laboratory experiences with various media and materials. Stresses curriculum planning and development of the elementary school program in art. Lab fee required. Basic

studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**140(1141) Drawing II (3)**

Prerequisite: Art 40(1140). The development of drawing skills through continued observation and problems of invention. A further exploration of varied drawing materials and techniques including graphite, charcoal, conte crayon, and inks. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**142(1143) Figure Drawing II (3)**

Prerequisite: Art 42(1142). Continuation of Figure Drawing I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**150(1151) Design II (3)**

Prerequisite: Art 50(1150). A continuation of Art 50(1150), two-dimensional design, with introduction to color theory. Some application of mixed media problems. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**160(2160) Photography II (3)**

Prerequisite: Art 60(1060). Continuation of Photography I at the intermediate level. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**161(2263) Introduction to Digital Photography (3)**

Prerequisite: Art 60(1060) or consent of instructor. An introduction to computer usage in photography. The basic computer techniques and software applications for digitizing, retouching, enhancing and altering photographic images will comprise the core of this course. This class will involve both learning exercises and the creation of original computer-aided photographic art. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**180(1180) Painting I (3)**

Prerequisite: Art 40(1140), Art 50(1150) or consent of instructor. An introduction to the use of oil and/or acrylic painting media. Studio problems to develop technical and expressive skills on various surfaces. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**210(1210) Graphic Design I (3)**

Introductory studio problems in layout, lettering, and design with typographic elements. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**211(1220) Graphic Design II (3)**

Prerequisite: Art 210(1220), Art 50(1150) and Art 40(1140). Continuation of Graphic Design I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**220(2220) Computer Art I (3)**

Prerequisite: Art 50(1150). An introduction to the use of computer graphics software for the creation of artwork applicable to the advertising and graphic design industry. No previous computer experience is necessary. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**221(2221) Computer Art II (3)**

Prerequisite: Art 220(2220). Designed to familiarize students with the methods and processes and computer functions used in graphic art and illustrations. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**232(2232) Sculpture II (3)**

Prerequisite: Art 132(1132). Continuation of Sculpture I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**240(2240) Drawing III (3)**

Prerequisites: Art 40(1140) and Art 140(1141). This course offers studio problems designed to further the development of drawing skills in various media. Limited color will also be introduced. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**242(2243) Figure Drawing III (3)**

Prerequisites: Art 42(1142) and Art 142(1151). Advanced study of the human form and anatomy from the model in a variety of drawing media. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**250(2250) Composition (3)**

Prerequisites: Art 50(1150) and Art 150(1151). An investigation of the use of formal design elements as used in historic and contemporary art. Weekly studio problems and discussions will concentrate on skills, application, and unifying effects of compositional elements on a variety of visual art forms. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**260(3363) Digital Photography II (3)**

Prerequisite: Art 161(2263). Intermediate exploration of the aesthetics and techniques of digital photography. Lab fee required. Basic studio equipment will be provided,

though students will need to supply some personal equipment and supplies.

**261(2262) Color Photography I (3)**

Prerequisite: Art 60(1060) or equivalent. An introduction to the techniques and aesthetics of color photography. Mastering the printing and finishing processes and producing a color print portfolio will be the requirements of this class. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**262(2264) Non-Silver Photography (3)**

Prerequisites: Art 60(1060) and Art 160(2160). An introduction to the aesthetics and techniques of non-traditional photographic processes. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**263(2265) Commercial Applications in Photography**

Prerequisites: Art 160(2160) and permission of adviser. Exploration of issues and applications in commercial photographic production. Topics will vary. Course may be repeated for credit with permission of adviser. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**264(2265) Video Art I (3)**

Prerequisite: Art 160(2160) or permission of instructor. An introduction to video as an art form. Knowledge of contemporary uses and video techniques will be stressed. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**270(1170) Printmaking I (3)**

Prerequisite: Art 50(1150) and Art 140(1141) or consent of instructor. An introduction to printmaking techniques, materials, and theories. The course will include work in a variety of print materials. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**271(2271) Printmaking II (3)**

Prerequisite: Art 270(1170) or consent of instructor. A continuation of Printmaking I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**272(2272) Printmaking: Lithography I (3)**

Prerequisite: Art 50(1150) and Art 140(1141) or consent of instructor. An introduction to printmaking skills and theory in stone and plate lithography. Studio problems in the use of materials and equipment. Attention will be given to individual development. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**273(1173) Printmaking: Screen-printing I (3)**

Prerequisite: Art 270(1170). An introduction into the techniques, methods, and aesthetics of screen-printing. Studio problems involving uses and approaches will be emphasized. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**277(2277) Printmaking: Photolithography I (3)**

Prerequisite: Art 60(1060) or departmental consent. An introduction to printmaking skills and theory in stone and plate lithography with particular emphasis on the photographic applications of the process. Some attention will also be given to commercial printmaking applications while studio problems in the use of materials and equipment will be stressed. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**280(2280) Painting II (3)**

Prerequisite: Art 180(1180) or consent of instructor. Continuation of basic studio problems in painting media. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**283(2283) Watercolor Painting (3)**

Prerequisites: Art 50(1150) and Art 140(1141). Beginning problems in watercolor painting. Includes the study of traditional and contemporary approaches to color, color techniques, and treatment of papers. May be repeated for credit. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**290(2290) Special Study (1-10)**

Prerequisites: Junior/Senior standing and consent of department and instructor. Independent study through readings, reports or field research. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**310(3310) Graphic Design III (3)**

Prerequisites: Art 211(1220). Advanced studio problems to further the understanding of design and its relationship to typographic elements, illustration, and communication. The course will encourage both conceptual and technical development of the designer. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**311(3311) Graphic Design IV (3)**

Prerequisite: Art 310(3310). Further studio problems in the graphic arts. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**312(3312) Special Topics in Illustration and Graphic Design (3)**

Prerequisite: Art 311(3311) or consent of instructor. Illustration and graphic design techniques as diverse as cartooning, Web page design, multi-media animation, and interactive kiosk design (among others) are explored in this class. Each semester, one or more of these specialties are offered. Emphasis is placed on the practical applications of these approaches as well as the production of a strong student portfolio that will demonstrate the mastery of these skills.

**334(3334) Contemporary Art Education: Craft and Theory (3)**

Prerequisite: Upper-division standing or consent of instructor. Intensive study for advanced students and art teachers, emphasizing specialized techniques and innovative concepts. Topics to be announced. May be repeated for credit. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**340(2241) Drawing IV (3)**

Prerequisite: Art 240(2240). Studio problems with emphasis on color and multi-material approach to drawing. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**342(2243) Figure Drawing IV (3)**

Prerequisite: Art 242(2243). Continuation of Figure Drawing III. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**350(2251) Design III (3)**

Prerequisites: Art 50(1150) and Art 150(1151). Advanced studio problems in design materials. Use of two-dimensional and three-dimensional mixed media. Experimental use of materials and media will be introduced. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**360(3260) Photography III (3)**

Prerequisite: Art 160(2160). An exploration into contemporary theories and trends in photography. Advanced projects, portfolios and techniques will be expected from those enrolled. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**361(3362) Color Photography II (3)**

Prerequisite: Art 261(2262). An advanced exploration into the aesthetics and techniques of color photography. Students will be expected to refine their vision utilizing color processes. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**363(3363) Special Topics in Photography**

Prerequisite: Art 160(2160): Photography II and permission of adviser. Selected topics in photographic practice. May be repeated for credit with permission of adviser. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**364(3364) Video Art II (3)**

Prerequisite: Art 264(2264). An advanced exploration of video as a visual art. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**370(2274) Printmaking and Relief (3)**

Prerequisites: Art 270 (1170) and Art 271(2271). Advanced problems in printmaking. Problems in relief printmaking. Work in wood and mixed materials. Development of skills and aesthetic judgments in the media. May be repeated for credit with consent of instructor. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**372(3372) Advanced Lithography (3)**

Prerequisites: Art 273(1173). Continuing problems in lithography with problems in black and white, photolithography, and/or color. May be repeated for credit. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**380(2280) Painting III (3)**

Prerequisite: Art 280 (2280) or consent of instructor. Advanced studio problems in painting media. Attention paid to individual development of theory, expression, and technique. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**381(2281) Painting IV (3)**

Prerequisite: Art 380(2280). A continuation of Painting III. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**383(3383) Advanced Problems in Graphic Design I (3)**

Prerequisite: Art 311(3311). This course is focused on professional-level art and portfolio production. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**384(3384) Advanced Problems in Graphic Design II (3)**

Prerequisite: Art 383(3383) A continuation of Art 383(3383). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**385(3380) Advanced Problems in Painting I (3)**

Prerequisite: Art 381(2281) course is focused on professional-level art and portfolio production. Non-traditional materials might be explored. Attention is focused on individual development of painting theory, self-expression, and advanced techniques. The student is expected to assume a substantial responsibility with regard to direction, motivation, and content. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**386(3381) Advanced Problems in Painting II (3)**

Prerequisite: Art 385(3380). A continuation of portfolio production in Art 385(3380). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**387(3340) Advanced Problems in Drawing I (3)**

Prerequisite: Art 340(2241). This course is focused on professional-level art and portfolio production. It offers studio problems designed to further the development of drawing skills. Emphasis will be given to the study of drawing as an independent art form. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**388 (3341) Advanced Problems in Drawing II (3)**

Prerequisite: Art 387(3340). A continuation of Art 387(3340). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**389(4389) Graphic Design Studio (3)**

Prerequisite: Art 384(3384) or consent of instructor. Students will work on actual client projects in a studio setting from creative concept through client presentation. Studies will include client interviews, project planning, studio operations, project budget and estimating, vendor selection, prepress preparation, working in creative groups and professional presentations.

**390(3390) Special Study (1-10)**

Prerequisites: Junior/senior standing and consent of department. Independent study through readings, reports, or field research. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**391(3391) Advanced Problems in Photography I (3)**

Prerequisite: Art 360(3260). This course is focused on professional-level art and portfolio production. Students may employ black and white, color, non-silver or other traditional or non-traditional press for projects in this course. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**392(3392) Advanced Problems in Photography II (3)**  
Prerequisite: Art 391(3391). A continuation of Art 391(3391). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**393(3370) Advanced Problems in Printmaking I (3)**  
Prerequisite: Art 370(2274). This course is focused upon professional-level art and portfolio production. After completion of this and the preceding course, students should be ready to meet the artistic and intellectual demands of today's visual art world. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**394(3371) Advanced Problems in Printmaking II (3)**  
Prerequisites: Art 393(3370). A continuation of Art 393(3370). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**396a(4495) Senior Studio Seminar (3)**  
Prerequisites: Senior standing and Art 386(3381), 388(3341), 392(3392) or 394(3371). Weekly critiques and discussions of technical and professional issues. Will instruct students in methods of portfolio display, documentation, gallery representation, grant writing, and professional preparation. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies. Offered only during fall semester.

**396b(4496) Senior Studio Seminar (3)**  
Prerequisites: Senior standing and Art 396a(4495). Weekly critiques and discussions of technical and professional issues. Will instruct students in methods of portfolio display, documentation, gallery representation, grant writing, and professional preparation. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies. Offered only during winter semester.

**397(4497) Senior Seminar in Graphic Design I (3)**  
Prerequisite: Senior standing and Art 384(3384). Weekly critiques and discussions of technical and professional issues. Will instruct students in the methods of professional preparation. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

**398(4498) Senior Seminar in Graphic Design II (3)**  
Prerequisite: Art 397(4497). Continuation of Art 397(4497). Will instruct students in the methods of professional preparation. Lab fee required. Basic studio equipment will be provided through students will need to supply some personal equipment and supplies.

## Department of Communication

### Faculty

**Michael Beatty, Professor\***; Chairperson  
Ph.D., Ohio State University  
**Thomas McPhail, Professor\***  
Ph.D., Purdue University  
**Michael Murray, Curators' Distinguished Teaching Professor**  
Ph.D., University of Missouri-Columbia  
**Donald Shields, Professor Emeritus**  
Ph.D., University of Minnesota  
**Rita Csapo-Sweet, Associate Professor**  
Ed.D., Harvard University  
**James Fay, Associate Professor\***  
M.F.A., Tulane University  
**Elizabeth Kizer, Associate Professor Emerita**  
Ph.D., Purdue University  
**Alice E. Hall, Assistant Professor**  
Ph.D., University of Pennsylvania  
**Alan D. Heisel, Assistant Professor**  
Ed.D., West Virginia University  
**Betty H. LaFrance, Assistant Professor**  
Ph.D., Michigan State University  
**C. Thomas Preston, Associate Professor\***  
Ph.D., University of Nebraska-Lincoln  
**Leighanne Heisel, Lecturer**  
M.A., West Virginia University  
**Clark McMillion, Lecturer**  
M.A., State University College of New York at Brockport  
**Sidney Savan, Lecturer**  
B.S., Washington University

\*members of Graduate Faculty

The faculty represents many fields within the discipline of communication including interpersonal communication, organizational communication, mass communication, and rhetoric in addition to related disciplines such as film and media history, media production, and public relations. Most faculty members contribute to the continued growth of the knowledge base, publishing the results of their research in scholarly journals and presenting papers at national and international professional conferences. Other faculty members engage in creative activities. By integrating theory, research, and practice, the faculty is able to offer a comprehensive approach to contemporary communication problems.

### General Information

#### The Bachelor of Arts in Communication

The B.A. in communication is a flexible degree program that allows the student to emphasize a particular field of study (communication theory and rhetoric, or mass communication) or tailor a specific concentration to meet the student's individual needs and interests. An emphasis in

communication theory or mass communication is recommended for students with clear career goals in one of these areas. The communication major is recommended for students interested in teacher certification, the bachelor of general studies degree in the Evening College, or in specific interdisciplinary fields such as public relations/advertising/organizational communication, information science, electronic journalism, television, media administration, and marketing communication. The faculty encourages all students to meet early and often with their faculty adviser to select a meaningful group of courses for a coherent, career-oriented academic program.

#### Minors and Certificates for Communication

The department actively supports the following minor and certificate programs open to students majoring in communication: Minor in Public Affairs Journalism, Minor in Photographic Studies, Minor in Legal Studies, Certificate in Writing, and Certificate in Secondary Education. For more information, see Certificate Programs and Interdisciplinary Studies in this *Bulletin*.

#### Master of Arts in Communication

The master of arts program, a collaborative effort between UM-St. Louis and UM-Kansas City, provides the opportunity for an advanced degree program in communication with emphasis in organizational and mass communication. For further details, please see the Graduate Studies section of the Communication Department listings.

#### Undergraduate Studies

##### General Education Requirements

Majors must satisfy the university and college general education requirements. The college's foreign language requirement may be taken in any language. Communication courses may not be taken on a satisfactory/unsatisfactory basis.

##### Course Emphasis Categories

Courses offered by the communication department are categorized below. Students will need to refer to this list in choosing courses to meet the requirements of their particular emphasis area.

##### Communication Theory and Rhetoric Area Courses

**30(1030)**, Interpersonal Communication I  
**40(1040)**, Introduction to Public Speaking  
**41(1041)**, Basic Public Debate  
**65(1065)**, Introduction to Information Technology  
**108(1108)**, Advertising Copywriting  
**130(1130)**, Interpersonal Communication II  
**135(1135)**, Communication Theory  
**140(1140)**, Advanced Public Speaking  
**141(1141)**, Business and Professional Speaking  
**143(1143)**, Parliamentary Procedure  
**150(1150)**, Introduction to Public Relations  
**228(2228)**, Public Relations Writing



230(2230), Small Group Communication  
231(2231), Communication in the Organization  
240(2240), Persuasive Communication  
241(2241), Argumentation and Debate  
243(2243), Communication in American Politics  
330(3330), Empirical Research in Communication  
331(3331), Research Methods in Communication  
332(3332), Intercultural Communication  
333(3333), Communication Audit  
334(3334), Advertising Media Planning  
335(4335), Seminar in Applied Communication Research  
336(3336), Communication in Advertising  
337(3337), Male/Female Communication  
340(3340), Rhetorical Criticism  
341(3341), Classical Rhetoric and Public Address  
342(3342), Modern Rhetoric and Public Address  
343(3343), The Rhetoric of Protest  
344(3344), Advanced Argumentation Theory  
345(3345), Theory and Practice of Interviewing  
346(3346), Advanced Interviewing Techniques  
358(3358), Communication in Public Relations  
360(3360), Health Communication

#### Mass Communication Area Courses

50(1050), Introduction to Mass Media  
65(1065), Introduction to Information Technology  
70(1070), Introduction to Cinema  
108(1108), Advertising Copywriting  
110(1110), Introduction to Radio and Television  
Broadcasting  
114(1114), Radio Production I  
118(1118), Radio and Television Announcing  
150(1150), Introduction to Public Relations  
210(2210), Television Production I  
212(2212), Broadcast Writing and Reporting  
214(3214), News Writing  
215(2215), Radio Production II  
216(2216), Radio News  
217(2217), Script Writing for Business and Industry  
218(2218), Public Policy in Telecommunication  
219(2219), Promotion, Publicity, and Advertising in  
Broadcasting  
228(2228), Public Relations Writing  
271(2271), History of Film to World War II  
272(2272), History of Film Since World War II  
273(2273), Basic Film Production  
310(3310), Television Production II  
311(3311), Broadcast Management  
316(3316), Television News  
317(3317), Radio and the Recording Industry  
330(3330), Empirical Research Methods  
331(3331), Research Methods in Communication  
334(3334), Advertising Media Planning  
350(3350), Mass Communication History  
352(3352), Mass Media Criticism  
354(3354), Comparative Telecommunication  
Systems  
355(3355), Media Law and Regulation  
356(4356), International Communication

357(4357), Media Ethics  
358(3358), Communication in Public Relations  
360(3360), Health Communication  
370(3370), Documentary Film

#### Degree Requirements

##### Bachelor of Arts in Communication

Majors must complete a minimum of 36, but not more than 45, hours in communication courses. At least 18 of these hours must be taken at UM-St. Louis. Each major must take at least 6 hours of communication courses numbered 200-299 and at least 6 hours of communication courses numbered 300-399. Every major must complete the requirements for an emphasis area as described below.

##### Emphasis Areas

Two emphasis areas are available: Communication theory and rhetoric and mass communication.

##### Required Courses for All Majors

40(1040), Introduction to Public Speaking  
135(1135), Communication Theory  
193(1193), 194(1194), 196(1196), 197(1197), 198(1198)  
(at least 3 hours of Practicum courses), or  
393(3393), 394(3394), 396(3396), 397(3397) (at least 3  
hours of Internship courses).

##### Emphasis Area Requirements

In addition to the above required course work, majors must complete the requirements specified below for one of the following emphasis areas:

###### I Communication Theory and Rhetoric

In addition to the required courses for all majors, students must take the following:

- a. 230(2230), Small Group Communication
- b. Twelve additional hours in Communication Theory and Rhetoric

- c. One of the following Mass Communication courses:

50(1050), Introduction to Mass Media  
70(1070), Introduction to Cinema  
110(1110), Introduction to Radio and Television  
Broadcasting

- d. Plus 9-18 hours from any area or areas in the communication department.

###### II Mass Communication

In addition to the required courses for all majors, students must take the following:

- a. 50(1050), Introduction to Mass Media  
70(1070), Introduction to Cinema  
110(1110), Introduction to Radio and Television  
Broadcasting

- b. Nine additional hours in mass communication

- c. Plus 9-18 hours from any area or areas in the communication department.

**Bachelor of Arts in Communication with Certification in Secondary Education**

In addition to the requirements for the B.A. in communication and general requirements set by the College of Education, students must meet the state requirements for certification.

The B.A. and certification for grades 7-12 can be completed by taking a minimum of 39 hours in communication, selected according to departmental recommendations. The B.A. and certification for grades 7-9 can be obtained by taking 36 hours in communication, selected according to departmental recommendations.

Requirements of the College of Education include courses in professional education and English 262(3600), The Curriculum and Methods of Teaching English (same as SEC ED 232(3600)).

**Departmental Activities, Laboratories, and Internships**

Cocurricular projects and activities relevant to student interests and vocational plans are sponsored and advised by the department (debate and forensic, television club). In addition to the traditional classroom experience, students receive practical training in the department's laboratory facility: the Lucas Hall video laboratory.

Internships at radio and television stations, community agencies, newspapers, and public relations, marketing, and advertising firms, and a variety of business organizations provide valuable opportunities for majors to apply their communication studies.

**Minors in Communication**

Students with majors other than communication may select from two minors to complement their academic and career goals.

The following conditions apply to all minors: Credit hours in Communication 195(1195), and/or Communication 395(3395), may be substituted for credit hours listed below with written consent of the communication department chairperson.

At least 9 of the 18 hours required for the minor must be taken at UM-St. Louis.

A minimum GPA of 2.5 is required in the minor.

**I Requirements for the minor in Communication Theory and Rhetoric are as follows:**

- a. 40(1040), Introduction to Public Speaking
- 135(1135) Communication Theory
- b. One of the following Communication Theory and Rhetoric courses:
  - 30(1030), Interpersonal Communication I
  - 140(1140), Advanced Public Speaking
  - 141(1141), Business and Professional Speaking

c. Plus nine hours from courses in Communication Theory and Rhetoric at the 200 level or above.

**II Requirements for a minor in Mass Communication are as follows:**

- a. 50(1050), Introduction to Mass Media
- 110(1110), Introduction to Radio and Television Broadcasting
- b. One of the following Mass Communication courses:
  - 70(1070), Introduction to Cinema
  - 350(3350), Mass Communication History and Criticism
- c. Plus nine hours in Mass Communication courses at the 200 level or above.

**Graduate Studies**

The department offers the Master of Arts degree in communication.

**Admission requirements:**

Applicants must have a baccalaureate in communication or a related discipline by the end of the semester in which they apply. In addition, the minimum GPA for regular admission to the graduate program in communication is 2.75 on a 4-point scale. Three letters or recommendation, at least two of which address the applicant's potential to succeed in graduate studies in communication are required. International students must obtain a TOEFL score of at least 600 to be considered for admission.

**Master of Arts in Communication**

**Degree Requirements:**

Candidates for the M.A. degree will complete a minimum of 30 semester hours of approved study, at least 21 of which must be taken in courses offered by the department. Video courses from UM-Kansas City taken while in residence at Um-St. Louis may count toward this 21 hour minimum. A minimum of 18 hours must be taken at the 400 level, in addition to the hours taken for the thesis or internship/paper. Of this 18 hours of 400 level courses, 5 hours must be the specific core courses noted as follows:

**Communication**

- 400(6400), Seminar in Communication Theory
- 405(6405), Introduction to Communication Research Methods
- 411(6411), Seminar in Mass Communication
- 431(6431), Seminar in Organizational Communication
- 435(6435), Seminar in Advanced Applied Communication Research

Students complete one of the following exit projects: No less than a 6-hour thesis or a 6-hour internship. After consultation with the graduate coordinator and with input from prospective exit project committee members, the student selects the appropriate exit project. The internship option requires submission of an essay in which the

coursework and internship experience are integrated. Internship essay and thesis must be approved by student's committees and assigned a grade by the adviser. The candidate must pass an oral examination conducted by student's committee regardless of exit option selected.

### **Career Outlook**

The B.A. in communication prepares students for careers in numerous fields. Past graduates are working in the following positions: radio and television news, promotion and public relations, administration, directing, announcing, production, and sports journalism; media management; public relations, advertising, marketing, Web page design, market research, corporate media, sales, training, speech writing, print editing, journalism, teaching, and research. Other students have pursued graduate education in communication programs across North America offering the M.A. and Ph.D. degrees.

## Course Descriptions

Prerequisites may be waived by consent of the department.

Students who have earned 24 or more semester hours of credit at any accredited post-secondary institutions(s) before the start of the fall 2002 semester must meet the general education requirements stipulated in the UM-St Louis 2001-2002 Bulletin. The following courses fulfill the Humanities breadth of study requirements as described in that Bulletin:

70(1070), 160(1160), 271(2271), 272(2272), 337(3337), 340(3340), 341(3341), 342(3342), 343(3343), 344(3344), 350(3350), 352(3352).

The following courses fulfill the Social Sciences breadth of study requirements: 65(1065), 135(1135), 218(2218), 230(2230), 231(2231), 243(2243), 330(3330), 331(3331), 332(3332), 333(3333), 335(4335), 350(3350), 354(3354), 356(4356).

**30(1030) Interpersonal Communication I (3) [C]**  
Development of basic one-to-one communication skills. Includes self-awareness, listening, nonverbal communication, feedback, roleplaying, and receiver awareness.

**40(1040) Introduction to Public Speaking (3) [C]**  
Theories and techniques of organization, evidence, argumentation, persuasion, and delivery in public speaking.

**41(1041) Basic Public Debate (3)**  
History and practice of debate in the public arena, with opportunities to prepare for a variety of public forums for argumentation. Various debate formats, including panel discussions, joint news conferences, and audience-participation debates, in a variety of settings, will be surveyed.

**50(1050) Introduction to Mass Media (3) [C,SS]**  
Introduction to oral, print, and electronic media of communication. Emphasis on history, theory, and criticism of the mass media as cultural institutions.

**65(1065) Introduction to Information Technology (3)**  
The production and consumption of information by individuals, the work place and society. Emphasis on the changing nature of communication processes as a result of the expansion of communication technologies.

**70(1070) Introduction to Cinema (3)**  
An introduction to the history, rhetoric, and aesthetics of film. Film theory and criticism will be studied as well as major genres, authors, and artists.

**108(1108) Advertising Copywriting (3)**  
(Same as English 108(2080).) To give students a hands-on approach for writing advertising material for print and broadcast against tight deadlines in a professional setting.

**110(1110) Introduction to Radio and Television Broadcasting (3)**

An introduction to broadcasting, including the areas of history, government regulations, station operation, and program development.

**113(1113) Basic Television Studio Production (3)**  
Study of basic television studio production techniques and practices. The class will provide the student with practical experience in studio camera operating, directing, producing, switching, audio mixing and lighting. Lab arranged.

**114(1114) Radio Production I (3)**

Prerequisite: Comm 110(1110). Theory and practice in the creation of radio programs. Laboratory experience included.

**118(1118) Radio and Television Announcing (3)**

Prerequisite: Comm 110(1110); 114(1114), and 210(2210) recommended. Training in radio and television studio procedures. Production and criticism of lab programs, including news, continuity, interviews, and oral improvisation. Classroom meetings at the radio lab and the television lab, plus lab hours to be arranged.

**130(1130) Interpersonal Communication II (3)**

Prerequisite: Comm 30(1030). Interpersonal communication in relationships within group contexts, such as family, classroom, and business. Various theories and diagnostic approaches to interpersonal communication. Extensive laboratory sessions utilizing individual and group exercises.

**135(1135) Communication Theory (3)**

Survey of elements and processes critical to human communication behavior. Comparison of influential communication theories.

**140(1140) Advanced Public Speaking (3)**

Prerequisite: Comm 40(1040). Application of advanced public speaking skills, with emphasis on special occasion speaking situations.

**141(1141) Business and Professional Speaking (3)**

Prerequisite: Comm 40(1040). Application of communication skills in the business and professional environment with emphasis on presentational speaking, organizational constructs germane to professional careers, and uses of various media.

**143(1143) Parliamentary Procedure (2)**

Prerequisite: Comm 40(1040). Study and practice in rules of procedure by which self-governing groups transact business.

**150(1150) Introduction to Public Relations (3)**

Prerequisite: Comm 40(1040) or 50(1050). Publicity methods and public relations representation of profit and nonprofit institutions to the public; use of communication research and media, as applied to the public relations profession.

**160(1160) Fundamentals of Oral Interpretation (3)**

Prerequisite: Comm 40(1040) or consent of instructor. An introduction to the analysis of literature and to the principles of its oral presentation by the interpreter.

**193(1193) Practicum in Applied Communication (1-3)**

Prerequisite: Consent of instructor. Practicum work at any of the UM-St. Louis public relations offices, sports and school newspapers, Office of Research or Photography Services. Work must be done on campus, under supervision of a working professional in the field, in consultation with a faculty member.

**194(1194) Practicum in Debate/Forensics (1-3)**

Prerequisite: Consent of instructor. Practical work in the University debate and forensics program, supervised by a faculty member. Repeatable, but no more than 6 credit hours may be earned in departmental practicum courses.

**195(1195) Seminar in Communication (3)**

Prerequisite: Consent of instructor. In-depth study of topics pertaining to current research in the department or otherwise of timely interest to students or faculty.

**196(1196) Practicum in Radio (1-3)**

Prerequisites: Comm 110(1110) and consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work at the campus radio station, supervised by a faculty member. Repeatable, but no more than 6 credit hours may be earned in departmental practicum courses.

**197(1197) Practicum in Television/Film (1-3)**

Prerequisites: Comm 110(1110) and consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work at one of the campus television studios or for the UM-St. Louis Television/Film Club, supervised by a faculty member. Repeatable, but no more than 6 credit hours may be earned in departmental practicum courses.

**210(2210) Television Production I (3)**

Prerequisites: Comm 110(1110) or consent of instructor. A study of the basic theories and practices of remote television production. The areas of producing and directing in the field will be studied. The class will provide the student with practical experience in remote camera operation and basic editing techniques. Lab arranged.

**212(2212) Broadcast Writing and Reporting (3)**

Prerequisites: Comm 110(1110) and 214(3214) or English 214(3140), or consent of instructor. Elementary principles

and practice of writing for radio and television in varied program formats, emphasis on preparation of written materials for news and public affairs presentation. Lecture and lab.

**214(3214) News Writing (3)**

(Same as English 214(3140)). Prerequisite: English 10(1100) or equivalent. An introduction to news writing and reporting. Course covers basic components of news reporting principles, and news writing style and structure. Daily writing assignments include coverage of speeches, meetings and interviews, accidents, deaths, courts, sports, consumer affairs, and government. Emphasis on clarity, accuracy, and speed.

**215(2215) Radio Production II (3)**

Prerequisite: Comm 114(1114). Study of advanced theories and techniques of audio production, building on principles and skills learned in Radio Production I. Exploration of complex program formats such as radio drama and special problems such as those encountered in recording live music.

**216(2216) Radio News (3)**

Prerequisite: Comm 114(1114). Theory and laboratory practice in the gathering, writing, and delivery of news through radio. Lab hours to be arranged.

**217(2217) Script Writing for Business and Industry (3)**

Prerequisites: Comm 210(2210) and 212(2212). Script writing for training, motivation, education, and other applications. Students will identify and discuss communication problems and solutions in live, slide/tape, video, and film script formats.

**218(2218) Public Policy in Telecommunication (3)**

Prerequisite: Comm 65(1065) or 110(1110) or consent of instructor. An examination of the structure and operation of domestic, international, commercial and public telecommunication. Regulatory agencies, both private and public, will be considered in terms of their effect on programming and ownership.

**219(2219) Promotion, Publicity, and Advertising in Broadcasting (3)**

Prerequisite: Comm 110(1110). Introduction to theory and practice in the planning, execution, and evaluation of persuasive campaigns involving radio and television. Emphasis on concept developments and production elements. Discussion of broadcast ethics.

**228(2228) Public Relations Writing (3)**

(Same as English 228(3280)). Prerequisite: English 214(3140) or equivalent. An introduction to the process of planning, producing, and evaluating written public relations messages. Writing assignments include media releases, letters, memos, position papers, background papers, brochures, and reports and proposals.

**230(2230) Small Group Communication (3)**

Prerequisite: Comm 40(1040). Development of communication skills needed in small group decision making. Application of these skills to contemporary problems.

**231(2231) Communication in the Organization (3)**

Prerequisite: Junior standing or consent of instructor. Course integrates communication theories applicable to the structure and function of organizations. The effect of communication variables on departmental interface, member satisfaction and motivation, leadership and subordinate styles, and perception of the organization by the external environment.

**232(2232) Effective Communication in the Organization: Tool for Leadership (3)**

Prerequisites: Junior standing or consent of instructor. Telecourse designed to equip students with communication skills applicable to the organizational context. The course will present effective strategies for the articulation of ideas, with particular emphasis on the development of leadership skills.

**240(2240) Persuasive Communication (3)**

Prerequisite: Comm 40(1040). A study of persuasive communication, including theories, techniques, forms, functions, applications, potential, and limitations for the individual and organizations. Insights from both classical rhetoric and contemporary communication theory.

**241(2241) Argumentation and Debate (3)**

Prerequisite: Comm 40(1040), or 41(1041), or consent of instructor. Principles of argumentation and debate with practice in preparing briefs and in delivering spoken arguments in formal debate. Emphasis on analysis of issues, logical reasoning, and audience analysis.

**243(2243) Communication in American Politics (3)**

Prerequisite: Comm 40(1040). Analysis of audience response and media preferences in political campaigns, campaign speeches, candidates' uses of television and other mass media, and measuring effectiveness of campaign communications.

**271(2271) History of Film to World War II (3)**

Prerequisite: Comm 70(1070) or consent of instructor. History of world cinema from the late nineteenth century to the 1940s.

**272(2272) History of Film Since World War II (3)**

Prerequisite: Comm 70(1070) or consent of instructor. History of world cinema from the 1940s to the present day.

**310(3310) Television Production II (3)**

Prerequisite: Comm 210(2210). Study of advanced theories of television production. Refinement of studio television principles learned in Comm 210(2210). Exploration of complex program formats. Lab arranged.

**311(3311) Broadcast Management (3)**

Prerequisite: Comm 110(1110). Introduction to theories of management, with application to radio and television station operations. Discussion of economic, legal, and ethical problems and issues.

**313(3313) Advanced Video Editing (3)**

Prerequisite: Six (6) hours of television production. Study of advanced editing techniques. Exposure to nonlinear formats. Animation and advanced graphics development. Exploration of state of the art editing formats. Lab arranged.

**316(3316) Television News (3)**

Prerequisite: Comm 210(2110). Theory and laboratory practice in the gathering, writing, and delivery of news through television. Lab arranged.

**317(3317) Radio and the Recording Industry (3)**

Prerequisite: Junior standing. Historical development and current status of the recording industry, particularly as it interacts with the broadcast industry. Impact of radio and recording technology on the development of rock and other popular music.

**330(3330) Empirical Research in Communication (3)**

Prerequisite: Comm 135(1135). Introduction to the fundamental tools of quantitative research in communication, including data analysis, statistical design and methods, basic measurement concepts and designs for empirical research.

**331(3331) Research Methods in Communication (3)**

Prerequisite: Comm 135(1135). Introductory study of research designs and methodologies employed in communication, including historical, critical, and empirical methods. Review of research reports which exemplify these methods.

**332(3332) Intercultural Communication (3)**

Prerequisite: Junior standing or consent of the instructor. Study of culture as a variable in both interpersonal and collective communicative situations. Emphasis upon opportunities and problems arising from similarities or differences in communication patterns, processes, and codes among various cultural groups.

**333(3333) Communication Audit (3)**

Prerequisite: Comm 231(2231). The application of specific empirical research designs to evaluate communication flows, effectiveness, or channels in complex organizations.

**334(3334) Advertising Media Planning (3)**

Prerequisite: Comm 50(1050). A hands-on study of how to determine an advertising budget, select media and develop a strategic plan.

**335(4335) Seminar in Applied Communication Research (3)**

Prerequisites: Comm 135(1135) and consent of instructor. This course explores the use of communication concepts, theories, methods, and designs in applied field settings with an emphasis on original research.

**336(3336) Communication in Advertising (3)**

Prerequisites: Comm 50(1050) and junior standing, or consent of instructor. Overview of components in persuasive messages and how advertising messages and campaigns use various media to reach target audiences.

**337(3340) Male/Female Communication (3)**

Prerequisite: Junior standing or consent of instructor. This course explores the influence of gender upon contemporary American communication behavior. Topics include semantic and syntactic variations in male and female speech, gender-role development as process and product of communication, analysis of communication patterns and barriers within gender groups. Mass, public, interpersonal, and dyadic communication contexts are considered.

**340(3340) Rhetorical Criticism (3)**

Prerequisite: Comm 40(1040). The application of rhetorical theories to the analytical and critical explanation of persuasive messages.

**341(3341) Classical Rhetoric and Public Address (3)**

Prerequisite: Comm 40(1040) or consent of instructor. A survey of the history and theories of persuasion and public address from ancient times to the Renaissance.

**342(3342) Modern Rhetoric and Public Address (3)**

Prerequisite: Comm 40(1040) or consent of instructor. A survey of the history and theories of persuasion and public address from the post-Renaissance era to the present.

**343(3343) The Rhetoric of Protest (3)**

Prerequisite: Comm 40(1040). An examination of the persuasive messages and tactics used in social movements and their campaigns.

**344(3344) Advanced Argumentation Theory (3)**

Prerequisite: Comm 241(2241) or consent of instructor. This course focuses on advanced argumentation theory. It is aimed at providing an advanced understanding of the complex issues faced by argumentation scholars.

**345(3345) Theory and Practice of Interviewing (3)**

Prerequisite: Comm 40(1040) and junior standing, or consent of instructor. The application of modern communication theory to interview situations. This theory and practicum course is designed to aid the student in mastering specific skills appropriate to specialized settings.

**346(3346) Advanced Interviewing Techniques (3)**

Prerequisite: Comm 345(3345). Examination and application of problem solving and information-gathering methods, with emphasis on specialized situations such as journalistic; health, crisis intervention, and counseling; superior-subordinate relationships and employment. In-class study approach and field interview assignments.

**350(3350) Mass Communication History (3)**

Prerequisite: Comm 50(1050) or 110(1110). Examination of the social, economic, and political factors contributing to the development of American mass media. Emphasis on significant personalities who helped shape its course; analysis of select critical works.

**352(3352) Mass Media Criticism (3)**

Prerequisite: Comm 50(1050) or 60(1060). The study of media content and its effect on society. Reading and viewing of selected works. Independent reading and critical analysis required.

**354(3354) Comparative Telecommunication Systems (3)**

Prerequisite: Comm 65(1065) or consent of instructor. Historical aspects of various systems of telecommunication throughout the world. Examination of American, Canadian, European Community (EC), and other telecommunication systems.

**355(3355) Media Law and Regulation (3)**

Prerequisite: Comm 50(1050) or 110(1110). Discussion of laws affecting the mass media. Exploration of problems and issues in legal regulation of media content, ownership, access, and accountability. Discussion of industry self-regulation and the influence of citizens' organizations.

**356(4356) International Communication (3)**

Prerequisite: Comm 50(1050) or 110(1110). Examination of the social, technical, economic, and political factors affecting international broadcasting and transnational media systems.

**357(4357) Media Ethics (3)**

Prerequisite: nine hours of philosophy or nine hours communication or consent of instructor. (Same as Philosophy 357(4457)). This course is concerned with some of the issues that arise from the intersection of ethics and modern media communications. Attention is given to some of the more specific concerns of media ethics, such as truth, honesty, fairness, objectivity and bias; personal privacy and the public interest; advertising; conflicts of interest; censorship and offensive or dangerous content (pornography, violence). Particular attention will be given to problems posed by the development of personal computer communications through bulletin boards, on-line services, and the Internet.



**358(3358) Communication in Public Relations (3)**

Prerequisite: Comm 150(1150). An overview of communication within the area of public relations. Emphasis on ethics, law, professional standards, and written communication. Case study approach.

**360(3360) Health Communication (3)**

Prerequisite: Comm 030(1030), 040(1040), or 050(1050) or consent of instructor. An analysis of the role communication plays in influencing the health care environment. The course consists of two parts. The first part examines public health care prevention campaigns, e.g., anti-smoking, as well as focusing on the environmental problems, including communication strategies utilizing various media alternatives. The second part focuses on interpersonal and small group communication practices within health-care settings. Consideration of verbal and nonverbal communication research will be explored.

**362(3362) Storytelling (1-3)**

Prerequisite: Junior standing or consent of instructor. This course gives an overview of the history of storytelling, types of tales, and appropriate uses for storytelling. The primary emphasis of the course is in developing storytelling skills through preparation, performances, and evaluation.

**370(3370) Documentary Film (3)**

Prerequisite: Comm 70(1070). Consideration of the history, theory, and criticism of nonfiction film. Screening of representative documentary films.

**390(4390) Directed Readings (3)**

Prerequisites: Consent of instructor; not open to students who have any Y or delayed grades outstanding. Supervised independent study involving readings, conferences, papers, etc., in one of the department's disciplines: communication theory and rhetoric, or mass communication.

**391(4391) Supervised Research (1-5)**

Prerequisites: Junior/senior standing and consent of instructor; not open to students who have any Y or delayed grades outstanding. Supervised field or laboratory research, data collection, literature searches, qualitative or quantitative data analysis, report writing and other techniques used by communication researchers. Repeatable, but no more than 5 credit hours may be earned in supervised research courses.

**392(3392) Administration of Cocurricular Activities (3)**

Prerequisites: Junior standing and consent of instructor. A survey of the skills required to administer the various cocurricular activities associated with teachers in the secondary schools, such as: operation of debate tournaments, public speaking competitions, and mass media centers.

**393(3393) Internship in Applied Communication (3-6)**

Prerequisites: Senior standing, with a least 12 hours of course work in communication theory and rhetoric; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Advanced practical work in business communication, political campaign communication, advertising, public relations, or other forms of organizational or public communication. Work must be done off campus, under supervision of a working professional in the field, in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

**394(3394) Internship in Journalism (3-6)**

Prerequisites: Senior standing, with at least 12 hours of course work in journalism, mass communication, etc.; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work with an off-campus newspaper, magazine, or other news organization, supervised by a journalism professional in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

**395(3395) Senior Seminar in Communication (3)**

Prerequisite: Senior standing and consent of instructor. This course will deal with basic issues, questions, theories and themes central to the discipline of communication. The course project will consist of a critique of selected communication literature and permit the student to integrate and synthesize the knowledge base accumulated in the systematic study of communication.

**396(3396) Internship in Radio (3-6)**

Prerequisites: Senior standing, with at least 12 hours of course work in radio, broadcasting, etc.; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work at an off-campus radio station, supervised by a professional in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

**397(3397) Internship in Television/Film (3-6)**

Prerequisites: Senior standing, with at least 12 hours of course work in television, film, video, etc.; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work at an off-campus television, film, or video organization, supervised by a television, film, or video professional in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

**400(6400) Seminar in Communication Theory (3)**

Prerequisites: Graduate Standing. Examination of the theoretical, methodological, and philosophy of science issues in the discipline of communication. Examines general, micro, contextual, and interdisciplinary (symbiotic) communication theories. Required of all graduate communication students. (Core Course.)

**405(6405) Introduction to Communication Research Methods (3)**

Prerequisites: Graduate Standing. Concerns the logic of scientific inquiry including the discovery, counting, and analysis of material, social, and symbolic facts, and reviews research methods guided by general, micro and contextual communication theories. Provides an orientation to graduate research including proposal development for thesis, internship and paper requirements and includes a theory-based research project of the student's choice. Required of all graduate communication students. (Core Course.)

**406(6406) Introduction to Communication Education Research (3)**

Prerequisites: Graduate Standing. The development of educational communication research as a social scientific field. Critical evaluation of techniques and problem selection. Emphasis on the function of communication education concept formation and theory.

**411(6411) Seminar in Mass Communication (3)**

Examines communication research literature pertaining to media planning, content, and effects. A broad-range of media forms and possible effects are considered.

**431(6431) Seminar in Organizational Communication (3)**

Prerequisites: Graduate Standing. Explores communication theories and topics related to organizational, institutional, and social system contexts and reviews the communication literature on behavior in organizations. Emphasizes a case study approach to the communication strategies used by agencies and corporations. (Core course.)

**435(6435) Seminar in Advanced Applied Communication (3)**

Prerequisites: Graduate Standing. Examines the logic and forms of communication inquiry in solving client-centered problems. Topics include audience ratings and segmentation, targeting, applied and basic research paradigms and approaches to grounding theory. Reviews the use of research by agencies, campaigns and organizations. Includes a team research project. (Core Course.)

**445(6445) Seminar in Advanced Organizational Communication (3)**

Prerequisite: Com 431(6431). Extends exploration of communication in organizations covered in Com 431(6431) to more advanced quantitative models of organizational communication. Focuses on quantitative studies published in communication research literature.

**454(6454) Seminar in Communication Systems and Technologies (3)**

Prerequisites: Graduate Standing. Examines innovation in modern communications technologies, their impact on society, and their contribution to the information revolution.

**490(6490) Directed Readings in Communication (1-10)**

Prerequisites: Graduate Standing. Individual research on a problem defined by the graduate student and the faculty member in conference. May be repeated once with the consent of the departmental graduate faculty.

**495(6495) Seminar in Special Topics in Communication (3-9)**

Prerequisites: Graduate Standing. Selected topics in the study of communication. Review of the communication theory and methods appropriate to the topic. The course includes a research project. May be repeated if the topic is different.

**498(6498) Thesis Research and Preparation (1-10)**

Prerequisites: Graduate standing. Individual research for and preparation of the graduate thesis.

**499(6499) Graduate Internship (3-6)**

Prerequisites: Graduate standing and approval of graduate coordinator. Individual on-site internship in organizational or mass communication setting. May be repeated.

**Department of Music****Faculty**

**Leonard Ott**, Associate Professor\*, Chairperson  
Ph.D., Michigan State University

**John Hylton**, Dean, College of Fine Arts and Communication, Professor\*  
D.Ed., Penn State University

**Gearoid O'hAllmhurain**, Jefferson Smurfit Professor of Irish Studies (Social Anthropology, Ethnomusicology)  
Ph.D., The Queen's University of Belfast

**Douglas Turpin**, E. Desmond Lee Professor of Music Education\*  
D.Ed., Washington University

**Kenneth E. Miller**, Professor Emeritus  
Ph.D., Northwestern University

**Evelyn Mitchell**, Professor Emerita

**Arnold Perris**, Professor Emeritus  
Ph.D., Northwestern University

**Robert J. Ray**, Professor\*  
B.M., Northwestern University

**James Richards**, Professor\*  
Ph.D., University of Rochester, Eastman School of Music

**Diane Touliatos**, Professor\*  
Ph.D., Ohio State University

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

**Thomas Barrett**, Visiting Professor (Voice)  
B.M., Vocal Performance, Indiana University

**Don N. Parker**, Associate Professor  
D.M.A., The University of Texas, Austin

**William Richardson**, Associate Professor\*  
Ph.D., University of Kansas

**Karen Parthun**, Assistant Professor\*  
D.M.A., Arizona State University

**Kurt S. Baldwin**, Arianna String Quartet, Artist-in-Residence  
M.M., New England Conservatory of Music

**Sheila Browne**, Arianna String Quartet, Artist-in-Residence  
M.M., Rice University

**John McGrosso**, Artist in Residence (Violin)  
Performers' Certificate, Northern Illinois University

**Rebecca Rhee**, Artist in Residence (Violin)  
M.A., Northern Illinois University

**William Hammond**, Affiliate Associate Professor (World Music/Music Appreciation, Theory/Aural Training, French Horn)  
D.Ed. Boston University

**Kathryn Haggans**, Adjunct Associate Professor (Voice)  
Ph.D., University of Arizona

**Joan Whittemore**, Adjunct Assistant Professor (Music History)  
D.M.A., University of Illinois-Urbana/Champaign

**Carol Koch**, Senior Lecturer (Music Ed./Piano)  
M.M.E., University of Missouri-St. Louis

**Jeffrey Hoard**, Lecturer (Tuba)  
B.A., California State University

**Ann Homann**, Lecturer (Oboe)  
M.M., St. Louis Conservatory of Music

**Joseph Kaminsky**, Lecturer (Viola)  
M.M., Southern Illinois University-Edwardsville

**Katharine Lawton-Brown**, Lecturer, (Voice) Director, Premiere Performance Concert Series  
M.M., James Madison University

**Twila M. McDonell**, Lecturer (Flute)  
D.M., Northwestern University

**Robert Mottl**, Lecturer (Bassoon)\*\*  
M.M., Indiana University

**Elke Overton**, Lecturer (Saxophone)  
M.M., University of Cincinnati, Conservatory of Music

**Maria Pinckney**, Lecturer (Harp)

**Alan Rosenkoetter**, Lecturer (Guitar)  
B.S., Washington University

**Andrew Schwartz**, Lecturer (Trumpet)  
M.M., University of Missouri-Columbia

**Robert Souza**, Lecturer (Trumpet)  
B.M.E., University of Missouri-St. Louis

**Sue Stubbs**, Lecturer (Double Bass)  
M.M., University of Missouri-Columbia

**John Walsh**, Lecturer (Organ)  
M.M., Washington University

**Jeanine York-Garesche**, Lecturer (Clarinet)  
M.M., St. Louis Conservatory of Music

**Milton Zoth**, Lecturer (Directing)  
MFA, Webster University

**Rekha Dravina**, Specialist (Piano)  
M.M., Krasnoyarsk State Institute, Krasnoyarsk, Russia

**Mieko Hironaka-Bergt**, Specialist (Piano)  
M.M., Toho Academy of Music

**Sandra Geary**, Specialist (Piano)  
B.M., St. Louis Conservatory of Music

**Sharon Tash**, Specialist (Piano)  
B.A., University of Missouri-St. Louis

**Susan Wells-Souza**, Specialist (Piano)  
M.M., Washington University

\*members of graduate faculty  
\*\*member, St. Louis Symphony Orchestra

Music faculty members have received recognition for distinguished achievements in conducting, composition, and performance. The faculty is also recognized for research in musicology and music education. Part-time applied music lecturers are all professional musicians.

The music department is accredited by the National Association of Schools of Music.

**General Information****Degrees and Areas of Concentration**

The Department of Music offers programs of study leading to the B.M. degree in music education (and state teaching certification in grades K-12); the B.M. degree with an

emphasis in performance; the B.M. degree with elective studies in business; and the B.A. degree in music. Instruction in piano, organ, voice, and all band and orchestral instruments is given by full-time faculty and part-time professional musicians, many of who are members of the St. Louis Symphony Orchestra. Faculty recitals are regularly scheduled.

**Music Minors** Three minors in music are available: a minor in music; a minor in music education (choral/vocal, grades K-9); and a minor in jazz studies.

**Facilities** All of the department's facilities, classrooms, rehearsal rooms, studios, practice rooms, and listening labs are located in the Music Building.

**Ensembles** Seventeen performing ensembles are open to all by audition with credit optional:

- 40(1400), University Chorus
- 41a(1410), The University Singers
- 41b, University Chorale
- 42, Chamber Singers
- 50(1500), University Orchestra
- 52(1520), University Band
- 53(1530), University Wind Ensemble
- 54A(1541), Chamber Ensemble Brass
- 54B(1542), Jazz Combo
- 54C(1543), Chamber Ensemble Percussion
- 54D(1544), Chamber Ensemble Strings
- 54E(1545), Chamber Ensemble Voice
- 54F(1546), Chamber Ensemble Woodwind
- 54G(1547), Accompanying
- 55(1550), Jazz Ensemble
- 56(1560), Opera Workshop
- 356(1600), Advanced Opera Workshop

Each year about 40 recitals and concerts are presented.

## Undergraduate Studies

### General Education Requirements

General education requirements apply to all majors, except students in the B.M. with elective studies in business and B.M. in music education degree programs who are not required to take a foreign language. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. All music courses presented to meet degree requirements must be completed with a grade of C or better

Students may complete any number of hours of applied music (private lesson) toward a degree. Non-music majors may complete no more than 8 hours in music-performing organizations Music 40(1400), University Chorus; 41A(1410), University Singers; 50(1500), University Orchestra; 52(1520), University Band, et. seq. toward graduation, including credit transferred. Courses in applied music (private lessons and performing organizations) do not fulfill the humanities general education requirement.

Department courses, which meet the non-Euro-American study requirement, are Music 9(1090), Non-Western Music I, and Music 10(1100), Non-Western Music II.

### Degree Requirements

Admission to all music degree programs is by audition and interview to demonstrate musical aptitude and potential, moderate technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, examinations in music theory and music history must be taken. Students in applied music must pass a junior-standing examination to confirm their level of performance skills for enrollment in Music 244 A - T (3440 - 3459) or Music 254 A - T (4440 - 4459). This examination is usually taken at the same time as the applied music jury for the fourth semester of enrollment in Music 44 A - T (1440 - 1459).

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all music degree programs. Students in the bachelor of music-performance emphasis fulfill this requirement with junior and senior recitals. Those in all other degree programs must satisfy the requirement by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special jury of faculty members. The faculty may invite students who are not in the bachelor of music-performance emphasis program to give public senior recitals with the recommendation of the applied music instructor.

Music majors are required to participate in an approved ensemble (Symphonic Band, University Singers, University Chorus, or Orchestra) and to study one applied area progressively each semester, and to attend pedagogy and literature seminars each semester of the degree program. (Music education majors are exempt from these requirements during the student teaching semester.) The following specific ensemble enrollments, depending upon the applied music area, are required:

Wind and percussion students--Symphonic Band; string students--University Orchestra; voice students --University Singers; keyboard and guitar students--any approved ensemble, but those in the bachelor of music in music education program must enroll in an ensemble compatible with the teaching certification they are pursuing. Instrumental students may be required to participate in additional ensembles to enhance their musical development.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. Non-keyboard players are required to pass an exam in piano proficiency: Music 118(2180), Intermediate Piano Proficiency, or equivalent

for instrumentalists, or Music 120(3290), Intermediate Piano Proficiency, or equivalent for vocalists.

The music department may require students to pass a placement test in order to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

#### **Core Curriculum**

The following core courses are required for all music majors:

#### **Music Theory**

30A(1301), Theory of Music I  
30B(1302), Aural Training I  
31A(1311), Theory of Music II  
31B(1312), Aural Training II  
130A(2301), Theory of Music III  
130B(2302), Aural Training III  
131A(2311), Theory of Music IV  
131B(2312), Aural Training IV  
141(3410), Orchestration

#### **Piano Proficiency**

14(1140), Piano Proficiency  
15(1150), Piano Proficiency  
116(2160), Intermediate Piano Proficiency  
118(2180), Intermediate Piano Proficiency

#### **Music History and Literature**

101(1010), History of Western Music I  
102(1020), History of Western Music II  
and at least one upper level history course 300(4000 - 4270).

#### **Applied Music**

44Z(1460), 244Z(3460), 254Z(4460), Seminar in Pedagogy and Literature

In addition to the core curriculum, students must fulfill the requirements for the specific degree program or emphasis area as listed below:

#### **Bachelor of Arts in Music**

In addition to the required core curriculum, candidates must complete the following:

151(2510), Conducting I  
192(3920), Senior Research  
09(1090), Non-Western Music I, or  
10(1100), Non-Western Music II

**Applied Area 8** credit hours of private lessons

**Ensemble 4** hours maximum credit

#### **Bachelor of Music in Music Education**

In addition to the required core curriculum, candidates must complete the following:

**Applied Area 7** credit hours

#### **Practicum**

151(2510), Conducting I  
**Instrumental Certification**  
25(1250), Brass Techniques  
26(1260), Woodwind Techniques  
27(1270), String Techniques  
28(1280), Percussion Instrumental Techniques  
152A(3521), Conducting II – Instrumental  
161A(2610), Elementary School Instrumental Literature Laboratory  
162A(3620), Junior – Senior High School Instrumental Literature Laboratory  
268(3680), Curriculum and Methods of Teaching Instrumental Music I  
270(3700), Curriculum and Methods of Teaching Instrumental Music II

#### **Vocal Certification**

125(1250), Singer's Diction: English, Italian and German  
126(1260), Singer's Diction: Latin, French, and Spanish  
25(1250), 26(1260), 27(1270), or 28(1280), Instrumental Techniques (2 credit hours required)  
119(3190), Intermediate Piano Proficiency  
120(3290), Intermediate Piano Proficiency  
142(3420), Choral Arranging  
143(3430), Instrumentation and Score  
152B(3522), Conducting II – Choral  
161B(2611), Elementary School Choral Literature Laboratory  
162B(3621), Junior – Senior High School Choral Literature Laboratory  
269(3690), Curriculum and Methods of Teaching Middle School/Junior High School General Music  
271(3710), Curriculum and Methods of Teaching Secondary Choral Music

For students whose applied area is not voice, the following course is also required:

124(1240), Intermediate Vocal Techniques or  
44T(1459), Applied Music (Voice) (2 credit hours)

**Ensemble 4** hours maximum credit

#### **Curriculum and Methods of Teaching**

The following courses are required:

257(3570), Curriculum and Methods of Teaching Elementary School Music  
267(3670), Philosophic and Practical Foundations of the Secondary Music Education Curriculum

**Proficiency Exam** Students working toward certification in choral/vocal or instrumental music K-12 or K-9 are required to pass a proficiency examination before

admission to student teaching in music, usually before or during the sixth semester of their program.

#### Professional Education and Student Teaching

The following education courses are required:

ED FND 111(1111), The School in Contemporary Society  
ED PSY 312(3312), The Psychology of Teaching and Learning  
SEC ED 213(3213), Techniques of Secondary School Teaching  
SEC ED 293(3293), Student Teaching in Music Education, K-6  
SEC ED 294(3294), Student Teaching in Music Education, 7-12  
SP ED 313(3313), The Psychology and Education of Exceptional Individuals  
SEC ED 386(4391), Teaching Reading in Secondary School Content Area

#### Bachelor of Music with an Emphasis in Performance

In addition to the required core curriculum, candidates must complete the following:

311(3110), Analysis of Twentieth-Century Techniques  
312(3120), Tonal Counterpoint  
151(2510), Conducting I  
152(3521 or 3522), Conducting II  
192(3920), Senior Research  
119(3190), Intermediate Piano Proficiency (voice majors only)  
120(3290), Intermediate Piano Proficiency (voice majors only)  
09(1090), Non-Western Music I, or  
10(1100), Non-Western Music II  
156(1560), Piano Pedagogy (Keyboard students only)

#### Music History and Literature

An additional upper level course is required 300(4000-4270).

#### Applied Area

12 credit hours of applied music, including 8 credit hours at the Music 254 A - T (4440-4459) level (junior and senior recitals required).

Students in Applied Music must pass a junior standing exam to confirm their level of performance skills for enrollment in Music 254 A - T (4440-4459).

#### Ensemble Participation required as follows:

Large Group 4 hours maximum credit  
Chamber Ensemble/Accompanying 6 hours

Foreign Language Candidates pursuing this emphasis area with an applied area in voice must complete two semesters of one foreign language selected from French, German, or Italian I and Italian 2.

#### Bachelor of Music with Elective Studies in Business

In addition to the required core curriculum, candidates must complete the following:

Applied Area 8 credit hours of applied music

Music History and Literature: An additional upper 300(4000 - 4459) level course is required.  
09(1090), Non-Western Music I, or  
10(1100), Non-Western Music II

#### Practicum

151(2510), Conducting I

Ensemble 4 hours maximum credit

#### Internship

292(4920), Internship (replaces Music 192(3920) Senior Research in Core Curriculum)

English One of the following English courses is required:

210(3100), Advanced Expository Writing  
212(3120), Business Writing  
213(3130), Technical Writing

Business Administration The following courses in business administration are required:

140(2400), Fundamentals of Financial Accounting  
145(2410), Managerial Accounting  
206(3700), Basic Marketing  
210(3600), Management as a Behavioral Science I

Two courses selected from the following list must also be taken:

103(1800), Computers and Information Systems  
156(2900), Legal Environment of Business  
204(3500), Financial Management  
256(3900), Business Law: Contracts, Sales, Secured Transactions, Bankruptcy  
270(3720), Management of Promotion  
301(3710), Consumer Behavior  
309(3621), Human Resource Management  
311(3611), Advanced Management and Organizational Behavior  
312(3622), Industrial and Labor Relations  
347(3441), Income Taxes

Note: The following courses fulfill general education requirements and are prerequisites to the required business administration courses:

Psych 3(1003), General Psychology, or  
Sociology 10(1010), Introduction to Sociology  
Economics 51(1001), Principles of Microeconomics

### Curricula for Minors

#### Minor in Music

Candidates must complete the following courses (26 hours):

#### Music Theory

30A(1301), Theory of Music I  
 31A(1311), Theory of Music II  
 30B(1302), Aural Training I  
 31B(1312), Aural Training II

#### Music History and Literature

101(1010), History of Western Music I  
 102(1020), History of Western Music II

Applied Area 4 credit hours of private lessons

Ensemble 2 credit hours (4 hours maximum credit)

Six additional credit hours to be chosen from courses such as the following:

130A(2301), Theory of Music III  
 130B(2302), Aural Training III  
 131A(2311), Theory of Music IV  
 131B(2312), Aural Training IV  
 141(3410), Orchestration  
 116(2160), Intermediate Piano Proficiency (Prerequisite: Music 15(1150))

118(2180), Intermediate Piano Proficiency

Any 300-level music history and literature course

Applied Music courses in sequence

Any ensemble course

Music education methods courses and instrumental techniques courses may not be taken to complete this minor.

Non-keyboard players are required to pass an exam of piano proficiency (Music 15(1150) or equivalent).

A GPA of 2.5 for all music hours is required to complete this minor.

#### Minor in Music Education (choral/vocal, grades K-9)

The minor in music education is designed to provide a second classification area for students enrolled in other education programs that lead to initial teaching certification.

Candidates must complete the following courses (41 hours):

#### Music Theory

30A(1301), Theory of Music I  
 31A(1311), Theory of Music II  
 30B(1302), Aural Training I  
 31B(1312), Aural Training II

#### Music History and Literature

101(1010), History of Western Music I  
 102(1020), History of Western Music II

#### Music Education

\*257(3570), Curriculum and Methods of Teaching Elementary School Music  
 \*267(3670), Philosophic and Practical Foundations of the Secondary Music Education Curriculum  
 \*269(3690), Curriculum and Methods of Teaching Middle School/Junior High School General Music

\*Elementary education majors will omit Music 177(3770) from their regular elementary program to take these courses. Also required, as applicable, is SEC ED 393(4399), Student Teaching.

#### Practicum

14/15(1140/1150), Piano Proficiency  
 116/118(2160/2180), Intermediate Piano Proficiency  
 151(2510), Conducting I  
 161b(2610), Elementary School Choral Literature Laboratory  
 162b(3620), Junior-Senior High School Choral Literature Laboratory

#### Ensemble

40/41(1400/1410), Chorus or University Singers

Applied Music, voice (at least 2 hours must be private rather than class voice)

The student must receive at least a C in each music course and maintain a 2.5 GPA in all music courses (Chorus/Singers is not included in the GPA).

Minor in Jazz Studies Candidates must complete 31 credit hours from the following:

#### Music Theory

30A(1301), Theory of Music I  
 31A(1311), Theory of Music II  
 32(1320), Theory of Jazz  
 30B(1302), Aural Training I  
 31B(1312), Aural Training II

#### Music History and Literature

7(1070), Introduction to Jazz  
 102(1020), History of Western Music II

Applied Area 4 credit hours of private lessons

#### Jazz Improvisation

20(1200), Jazz Improvisation Laboratory (2 credit hours/Music 20(1200) repeated)

#### Piano Proficiency

14/15(1140/1150), Piano Proficiency  
 116(2160), Intermediate Piano Proficiency  
 117(2170), Jazz Keyboard Harmony



Ensemble 2 credit hours minimum, to be selected from:  
54B(1542), Jazz Combo  
54E(1545), Chamber Ensemble Voice  
55(1550), Jazz Ensemble

## Graduate Study

### Master of Music Education

The master of music education degree is designed to enable music specialists in grades K-12 to pursue continued professional growth in an emphasis area of their choice: choral, general music, instrumental, or music technology.

### Admission Requirements

Admission to the program requires a bachelor of music in music education (or equivalent) degree, admission to the Graduate School, and three letters of recommendation.

A written examination in music education (including applications of music history and music theory/ear-training) will be taken during the first semester or term of enrollment in the program for advising purposes and to identify the possible need for review in the areas of music theory and history.

The program requires completion of 32 hours of graduate credit, 22 of which must be earned in residence.

### Required Courses and Options:

Each candidate will choose one of the following emphasis areas:

Choral music education  
Instrumental music education  
General music education  
Music education and technology

The minimum 32-hour program includes the following requirements.

### Major Area (9 credit hours)

481(5810), Foundations of Music Education (3)  
491(5910), Music Education Research (3)  
499(5990), Master's Project in Music Education (3)

### Advanced Methods (3 credits from the following)

451(5510), Advanced Instrumental Methods (3)  
461(5610), Advanced Choral Methods (3)  
471(5710), General Music: A Model for Multi-Faceted Musical Learning (3)

### Choose 9 credits from the following:

401(5010), Studies in Style and Performance (3)  
402(5020), Choral Literature (3)  
403(5030), Band Literature (3)  
404(5040), Orchestra Literature (3)

411(5110), Scoring and Arranging (3)  
421(5210), Advanced Conducting (3)  
462(5620), Guitar in the Classroom (3)  
475(5750), Microcomputer Applications in Music Education(3)  
476(5760), Microcomputer Assisted Instruction:  
Curriculum Development in Music (3)  
477, Graduate Microcomputer Applications in Music (3)  
492(5920), Psychology of Music (3)  
Cognate in Education

### Choose one 3-credit curriculum course such as:

Sec Ed 415(6415), The Secondary School Curriculum (3)  
Ele Ed 422(6422), Curriculum Construction in Elementary Schools (3)

### Choose one other 3-credit education course such as:

Ed Rem 420(6707), Classroom Testing and Measurement (3)  
Ed Fnd 421(6421), Philosophy of Education (3)  
Sec Ed 425(6425), Secondary School Supervision (3)  
Ele Ed 425(6425), Elementary School Supervision (3)  
Ed Rem 330(5730), Educational Statistics (3)  
Ed Rem 431(6710), Educational Research Methods (3)

### Electives

### Choose 5 credits from elective courses such as:

301(4010), Marching Band Techniques (3)  
401 (5010), Studies in Style and Performance (3)  
402(5020), Choral Literature (3)  
403(5030), Band Literature (3)  
404(5040), Orchestra Literature (3)  
406(5060), Graduate Workshop in Music Education (1-3)  
407(5070), Techniques and Literature for the Jazz Ensemble (3)  
411(5110), Scoring and Arranging (3)  
412(5120), Advanced Composition Techniques (3)  
413(5130), Teaching Music Theory in the High School (3)  
421(5210), Graduate Conducting (3)  
431(5310), Graduate Chamber Ensemble (0)  
443(5430), Special Applied Studies (1)  
444, Graduate Applied Studies (1)  
449(5490), Graduate Ensemble (1)  
451(5510), Graduate Instrumental Methods (3)  
452(5520), Instrumental Music Administration (3)  
461(5610), Graduate Choral Methods (3)  
462(5620), Guitar in the Classroom (3)  
465(5650), Music Theatre in the School (3)  
471(5710), General Music: A Model for Multi-Faceted Musical Learning (3)  
472(5720), Electronic Music Techniques for Teachers (3)  
473(5730), Individualizing Music Instruction (3)  
474(5740), Techniques of Group Keyboard Instruction (3)  
475(5750), Microcomputer Applications in Music Education (3)  
476(5760), Microcomputer Assisted Instruction:  
Curriculum Development in Music

477, Graduate Microcomputer Applications in Music (3)  
480(5800), Musical Acoustics (3)  
482(5820), School Music Administration and Supervision  
(3)  
483(5830), Contemporary Music Education (3)  
484(5840), Problems of Urban Music Education (3)  
492(5920), Psychology of Music (3)  
495(4950), Special Problems in Music Education (3)  
Ed Tec 340(5340), Selection and Utilization Education  
Media (3)  
Ech Ed 410, Foundations of Pre-School Education (3)  
Spc Ed 412(6412), Psychology of Exceptional Children  
(3)  
Sec Ed 414(6414), Teaching the Gifted/Talented in the  
Secondary School (3)  
Sec Ed 418(6418), The Junior High/Middle School (3)  
Sec Ed 427(6427), Supervision of Clinical Experiences in  
Teacher Education (3)  
Sec Ed 429(6429), The Department Head (3)  
Ed Rem 431(6710), Educational Research Methods (3)

## **Career Outlook**

### **Undergraduate**

A music degree builds the foundation for a career in professional performance, for teaching in a school or private studio or for serving as a church music director. A music degree may also prepare one for positions in the music industry (recording, publishing, radio programming, manufacturing, or music retail). A trained artistic mind can also be valuable in the fields of advertising, public relations, and consumer services.

A number of UM-St. Louis music graduates have been readily accepted into outstanding graduate programs, including that at UM-St. Louis. Many are pursuing successful careers in music education, business, and industry, or as professional performers.

### **Graduate**

Many graduate students in music education will already hold full-time music teaching positions. A graduate degree in music education allows for continued professional growth. Music specialists may refine their teaching expertise, add to their understanding and knowledge about music and educational processes, become more specialized in a specific emphasis area of music education (choral, instrumental, general music or music technology), or any combination of these professional growth areas.

Graduate-level work in music education is often required to renew a teacher's certificate or to satisfy professional growth requirements specified by an employing school or school district or to advance to new positions within the field of music education.

## Course Descriptions

Prerequisites may be waived by consent of the department.

Students who have earned 24 or more semester hours of credit at any accredited post-secondary institutions(s) before the start of the fall 2002 semester must meet the general education requirements stipulated in the UM-St Louis 2001-2002 Bulletin. The following courses fulfill the Humanities breadth of study requirements as described in that Bulletin:

1 (1001), 6(1060), 7(1070), 8(1080), 9(1090), 10(1100), 11(1110), 19(1190), 30A(1301), 31A(1311), 32(1320), 101(1010), 102(1020), 103(1030), 105(1050), 108(1080), 130A(2301), 131A(2311), 177(3770), 192(3920), 202(3020), 300(4000), 321(4210), 322(4220), 323(4230), 324(4240), 325(4250), 326(4260), 327(4270), 400(5000), 475(5750).

The following music History courses satisfy the Cultural Diversity requirement: Music 9 and 10(1080/1090)

## Applied Music

### 43A - T (1410 - 1429) Secondary Applied Music (1)

Prerequisites: By audition and consent of department.

Courses are offered in the following areas: a, bassoon; b, clarinet; c, classical guitar; d, euphonium; e, flute; f, French horn; g, harp; h, oboe; i, organ; j, percussion; k, piano; l, saxophone; m, trombone; n, trumpet; o, tuba; p, violin; q, viola; r, violoncello; s, string bass; t, voice. Not applicable to the applied music requirement for music majors or music minors. May be repeated for credit.

### 43Y(1043) Secondary Applied Music: Jazz Studies (1)

Prerequisites: By audition and consent of department.

Individual instruction in jazz performance and literature on designated instrument. Not applicable to applied music requirement for music major or music minor degrees. May be repeated for credit.

### 44A -T (1440 - 1459) Applied Music (1)

Prerequisites: By audition and consent of department.

Courses offered in the following areas: a, bassoon; b, clarinet; c, classical guitar; d, euphonium; e, flute; f, French horn; g, harp; h, oboe; i, organ; j, percussion; k, piano; l, saxophone; m, trombone; n, trumpet; o, tuba; p, violin; q, viola; r, violoncello; s, string bass; t, voice. May be repeated, up to 4 credit hours. Applied Music registration requires concurrent registration in a large ensemble and seminar (Music 44Z(1460)).

### 244A-T (3440 - 3459) Applied Music (1)

Prerequisite: The completion of Junior Standing Exam in major applied area. Courses offered in the following areas: a, bassoon; b, clarinet; c, classical guitar; d, euphonium; e, flute; f, French horn; g, harp; h, oboe; i, organ; j, percussion; k, piano; l, saxophone; m, trombone; n, trumpet; o, tuba; p, violin; q, viola; r, violoncello; s, string bass; t, voice. May be repeated, up to 6 credit hours.

Applied Music registration requires concurrent registration in a large ensemble and seminar (Music 244Z(3460)).

### 254A-T (4440 - 4459) Applied Music (2)

Prerequisites: Completion of Junior Standing Exam in major applied area and admission to Performance Degree Program. Courses offered in the following areas: a, bassoon; b, clarinet; c, classical guitar; d, euphonium; e, flute; f, French horn; g, harp; h, oboe; i, organ; j, percussion; k, piano; l, saxophone; m, trombone; n, trumpet; o, tuba; p, violin; q, viola; r, violoncello; s, string bass; t, voice. May be repeated, up to 12 credit hours.

Applied Music registration requires concurrent registration in a large ensemble and seminar (Music 254Z(4460)).

### 44Z(1460) Seminar in Pedagogy and Literature (0)

Prerequisites: Concurrent registration with parallel Applied Music course. Seminars are offered in pedagogy and literature for all areas of Applied Music. May be taken on a satisfactory/unsatisfactory grading basis.

### 244Z (3460) Seminar in Pedagogy and Literature (0)

Prerequisite: Concurrent registration with parallel Applied Music course. Seminars in pedagogy and literature are offered for all areas of Applied Music. May be taken on satisfactory/unsatisfactory grading basis.

### 254Z(4460) Seminar in Pedagogy and Literature (0)

Prerequisite: Concurrent registration with parallel Applied Music course. Seminars in pedagogy and literature offered for all areas of Applied Music. May be taken on satisfactory/unsatisfactory basis.

### 443(5430) Special Applied Studies (1)

Prerequisites: Graduate standing in music and consent of department. Individual instruction in performance and literature of an instrument or instrumental family for pedagogical or review purposes in applied area other than student's primary performance study. No jury examination required. May be repeated for credit.

### 444 Graduate Applied Music (1)

Prerequisites: Graduate standing in music and consent of department. Instruction offered in the following areas: bassoon, clarinet, classical guitar, euphonium, flute, French horn, harp, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, violin, viola, violoncello, string bass, and voice. May be repeated for credit.

## Ensemble Performance

### 40(1400) University Chorus (1)

Prerequisite: Consent of instructor. Preparation and performance of choral literature.

**41(1410) The University Singers (1)**

Prerequisite: Consent of instructor. The study and performance of music for vocal chamber ensemble.

**50(1500) University Orchestra (1)**

Prerequisite: Consent of instructor. Study, preparation, and performance of orchestral repertory.

**52(1520) University Band (1)**

Prerequisite: Consent of instructor. Study, preparation, and performance of music for the wind ensemble and band.

**53(1530) University Wind Ensemble (1)**

Prerequisite: Consent of instructor. The study, preparation, and performance of music for wind ensemble and chamber band.

**54A-G (1541 -1547) Chamber Ensemble (1)**

Prerequisite: Consent of instructor. Study, preparation, and performance of music for small ensembles: a, brass; b, jazz combo; c, percussion; d, strings; e, voice; f, woodwinds; g, accompanying.

**55(1550) Jazz Ensemble (1)**

Prerequisite: Consent of instructor. Study, preparation, and performance of jazz music for big band.

**56(1560) Opera Workshop (1)**

Prerequisite: Consent of instructor. Instruction in movement, basic stage techniques, technical theater, repertory and performance techniques and preparation. May be repeated for credit.

**356(4560) Advanced Opera Workshop (1)**

Prerequisite: Consent of instructor. Instruction in movement, stage technique, technical theater, repertory, and performance based on advanced vocal skills. May be repeated for credit.

**431(5310) Graduate Chamber Ensemble (1)**

Prerequisite: Graduate standing in music and consent of department. Study and performance of traditional and nontraditional chamber literature.

**449(5490) Graduate Ensemble (1)**

Prerequisite: Graduate standing in music or consent of department. Study, preparation, and performance of ensemble literature from the choral, orchestral, or band/wind ensemble repertory. May be repeated for a total of four hours of credit.

## Music Education

**177(3770) An Introduction to Music for the Elementary School Teacher (3)**

An introduction to the elements of music and the expressive nature of music. Includes application of fundamentals to appropriate literature and activities for use with children in a classroom setting. This course will not apply toward requirements for a music major.

**257(3570) Curriculum and Methods of Teaching Elementary School Music (3)**

(Same as Ele Ed 277(3277). Prerequisites: Music 131 (2311/2312) and Ed Fnd 111(1111). For the music education major. A study of the elementary school music curriculum emphasizing the objectives, methods of teaching and staffing music classes, and analysis of instructional materials and resources. This course must be completed in residence.

**267(3670) Philosophic and Practical Foundations of the Secondary Music Education Curriculum (1)**

(Same as Sec Ed 275(3670). Prerequisites: Music 131(2311/2312), Music 257(3570)/Ele Ed 277(3277) and Ed Fnd 111(1111). Concurrent registration in Music 268(3680)/Sec Ed 276 (3576) and Music 270(3700)/Sec Ed 278(3278) or Music 271(3710)/Sec Ed 279(3279). For the music education major. A study of the secondary school music program: curricular objectives, philosophy, and general administrative procedures common to all secondary music classes. This course must be completed in residence.

**268(3680) Curriculum and Methods of Teaching Instrumental Music I (2)**

(Same as Sec Ed 276(3576). Prerequisites: Music 131(2311/2312), 141(3410), 151(2510), 161(2610), Ed Fnd 111(1111), two of the following: Music 25(1250), 26(1260), 27(1270), and 28(1280). Concurrent registration in Music 257(3570)/ Ele Ed 277(3277). A study of the teaching techniques, materials, curriculum, and organization of the beginning instrumental music education program. Topics include student recruitment the elementary band/orchestra, small group instruction, jazz ensemble, and marching band. This course must be completed in residence.

**269(3690) Curriculum and Methods of Teaching Middle School/Junior High School General Music (2)**

(Same as Sec Ed 277(3277). Prerequisites: Music 131(2311), Music 257(3570)/Ele Ed 277(3277), and Ed Fnd 111(1111). Concurrent registration in Music 267(3670)/Sec Ed 275 (3275) and Music 271(3710)/Sec Ed 279(3279). For the music education major. A study of the middle school/ junior high school general music program emphasizing a conceptually based curriculum: objectives, methodologies, materials, innovations, classroom organization, and management. This course must be completed in residence.

**270(3700) Curriculum and Methods of Teaching Instrumental Music II (2)**

(Same as Sec Ed 278(3278). Prerequisites: Music 131(2311/2312), Music 152a(3521), Music 162(3620), Music 257(3570)/ELE Ed 277(3277), Music 268(3680)/Sec Ed 276(3276), Ed FND 111(1111), three of the following: Music 25(1250), Music 26(1260), Music 27(1270), Music 28(1280). Concurrent registration in Music 267(3670)/Sec Ed 275(3275). A continuation of Music 268(3680)/Sec Ed 276(3276). Topics include large group rehearsal techniques, program development, administrative procedures, and evaluation. This course must be completed in residence.

**271(3710) Curriculum and Methods of Teaching Secondary Choral Music (2)**

(Same as Sec Ed 279(3279). Prerequisites: Music 131(2311/2312), Music 257(3570)/ELE Ed 277(3277), and Ed FND 111(1111). Concurrent registration in Music 267(3670)/Sec Ed 275(3275) and Music 269(3690)/Sec Ed 277(3277). For the music education major. A study of the secondary school choral music program: curriculum, methods, teaching techniques, organization, and administrative procedures for choral performance classes. This course must be completed in residence.

**300(4000) Advanced Techniques in Music Education (1-2)**

Prerequisite: A 200-level music education course or permission of the department. Intensive study for advanced music education students and music teachers, emphasizing specialized techniques and innovative concepts. Topics to be announced. May be repeated for credit.

**301(4010) Marching Band Techniques (3)**

Prerequisite: Junior Standing. Techniques for organizing and training school marching bands. Content will include planning and charting shows, rehearsal problems, corps and traditional styles, and auxiliary units.

**306(4060) Advanced Workshop in Music Education (1-5)**

Prerequisite: Junior standing and consent of the instructor. An intensive variable-topic workshop in music education presenting knowledge and skills to supplement specific areas in existing courses.

**400(5000) Directed Research in Music: Variable Topic (1-5)**

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

**406(5060) Graduate Workshop in Music Education (1-5)**

Prerequisite: Graduate standing and consent of instructor. Intensive workshop in music education. Variable topics.

To gain skills and knowledge in specific areas not readily available in existing courses.

**407(5070) Techniques and Literature for the Jazz Ensemble (3)**

Prerequisite: Graduate standing in music. An examination of jazz music education. Includes methods, materials, improvisational techniques, and administration.

**413(5130) Teaching Music Theory in the High School (3)**

Prerequisite: Graduate standing in music. A study of the course content and pedagogical techniques for high school music theory courses.

**451(5510) Graduate Instrumental Methods (3)**

Prerequisite: Graduate standing in music. Development of objectives for instrumental programs and methods of achieving those objectives. Comprehensive musicianship through instrumental performance, analysis of instrumental literature, instrumental philosophies and methodologies, rehearsal organization, and recent research in instrumental music education will be discussed.

**452(5520) Instrumental Music Administration (3)**

Prerequisite: Graduate standing in music. Study of the organizational problems of the instrumental program; library management; budgeting; awards and incentive systems; selection, care, and handling of uniforms and equipment; instrumental balance; seating plans; and operation of festivals and contests.

**461(5610) Graduate Choral Methods (3)**

Prerequisite: Graduate standing in music. Development of objectives for choral programs and methods of achieving those objectives. Comprehensive musicianship through choral performance, analysis of choral literature, the changing voice, choral philosophies and methodologies, rehearsal organization, and recent research in choral music education will be discussed.

**462(5620) Guitar in the Classroom (3)**

Prerequisite: Graduate standing in music. A study of guitar instruction in grades 5-12 with a focus on curricular sequence that includes chords, strums and picking patterns essential for song accompaniment skill development. Current materials, suitable for upper elementary and secondary students will be explored.

**465(5650) Music Theatre in the School (3)**

Prerequisite: Graduate standing in music. Techniques appropriate for school musical productions. Aspects of production and planning, including makeup, staging, lighting, and costuming.

**471(5710) General Music: A Model for Multifaceted Musical Learning (3)**

Prerequisite: Graduate standing in music. An exploration of the general music class as a learning laboratory model designed to actively engage the learner in a series of comprehensive music learning experiences. Emphasizes techniques and materials that will motivate the nonperformance-oriented student.

**472(5720) Electronic Music Techniques for Teachers (3)**

Prerequisite: Graduate standing in music. Basic electronic music instruments, their operation and use as teaching tools. Materials and techniques suitable for use with students in both elementary and secondary school settings will be presented.

**473(5730) Individualizing Music Instruction (3)**

Prerequisite: Graduate standing in music. The development of learning strategies, materials, and evaluation techniques suitable for better accommodating the varying interests, abilities, and learning styles of individual students in music classes.

**475(5750) Microcomputer Applications in Music Education (3)**

(Same as ED 475(5750)). Prerequisites: Graduate Standing in Music. An examination of the potential of microcomputers in the music education field. Experiences with available hardware and software suitable for applications that include inventory, budget, music library cataloging, digital music synthesis, and computer-assisted instruction at all levels.

**476(5760) Microcomputer-Assisted Instruction Curriculum Development in Music (3)**

(Same as ED 476(5760)). Prerequisites: Graduate Standing in Music. Design and development of Computer-Assisted Instruction (CAI) lessons in music. Commercial courseware and various CAI models will serve as the basis for creating original programs that can be used effectively to implement objectives of the music curriculum for a specific school or school district. The design, refinement, and production of a major CAI program for use in an elementary, secondary or postsecondary setting is required.

**477 Graduate Microcomputer Applications in Music (3)**

(Same as ED 477.) Prerequisite: Graduate Standing in Music. The study of complex microcomputer applications including music synthesis, MIDI, music-oriented graphics, voice and pitch recognition, administrative applications and computer-assisted instruction.

**480(5800) Musical Acoustics (3)**

Prerequisite: Graduate Standing in Music. The acoustical properties of the human voice, acoustic and electronic musical instruments, rehearsal rooms and performance spaces. Applications for musicians/teachers in the choice,

design and acoustical treatment of rehearsal/performance space, requirements and techniques for quality musical recordings and the use of acoustic principles in the design of original classroom musical instruments.

**481(5810) Foundations of Music Education (3)**

Prerequisite: Graduate standing in music. A study of the historical, philosophical, and psychological foundations of music education. Includes principles necessary for development, implementation, and evaluation of the total school music program.

**482(5820) School Music Administration and Supervision (3)**

Prerequisite: Graduate standing in music. Theory and practice of administration and supervision of school music programs.

**483(5830) Contemporary Music Education (3)**

Prerequisite: Graduate standing in music. A study of recent trends and issues in music education.

**484(5840) Problems of Urban Music Education (3)**

Prerequisite: Graduate standing in music. An analysis of current practices, problems, trends, and research involved in developing strategies for the improvement of music programs in inner-city schools.

**491(5910) Music Education Research (3)**

Prerequisite: Graduate standing in music. Applications of various approaches in defining and analyzing research problems in music education. Historical, experimental, descriptive, and philosophical research will be included.

**492(5920) Psychology of Music (3)**

Prerequisite: Graduate standing in music. A study of the effects of music on behavior. Tuning and temperament, psychoacoustics, measurement of musical behavior, aesthetic response to music, and functional music.

**495(4950) Special Problems in Music Education (1-3)**

Prerequisite: Graduate standing in music. Selected problems to meet the needs of the individual student.

**499(5990) Master's Project in Music Education (3)**

Prerequisite: Graduate standing in music. A project utilizing historical, experimental, philosophical, descriptive, or analytical research techniques. The project will include a written report.

**Music History and Literature**

**1(1001) Introduction to Music (3)**

A historically oriented study of art music, its styles, and forms from the Baroque period to the present day. This course will not apply toward requirements for a music major.

**6(1060) Introduction to African-American Music (3)**  
A survey of the African-American musical heritage from its African origins through its role and development in twentieth-century American society. All genres will be discussed, including African-American composers who wrote in the European tradition. This course will not apply toward requirements for a music major or minor.

**7(1070) Introduction to Jazz (3)**  
A survey course that examines the musical, historical, and social aspects of the subject. This course will not count toward requirements for a music major.

**8(1080) Introduction to Irish Traditional Music (3)**  
This music appreciation course will survey the rich tapestry of Irish traditional music, song and dance. Particular attention will be given to the cultural history of the traditional music maker in Irish society, as well as among the constituent communities of the Irish Diaspora in Europe and North America. The course will introduce students to the instruments, performance settings and regional styles of Irish traditional music. Using field recordings and archive materials collected in Ireland and North America, it will also focus on celebrated folk performers of the past and present, and evaluate the impact of contemporary media on their ancient, yet evolving, musical genre. No prior experience of Irish traditional music is necessary to pursue this course.

**9(1090) Non-Western Music I (3)**  
The music of Oceania; folk and classical music and dance of East Asia, Tibet and Southeast Asia; the influence of Buddhism, Islam, and Western acculturation on the functions of music in these societies.

**10(1100) Non-Western Music II (3)**  
Music of the African continent, West Asia, and South Asia; a survey of the tribal, folk, and classical music and performing arts of these cultures.

**11(1110) Introduction to Irish Traditional Music in North America (3)**  
Will examine the cultural history of Irish traditional music and music makers in North America since the end of the eighteenth century. Drawing on a diversity of ethnomusicological sources, will evaluate the contribution of Irish musicians, singers and dancers to the growth of American popular culture in the nineteenth and twentieth centuries. Will explore the role of Irish musicians in rural communities from Newfoundland and Quebec to the Mid Western States and California. In reviewing the music history of the Irish Diaspora in North America, will compare and contrast historical recordings of Irish music made in the 1920s with those produced by modern masters of Irish music. No prior knowledge of Irish traditional music is necessary to pursue this course.

**101(1010) History of Western Music I (3)**  
Prerequisite: Music 30(1301/1302) or consent of department. A general survey of the history of Western music. Includes the evolution and development of styles, forms, and their social setting.

**102(1020) History of Western Music II (3)**  
Prerequisite: Music 30(1301/1302) or consent of department. A continuation of Music 101(1010).

**300(4000) Directed Studies: Variable Topic (1-5)**  
Prerequisite: Consent of department. Directed independent study of selected topics in music. May be repeated, if topic is substantially different but no more than 5 hours may be applied toward a degree.

**321(4210) Music of the Middle Ages (3)**  
Prerequisite: Music 101(1010) or consent of department. A study of music and musical thought from the beginning of Christianity to 1450. Gregorian chant, polyphonic music, the *Ars Antiqua*, and the *Ars Nova*.

**322(4220) Music of the Renaissance (3)**  
Prerequisite: Music 101(1010) or consent of department. A study of the theoretical and practical impact of humanism on music, musicians, and musical thought from 1450 to 1600. Sacred and secular music; the rise of an instrumental idiom.

**323(4230) Music of the Baroque (3)**  
Prerequisite: Music 101(1010) or consent of department. A detailed study of music from 1600 to 1750. The rise of the new style, national styles in the seventeenth century, and the culmination of the Baroque period.

**324(4240) Music of the Classic Period (3)**  
Prerequisite: Music 102(1020) or consent of department. A study of the growth of classical style; galant and expressive styles; Mozart, Haydn, and Beethoven.

**325(4250) Music of the Romantic Period (3)**  
Prerequisite: Music 102(1020) or consent of department. Composers, forms, and styles in nineteenth-century music. The literary and social background of musical romanticism.

**326(4260) Music of the Twentieth Century (3)**  
Prerequisite: Music 102(1020) or consent of department. A detailed study of trends in modern music and of influential composers; impressionism, serial composition, electronic music, and other recent techniques.



**327(4270) A History of Byzantine Music and Hymnography (3)**

Prerequisite: Music 102(1020) or consent of department. A study of the liturgical and secular music of the Byzantine Empire and post-Byzantine period during the Ottoman occupation; a historical investigation of the Oriental and Ancient Greek origins of the music along with an evolution of the types of music and poetical forms. A study of the types of notation and transcription analyses from the Medieval neumes into Western staff notation is included.

**400(5000) Directed Research in Music: Variable Topic (1-5)**

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

**Music Theory and Composition**

**19(1190) Fundamentals of Music (3)**

This course provides basic music vocabulary: scales, intervals, and chords, and systematic instruction in the melodic, rhythmic, and harmonic aspects of music. This course will not apply toward requirements for a music major.

**30A(1301) Theory of Music I (3)**

Prerequisite: Consent of the department. The basic materials of music and their use in analyzing and writing music. Concurrent registration in Music 30B(1302) is required for music majors and minors.

**30B(1302) Aural Training I (1)**

Prerequisite: Consent of the department. Systematic instruction in ear training and sight singing. Includes diatonic melodic and rhythmic dictation, chord quality recognition, sight singing of diatonic melodies, and the reading of units and divisions of units in simple and compound meters.

**31A(1311) Theory of Music II (3)**

Prerequisites: Music 30A(1301) and Music 30B(1302) or consent of department. The study of seventh chords, secondary dominants, and modulation; composition in small forms. Concurrent registration in Music 31B(1312) is required for music majors and minors.

**31B(1312) Aural Training II (1)**

Prerequisites: Music 30A(1301) and Music 30B(1302) or consent of department. The systematic instruction in ear training and sight singing begun in Music 30B(1302) is continued. Includes further diatonic melodic and rhythmic dictation, primary chord progressions, sight singing of diatonic melodies, and the reading of unit subdivisions in simple and compound meters.

**130A(2301) Theory of Music III (3)**

Prerequisites: Music 31A(1311) and Music 31B(1312) or consent of department. Study of chromaticism in eighteenth and nineteenth centuries; composition in simple part forms. Concurrent registration in Music 130B(2302) is required for music majors and minors.

**130B(2302) Aural Training III (1)**

Prerequisites: Music 31A(1311) and Music 31B(1312) or consent of department. Systematic instruction in ear training and sight singing of Music 31B(1312) is continued. Chromatic melodic dictation, rhythmic dictation continues, secondary and altered chords in progressions are introduced. Sight singing of chromatic, modulating, and modal melodies, and the reading of syncopated rhythmic patterns are included.

**131A(2311) Theory of Music IV (3)**

Prerequisites: Music 130A(2301) and 130B(2302) or consent of department. Study of late nineteenth- and early twentieth-century tonal harmony; analysis of large forms; composition in large forms. Concurrent enrollment in 131B(2312) is required for all music majors and minors.

**131B(2312) Aural Training IV (1)**

Prerequisites: Music 130A(2301) and 130B(2302) or consent of department. Systematic instruction in sight singing and advanced aural perceptions. Includes drill in recognition of formal events and key relationships, sight singing of twentieth-century melodies, and rhythmic drills in borrowed divisions and changing meters.

**141(3410) Orchestration (3)**

Prerequisite: Music 131(2311/2312) or consent of department. Study of the instruments of the brass, woodwind, percussion, and string families; scoring, transcription, and arranging for various instrumental ensembles.

**142(3420) Choral Arranging (2)**

Prerequisite: Music 131(2311/2312) or consent of department. Study of vocal ranges, characteristics and capabilities at various ages and scoring for choral ensembles comprised of singers in these varying stages of development.

**143 (3430) Instrumentation and Scoring Technique (2)**

Prerequisite: Music 131(2311/2312) or consent of department. Study of the modern orchestral instruments, scoring for various instrumental ensembles with emphasis on idiomatic technique and transcription from keyboard models. This course will not fulfill the music degree requirement for students with instrumental or keyboard emphases.

**300(4000) Directed Studies: Variable Topic (1-5)**

Prerequisite: Consent of instructor. Directed independent study of selected topics in music. May be repeated, if topic is substantially different but no more than 5 hours may be applied toward a degree.

**311(3110) Analysis of 20th Century Technique (2)**

Prerequisite: Music 131(2311/2312) or consent of department. Study of compositional devices in tonal and atonal music of the twentieth century.

**312(3120) Tonal Counterpoint (2)**

Prerequisite: Music 131(2311/2312) or consent of department. Study of tonal counterpoint with emphasis on the eighteenth-century style. Composition in two and three parts.

**330(3300) Seminar in Composition (2)**

Prerequisite: Music 311(3110) or consent of instructor. The study of composition in theory and practice.

**400(5000) Directed Research in Music: Variable Topic (1-5)**

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

**411(5110) Scoring and Arranging (3)**

Prerequisite: Graduate standing in music. Experience in scoring and arranging music for a variety of ensembles.

## Pedagogy

**25(1250) Brass Techniques (2)**

Prerequisite: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all brass instruments including trumpet, horn, trombone, euphonium, and tuba in the school setting.

**26(1260) Woodwind Techniques (2)**

Prerequisite: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all woodwind instruments including flute, clarinet, oboe, bassoon, and saxophone in the school setting.

**27(1270) String Techniques (2)**

Prerequisite: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all string instruments including violin, viola, cello, and bass in the school setting.

**28(1280) Percussion Instrumental Techniques (2)**

Prerequisite: Consent of the department. The objective of the course is to familiarize students with materials and techniques for teaching all percussion instruments including

snare drum, tom-tom, bass drum, cymbals, drumset, timpani, mallet instruments and miscellaneous percussion instruments in the school setting.

**124(1240) Intermediate Vocal Techniques (2)**

Prerequisite: Consent of department. Open to non-voice majors and to non-music majors who participate in a university choral program.

**156(1560) Piano Pedagogy (2)**

Prerequisite: Equivalent of Music 45k or permission of instructor. A study of methods, repertoire, and technical problems pertaining to private studio teaching for all levels of performance ability.

**221(2210) Pedagogy of Jazz Improvisation (1)**

Prerequisites: Music 131(2311/2312) and permission of instructor. Study of the techniques, systems, and instructional materials used in teaching jazz improvisation.

**300(4000) Directed Studies: Variable Topic (1-5)**

Prerequisite: Consent of department. Directed independent study of selected topics in music. May be repeated, if topic is substantially different but no more than 5 hours may be applied toward a degree.

**400(5000) Directed Research in Music: Variable Topic (1-5)**

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

## Practicum

**14, 15(1140/1150) Piano Proficiency (2)**

Prerequisite: Permission of department. Group instruction for music majors who do not meet beginning keyboard requirements.

**20(1200) Jazz Improvisation Laboratory (1)**

Prerequisite: Consent of instructor. The study and application of the theoretical, technical, and performance aspects of jazz improvisation. May be repeated for credit.

**116(2160) 118(2180), 119(3190), 120(3290)  
Intermediate Piano Proficiency (1)**

Prerequisite: Music 15(1150) or permission of department. Continuation of piano proficiency study.

**117(2170) Jazz Keyboard Harmony (1)**

Prerequisite: Applied Music 116(2160) or consent of department. Group keyboard instruction in the application of chordal structures and harmonic functions commonly used in mainstream jazz performance.

**125(1250) Singer's Diction: English, Italian, and German (1)**

Prerequisite: Music 44 or Music 124. A study of English, Italian, and German pronunciation using the International Phonetic Alphabet.

**126(1260) Singer's Diction: Latin, French, and Spanish (1)**

Prerequisite: Music 44 or Music 124. A study of Latin, French, and Spanish pronunciation using the International Phonetic Alphabet.

**151(2510) Conducting I (2)**

Prerequisite: Music 130(2301/2302), Concurrent registration in Music 161A(2610) required for bachelor of music in music education program. Techniques and problems in conducting.

**152a(3521) Conducting II Instrumental (2)**

Prerequisite: Music 151(2510). Concurrent registration in Music 162A(3620) required for bachelor of music in music education program. Advanced study of instrumental conducting and rehearsal techniques: score reading, and interpretation.

**152b(3522) Conducting II Choral (2)**

Prerequisite: Music 151(2510). Concurrent registration in Music 162A(3620) required for bachelor of music in music education program. Advanced study of choral conducting and rehearsal techniques, score reading, and interpretation.

**153(1530) Accompanying I (1)**

Prerequisite: Consent of department. Accompanying and ensemble practices, including rehearsal techniques, for keyboard majors. Public performance of works studied is required.

**154(1540) Accompanying II (1)**

Prerequisite: Consent of department. A continuation of Music 153(1530).

**155(1550) Accompanying III (1)**

Prerequisite: Consent of department. A continuation of Music 154(1540).

**161A(2610) Elementary School Instrumental Literature Laboratory (1)**

Prerequisite: Music 130A(2301) & 130B(2302) Active conducting experience while analyzing and evaluating selected instructional and concert materials for elementary grades.

**161B(2611) Elementary School Choral Literature Laboratory (1)**

Prerequisites: Music 130A(2301) & 130B(2302). Active conducting experience while analyzing and evaluating selected instructional and concert materials for elementary grades.

**162A(3620) Junior-Senior High School Instrumental Literature Laboratory (1)**

Prerequisite: Music 131A(2311) & 131B(2312) Analysis and evaluation of selected instructional and concert materials for junior and senior high school performance groups.

**162B(3621) Junior-Senior High School Choral Literature Laboratory (1)**

Prerequisites: Music 131A(2311) & 131B(2312) Analysis and evaluation of selected instructional and concert materials for junior and senior high school performance groups

**192(3920) Senior Research (2)**

Prerequisite: Consent of department. Required of all senior music majors. Directed readings and research in an area mutually acceptable to the student and instructor.

**292(4920) Internship (1-3)**

Prerequisites: Senior standing in bachelor of music business emphasis program and permission of the instructor. Supervised experience in the area of the student's career objective, such as music or instrument merchandising, arts management, mass communication, publishing, manufacturing or other, as available. May be repeated once for credit in different area.

**300(4000) Directed Studies: Variable Topic (1-5)**

Prerequisite: Consent of department. Directed independent study of selected topics in music. May be repeated, if topic is substantially different but no more than 5 hours may be applied toward a degree.

**400(5000) Directed Research in Music: Variable Topic (1-5)**

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, if topic is substantially different, but no more than 5 hours may be applied toward a degree.

**402(5020) Choral Literature (3)**

Prerequisite: Graduate standing in music. Study of choral literature appropriate for ensembles from elementary to senior high school. Criteria for evaluating choral literature will be developed, and pedagogical implications of choral music as a means of developing comprehensive musicianship will be discussed.

**403(5030) Band Literature (3)**

Prerequisite: Graduate standing in music. Study of band literature appropriate for soloists and ensembles from elementary to senior high school. Criteria for evaluating the literature will be developed, and related technical problems will be studied.

**404(5040) Orchestra Literature (3)**

Prerequisite: Graduate standing in music. Study of orchestral literature appropriate for soloists and ensembles from elementary to senior high school. Criteria for evaluating the literature will be developed, and technical problems will be studied.

**421(5210) Graduate Conducting (3)**

Prerequisite: Graduate standing in music. Conducting techniques, score reading, and interpretation of choral, orchestral, and band literature.

**448(5480) Graduate Applied Conducting (1-2)**

Prerequisite: Music 421(5210) and consent of the department. Private conducting study of the choral, orchestral, or band repertoire. Does not fulfill the applied music requirement for the master of music education degree.

## Department of Theatre and Dance

The Theatre and Dance Department at the University of Missouri-St. Louis is a newly activated program. Theatre courses will be offered in both the Fall and Spring semesters of the 2002-2003 academic year, and Dance courses are projected for 2003-2004. The University of Missouri-St. Louis has presented theatrical productions in each of the last four academic years, including *Man of La Mancha* (1999), *Pirates of Penzance* (2000), *El Capitan* (2001) and *The 1940's Radio Hour* (2002).

Courses planned for the 2002-2003 academic year include Fundamentals of Acting, Introduction to Theatre, and Advanced acting. Curricular planning is under way for a degree program in theatre. For further information concerning theatre at the University of Missouri-St. Louis, contact the College of Fine Arts and communication office.

## **Course Descriptions**

### **21(1210) Fundamentals of Acting (3)**

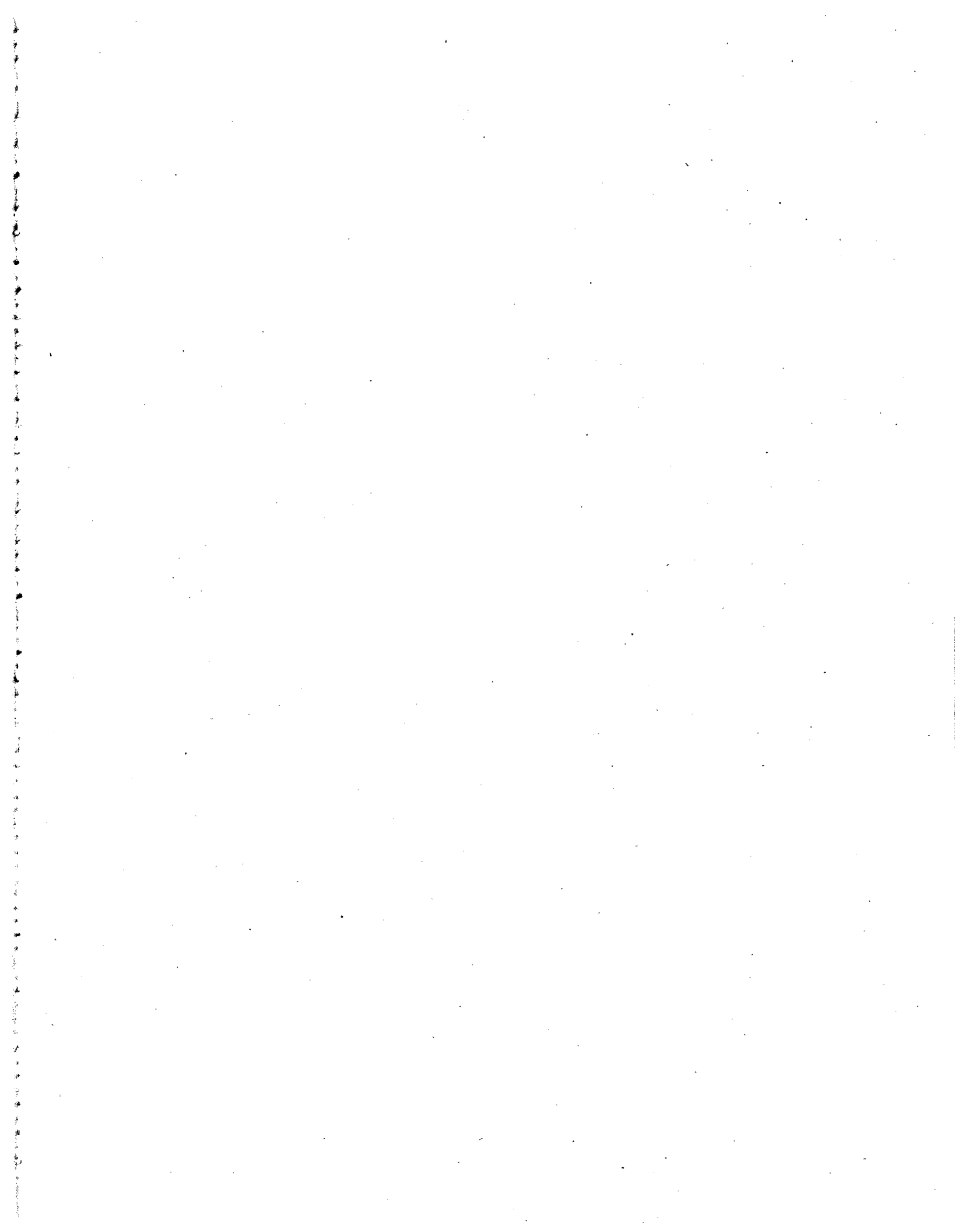
Oral and physical communication of a role through improvisations, exercises, and scene work. Emphasis on modern representational method with some attention given to other styles.

### **80(1800) Introduction to the Theatre (3)**

A study of theatre as an art form, emphasizing the audience's appreciation of the art of the playwright, actor, director, and designer. Study of major periods, genres, and plays from classical to modern time.

### **222(3222) Advanced Acting (3)**

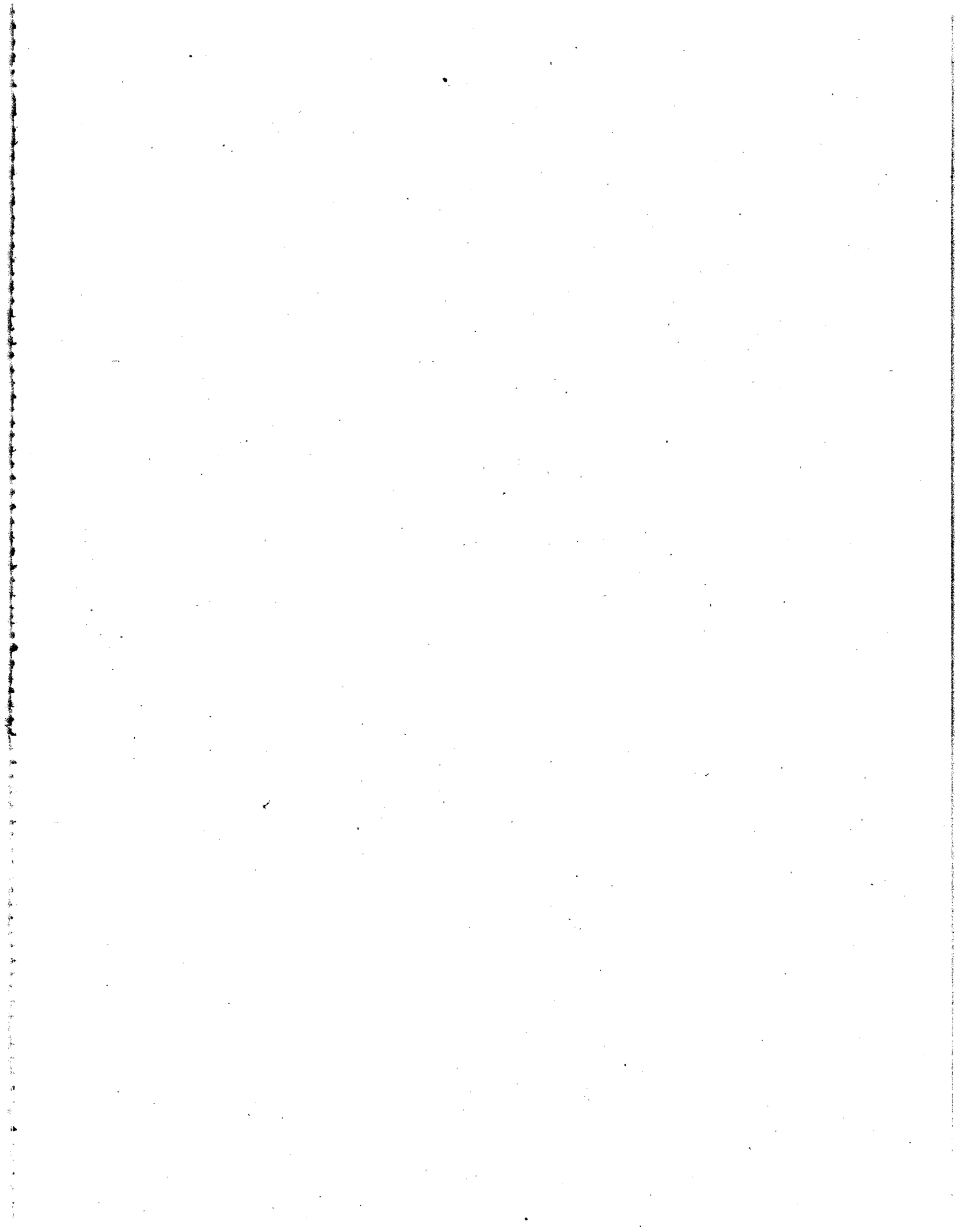
Prerequisite: Fundamentals of Acting 21(1210).  
Laboratory-discussion course emphasizing role analysis, scene study, characterization, and ensemble acting.





# Inter-School Studies





## Gerontology

### Faculty

**Robert J. Calsyn**, Professor\* of Psychology and Gerontology  
Ph.D., Northwestern University  
**Carl J. Bassi**, Associate Professor\* of Optometry  
Ph.D., Vanderbilt University  
**Margo-Lea Hurwicz**, Associate Professor\* of Anthropology and Gerontology  
Ph.D., University of California-Los Angeles  
**Timothy D. McBride**, Associate Professor\* of Public Policy Administration, Economics, and Gerontology  
Ph.D., University of Wisconsin-Madison  
**Chikako Usui**, Associate Professor\* of Sociology and Gerontology  
Ph.D., Stanford University  
**Timothy A. Wingert**, Associate Professor\* of Optometry  
O.D., Illinois College of Optometry  
**Ann M. Steffen**, Associate Professor\* of Psychology  
Ph.D., Indiana University  
**Nanora L. Sweet**, Assistant Professor of English  
Ph.D., University of Michigan  
**Terry Ettl**, Senior Lecturer  
M.A., Webster University  
**John Van Emden**, Senior Lecturer  
M.A., Washington University  
**Anna Biggs**, Clinical Professor Barnes College of Nursing  
Ph.D., University of Colorado Health Sciences Center  
**Kelly Everard**, Adjunct Assistant Professor  
Ph.D., University of Kentucky  
**Nina Tumosa**, Adjunct Associate Professor\* of Optometry  
Ph.D., State University of New York at Albany (SUNYA)  
**Myra Aud**, Adjunct Assistant Professor  
Ph.D., Saint Louis University  
**Rosalie Marx**, Lecturer  
M.A., Social Work, G.W. Brown School of Social Work, Washington University  
**Robert Sontag**, Lecturer  
M.A., Social Work, St. Louis University

\*members of Graduate Faculty

Faculty from 11 departments and schools are involved in the undergraduate and graduate programs in gerontology.

### Master of Science in Gerontology

The master of science degree in gerontology program is a multidisciplinary program designed to prepare students for management or direct service positions working with the aged. The program of study includes courses from a variety of departments including anthropology, biology, nursing, physical education, political science, psychology, sociology, social work, English, public policy administration, and optometry. Courses are offered

primarily in the evening to accommodate part-time, as well as full-time students.

### Admission Requirements

Program applicants must have the following:

- Baccalaureate degree.
- 3.0 or B average (students with exceptions should contact the director of the gerontology program).
- Official transcripts of all previous undergraduate/graduate work.
- Three letters of recommendation

In addition, students must meet the other general requirements for admission to the Graduate School as explained in the Graduate Study section of the *Bulletin*.

### Degree Requirements

The students are required to complete 30 credit hours, including 27 hours in gerontology courses, and a 3-hour statistics course. The required courses are listed below.

### Gerontology Distribution Requirements

A. Public Policy and Aging-3 credits from the following:  
Ger (PPA, Pol Sci) 443(6443), Health Care Policy  
Ger (PPA, Pol Sci) 417(6417), Income and Pension Policy for the Aged  
Ger (Soc) 449(5449) Issues in Retirement

B. Health and Physical Aspects of Aging - 3 credits from the following:  
Ger 300A (Soc Wk 381A(5610) Mechanics of Aging I: The Aging Body (1 credit hour)  
Ger 300A (Soc Wk 381B(5611) Mechanics of Aging II: The Aging Brain (1 credit hour)  
Ger 300C (Soc Wk 381C(5612) Mechanics of Aging III: Diseases of Aging (1 credit hour)  
Ger (Nur) 401(6401), (5000) Health and Wellness in the Aging  
Ger 441(6441) Aging and Health Behavior  
Ger 458(6458) (Opt 558(8650), Geriatric Optometry

C. Psychosocial Aspects of Aging-3 credits from the following:  
Ger (Psych) 373(4373) Psychology of Aging  
Ger (Psych) 376(4376) Mental Health and Aging  
Ger (Soc) 361(4361), Sociology of Aging  
Ger (Anthro) 440(5440) Cultural Aspects of Aging

D. Practica in Gerontology, 6 credits from the following:  
Ger 495(6495) Practicum in Gerontology  
Ger 496(6496) Advanced Practicum in Gerontology

E. Ger 494(6494) Integrative Research in Gerontology - 3 credits

F. Gerontology Electives - 9 credits

G. Graduate-level statistics course - 3 credits

Students should consult Director of Gerontology for approved courses.

### **Graduate Certificate in Gerontology**

The graduate certificate in gerontology is designed for students who wish to receive post-baccalaureate training in gerontology. The certificate can be taken by itself or in conjunction with pursuit of a graduate degree in another field. Eighteen credit hours are required.

### **Admission Requirements**

Program applicants must have the following:

1. Baccalaureate degree.
2. 2.75 grade point average (students with exceptions should contact the director of the gerontology program).
3. Official transcripts of all previous undergraduate/graduate work.
4. Two letters of recommendation.

### **Distribution Requirements**

#### **A. Public Policy-3 credits from the following:**

Ger (PPA, Pol Sci) 443 (6443) Health Care Policy  
Ger (PPA, Pol Sci) 417(6417) Income and Pension Policy for the Aged  
Ger (Soc) 449(6449) (5449), Issues in Retirement

#### **B. Health and Physical Aspects of Aging-3 credits selected from the following:**

Ger (Nur) 401(6401) (5000), Health and Wellness in the Elderly  
Ger 441(6441), Aging and Health Behavior  
Ger 300A(5610)(Soc Wk 381A(5610), Mechanics of Aging II: The Aging Brain (1 credit hour)  
Ger 300B(5611) (Soc Wk 381B(5611), Mechanics of Aging II: The Aging Brain (1 credit hour)  
Ger 300C(5612) (Soc Wk 381C(5612), Mechanics of Aging III: Diseases of Aging (1 credit hour)  
Ger 458(6458) (Opt 558(8650), Geriatric Optometry

#### **C. Psychosocial Aspects of Aging - 3 credits selected from the following:**

Ger (Psych) 373(4373), Psychology of Aging  
Ger (Psych) 376(4376), Mental Health and Aging  
Ger (Soc) 361(4361), Sociology of Aging

#### **D. Ger 495(6495), Practicum in Gerontology -3 credits**

#### **E. Electives in Gerontology - 6 credits**

### **Undergraduate Certificate in Gerontological Studies**

A certificate in gerontological studies, a multidisciplinary course of study, is available at the University of Missouri-St. Louis. This program provides an opportunity for students to obtain a focused specialty in gerontology in addition to their majors. It utilizes offerings in the College of Arts and Sciences, Barnes College of Nursing, the College of Business, and the College of Education. It is

appropriate for students in any of the colleges of the University.

### **Certificate Requirements**

A student may earn the certificate in gerontological studies by completing a total of 15 hours. Courses must be chosen from at least two of the following four topic areas. No more than 3 credit hours from Research/ Practicum Experience courses will be allowed. The student must have the approval of the director of the gerontology program before enrolling in the course. Courses taken to fulfill the requirements may not be taken on a satisfactory/unsatisfactory basis. New courses continually are added, so it is advisable to check with the director each term. Many courses are cross-listed and also have a gerontology designation.

### **Humanities**

Ger (Eng) 15(1115), Images of Age in Film  
Ger (Eng) 16(1116), Images of Age in Literature  
Ger (Philos) 156(2256), Bioethics

### **Natural Sciences and Mathematics**

Ger 300A(5610) (Soc Wk 381A), Mechanics of Aging I: The Aging Body  
Ger 300B(5611) (Soc Wk 381B), Mechanics of Aging II: The Aging Brain  
Ger 300C(5612) (Soc Wk 381C), Mechanics of Aging III: Diseases of Aging

### **Social Sciences**

Ger (Psych) 272(2272), Developmental Psychology: Adulthood and Aging  
Ger (Psych) 380(4380), The Psychology of Death, Dying, and End-of-Life Concerns  
Ger (Psych) 373 (4373), The Psychology of Aging  
Ger (Soc) 361(4361), Social Gerontology  
Ger (ID) 60(1160), Aging in America  
Ger (ID) 120(1220), Special Topics in Gerontology  
Ger (Anthro) 215(3215), Growing Old in Other Cultures

### **Education**

Ger (PE) 190(1190), (Clinical Experience in Physical Gerontology  
Ger (PE) 392(5992), Internship in Physical Gerontology  
Ger (PE) 330(5330), Prescribing Physical Activity

### **Career Outlook**

The increasing number of elderly in the population has greatly expanded job opportunities in gerontology in the last decade, and job prospects for the future are equally bright. Career possibilities include nursing home administration, administration and planning of community-based programs for the elderly, recreational programming, and counseling of the elderly.

## Course Descriptions

### 15(1115) Images of the Elderly in Film (3)

(Same as Eng 15(1150).) 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(1116) Images of Age in Literature (3)

(Same as Eng 16(1160).) Reading and discussion of literature that portrays aging and old age in various settings. Discussion and short essays enable consideration of how literature helps in the study of aging and also how the process of aging can be a creative force within literature.

### 60(1160) Aging in America (3)

(Same as ID 60(1160).) 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.

### 120(1220) Special Topics in Gerontology (1-3)

(Same as ID120(1220).) 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(2256) Bioethics (3)

(Same as Phil 156(2256).) An examination of ethical issues in health care practice and clinical research and in public policies affecting health care. Topics include abortion, euthanasia, health care, experimentation, informed consent, and the right to health care.

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

Prerequisite: Consent of instructor. (Same as Phy Ed 190(1190).) Early supervised experience in gerontological physical activity programming. Seminar precedes and accompanies clinical experience.

### 215(3215) Growing Old in Other Cultures (3)

(Same as Anthro 215(3125).) 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(2272) Developmental Psychology: Adulthood and Aging (3)

(Same as Psych 272(2272).) Personality, social, and physiological development from the onset of early adulthood through maturity and old age.

### 300A(5610) Mechanisms of Aging I: The Aging Body (1)

Prerequisites: Bio 001(1012) or Bio 110(1102) or equivalent. (Same as SW 381A). (MSW students normally take all foundation courses prior to enrolling in this course). Introduces students with a social sciences/ humanities background to the normal changes in the biology and chemistry of the aging human body.

### 300B(5611) Mechanisms of Aging II: The Aging Brain (1)

Prerequisites: Ger 300A(5610) or SW 381A or equivalent or consent of instructor. (Same as SW 381B(5611).) (MSW students normally take all foundation courses prior to enrolling in this course) Provides students with a social sciences/humanities background a basic introduction to the biology and chemistry of the aging human brain and nervous system.

### 300C(5612) Mechanisms of Aging III: Diseases of Aging (1)

Prerequisites: Ger 300A(5610) and 300B(5611) or SW 381A(5610) and 381B(5611) or equivalents or consent of instructor. (Same as SW 381C(5612).) (MSW students normally take all foundation courses prior to enrolling in this course) Provides students with a social sciences/humanities background with information on how diseases associated with aging exacerbate the effects of aging on the human body and mind.

### 330(5330) Prescribing Physical Activity (3)

Prerequisite: Phy Ed 280(3280) or consent of instructor. (Same as Phy Ed 330(5330).) 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(4361) Social Gerontology (3)

Prerequisite: Soc 10(1010) and junior standing or consent of instructor. (Same as Soc 361(4361).) 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(4373) Psychology of Aging (3)

Prerequisite: Nine hours of Psychology or consent of instructor. (Same as Psych 373(4373).) This course focuses on the developmental changes associated with aging including sensation, memory, emotions, and attitudes.

**376(4376) Mental Health and Aging (3)**

Prerequisites: Psych 272(2272), 373(4373), or graduate student status. (Same as Psych 376(4376) and SW 376(5600) (MSW students normally take all foundation courses prior to enrolling in this course.) A survey of recent theory and research in mental health issues for older populations. The primary focus is on major psychological disorders prevalent among the elderly and in treatment approaches for elders.

**380(4380) Psychology of Death, Dying, and End-of-Life Concerns (3)**

(Same as Psych 380(4380). Prerequisites: Nine hours of psychology. This course will address the psychological aspects of a variety of end of life issues, including death attitudes, funeral practices, ethics, grief theory, family communication practices, health care system approaches, and current research regarding these.

**390(4490) Directed Readings (1-3)**

Prerequisite: Consent of instructor. Directed readings and research or field work. May be repeated for a maximum of three hours.

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

Prerequisite: Phys Ed/Ger 190(1190) or consent of instructor. (Same as Phys Ed 392). Supervised clinical experience in selected gerontological settings as a physical education practitioner under the supervision of university and program professionals. Internship may include two or more separate experiences completed concurrently or sequentially and involve planning of instruction, participant and program evaluation, research, and related activities.

**401(6401) Health and Wellness in the Elderly (3)**

Prerequisite: Graduate standing. (Same as Nurs 401(5000). Factors contributing to longevity and health in old age, including genetic predisposition, lifestyle, culture, and environment are related to aspects of maintaining health and promoting wellness. Through a holistic approach, explores aspects of nutrition, exercise and activity, prevention of hazards to health, maintaining self-responsibility, managing stress, and meeting continued developmental, emotional and spiritual needs. Considers cross-disciplinary interventions to promote health and wellness in the elderly. Introduces the "Putting Prevention into Practice" model adapted to health promotion in the elderly.

**417(6417) Income and Pension Policy for the Aged (3)**

Prerequisite: Graduate standing or consent of instructor. (Same as PPA 417(6417), Pol Sci 417(6417), and SW 417(6417) (MSW students normally take the social policy foundation course prior to enrolling in this course). Examination of federal, state, and local policies that affect the economic well being of the elderly. The development of social security programs and pension programs is explored within a historical context. Emphasis is placed on

the analysis of current policy problems and proposed solutions.

**440(5440) Cultural Aspects of Aging (3)**

(Same as Anthro 440.) Focuses on the variety of solutions encountered in different sociocultural contexts for dealing with the problems, challenges, and opportunities of growing old. It is organized around topics that are of concern to both anthropology and social gerontology: the status of the aged, intergenerational relations, aging in modernizing societies, ethnic dimensions of aging in complex societies, health in later life, death and dying. Both in-depth case studies and cross-cultural comparisons are examined in an effort to arrive at a culturally informed assessment of factors affecting aging and the aged in the United States.

**441(6441) 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(6442) Minority Aging (3)**

Prerequisite: Soc 361(4361) or consent of instructor. (Same as Soc 442(6422). 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(6443) Health Care Policy (3)**

Prerequisites: Graduate standing and consent of instructor. (Same as Pol Sci 443(6443), PPA 443(6430) and SW 443(6443). (MSW students will normally take the social policy foundation course prior to enrolling in this course). Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

**444(6444) Seminar in Public Policy and Aging (3)**

Prerequisite: Consent of instructor. (Same as PPA 444(6440) and Pol Sci 444(6444). 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(6445) Sociological Dimensions of Chronic Illness (3)**

Prerequisite: Soc 400(5400) or consent of instructor. (Same as Soc 445(6445)). 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(6449) Issues in Retirement (3)**

(Same as Soc 449(5449)). 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(6458) Geriatric Optometry (2)**

(Same as Opt 558(8650)). 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.

**490(6490) Directed Study (1-3)**

Prerequisite: Consent of instructor. Designed to give the student an opportunity to pursue a more in-depth study of a problem area in gerontology than is normally covered in more formal courses. May be repeated for a total of 6 credit hours.

**494(6494) Integrative Research Seminar in Gerontology (3)**

(Same as Psych 494(7494)). Prerequisite: A graduate level research methods course (e.g., PPA 401(6401)). 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(6495) Practicum in Gerontology (3)**

Prerequisite: Consent of instructor. Supervised work experience in an agency that serves older adults. Students are required to complete a minimum of 150 clock hours at the practicum site.

**496(6496) Advanced Practicum in Gerontology (3)**

Prerequisites: Ger 495(6495) and consent of instructor. Advanced practicum experience beyond Gerontology 495(6495). Students must complete a minimum of 150 clock hours of supervised fieldwork (service or research) with older adults.

**497(6497) Interdisciplinary Geriatric Care (2)**

(Same as Opt 497(6497)). 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(6498) 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(6499) Topics in Gerontology (1-2)**

Prerequisite: Graduate standing. Analysis of a current problem in gerontology. (Course may be repeated for maximum of five credits, assuming topics are different.)

## Managerial Decision Making and Health Informatics

### General Information

The MHS in Managerial Decision Making and Informatics is an integrated, multidisciplinary degree designed to enable health professionals to bridge the traditional divide between clinical services and business. The degree is offered through the Managerial Decision Making and Health Informatics (MDHI) unit of the Graduate School. The program's core is comprised of one-credit modules that provide extensive exposure to health informatics and emerging technologies while simultaneously fostering a systems view of the internal and external forces that affect organizations in the healthcare market. Electives drawn from information systems, health economics, health policy, gerontology, nursing, and business allow students to tailor the program to meet their individual career needs. The program is structured to meet the needs of working health professionals, and characterized by a high degree of integration among the courses.

### Admission Requirements:

Applicants must complete an application form and also submit:

1. An undergraduate degree with a minimum grade point average of 3.0 or (B).
2. A statement of purpose demonstrating a commitment to pursue a degree in health informatics.
3. A resume, preferably showing two years of professional work experience in a health-related field.
4. Three letters of recommendation from persons qualified to judge the candidate's potential for success in the program.

Applicants are required to take either the Graduate Record Exam (GRE) General Test, or the Graduate Management Admission Test (GMAT), and fulfill the general requirements for admission to the Graduate School as explained in the Graduate Studies section of this *Bulletin*. These exams measure verbal, quantitative and analytical skills that are developed over a long period of time and are associated with success in graduate studies.

Admission decisions are based on the applicant's portfolio. The MDHI program director may request a personal or phone interview once the applicant's file is complete. Applicants who do not meet all the requirements listed above may be provisionally admitted to the program at the program director's discretion.

### Mathematics Background Requirement

If college algebra or its equivalent was not taken as part of the applicant's undergraduate program, they are required to successfully complete Math 30 or its equivalent prior to their entrance into the MHS-MDHI program. This course may not be used as a program elective.

### Degree Requirements

Students are required to complete 36 credit hours. Of these, 21 are in the core curriculum, 6 are from related fields as electives, and 9 involve contact with the local healthcare community via case studies and a capstone project course.

### Distribution Requirements

#### A. Overview: 7 credits

MDHI 400(6400), Emerging Trends in Healthcare Markets  
 MDHI 402(6402), Insurance and Managed Care  
 MDHI 404(6404), The Internet and Electronic Commerce for Healthcare Professionals  
 MDHI 406(6406), Informatics in the Health Professions  
 MDHI 408(6408), Patient Rights and Provider Responsibilities  
 MDHI 410(6410), Effective Communication for Healthcare Professionals  
 MDHI 412(6412), Organizational Structures and Administration in the Healthcare Industry.

#### B. Tools and Techniques used in Decision Making: 4 credits

MDHI 420(6420), Quality and Productivity Improvement Tools  
 MDHI 422(6422), Decision Analysis  
 MDHI 424(6424), Modeling and Understanding Statistical Relationships  
 MDHI 426(6426), Outcomes Research Methods

#### C. Understanding Decision Making: 5 credits

MDHI 440(6440), Total Quality Management in Healthcare Organizations  
 MDHI 450(6450), Consumer Behavior in Healthcare Markets  
 MDHI 452(6452), Health Provider Decision Making  
 MDHI 454(6454), The Role of the Government in the Healthcare Sector  
 MDHI 456(6456), Outcomes Research Applications in the Healthcare Sector

#### D. Informatics: 5 credits

MDHI 460(6460), Information Technology Concepts and Elements  
 MDHI 462(6462), Health Information Resource Management  
 MDHI 464(6464), Decision Support for Healthcare Management  
 MDHI 466(6466), Health Information Systems Evaluation  
 MDHI 468(6468), Health Data Warehousing and Security



**E. Electives: 6 credits**

Students may select courses from the list below, or another course approved by the MDHI program director.

**Econ 471(6750), The Political Economy of Healthcare**

**Econ 472(6760), Health Economics**

**MSIS 430(5326), Quality Management**

**MSIS 485(6825), Management Information Systems:**

**Theory and**

**MSIS 488(6840), Information Systems Analysis**

**Nurs 405(6105), Values in Health Care Decision Making**

**Nurs 406(6106), Policy, Organization and Financing in Healthcare**

**Nurs 408(6108), Health and Society**

**Nurs 458(6114), Resource Utilization**

**Phil 456, Medical Ethics for Health Care Providers**

**PPA/Pol Sci/Ger 443(6443), Health Care Policy**

## Course Descriptions

### 400(6400) Emerging Trends in Healthcare Markets (1)

Emerging trends in the healthcare marketplace are described. Topics include market dynamics of the healthcare industry, the use of quality and accessibility to enhance market share, changes in cost accounting systems and healthcare marketing tactics, telemedicine, and more. Emphasis is on recent changes in the local and national markets, and projections for the future.

### 402(6402) Insurance and Managed Care (1)

The dynamic changed in the managed care industry is explored. The structure of managed care plans is described and analyzed, focusing on the ways that managed care plans have changed the incentives for health providers and patients to alter their behavior, thus leading to changes in medical care delivery. Evidence of the impacts of managed care are studied on important trends such as health care spending, the utilization of medical care, and the quality of medical care. Proposed reforms of the managed care industry will be studied and analyzed.

### 404(6404) The Internet and Electronic Commerce for Healthcare Professionals (1)

Discussion of identifying and analyzing healthcare organizational needs that may be satisfied using electronic commerce technologies. Focus is on the technical and economic evaluation, analysis, and design of Internet Web pages for electronic commerce using a standard programming language such as, for example, Java Script. Health industry applications of Internet electronic commerce, electronic data interchange, and telemedicine will be discussed.

### 406(6406) Informatics in the Health Professions (1)

Overview of Health Informatics as a discipline, describing the history of its development, current research and applications domains, job opportunities, informatics resources and ethical responsibilities. Examination of the roles of managers, coordinators, consultants, and users of informatics in the health sciences.

### 408(6408) Patient Rights and Provider Responsibilities (1)

Examination of issues involving relations between patients and healthcare providers. Topics include informed consent to medical treatment, access to experimental liability for denial of care, and patient confidentiality.

### 410(6410) Effective Communication for Healthcare Professionals (1)

Analyzing business writing and speaking, and the communication conventions common in organizations. Emphasis is on developing skills critical to career advancement and necessary for effective organizational functioning.

### 412(6412) Organizational Structures and Administration in the Healthcare Industry (1)

Various organizational structures present in today's healthcare industry are described. Utilizing a systems perspective, several areas from the standpoint of both individual and organizational performance, including communication, motivation, conflict resolution, and leadership are considered.

### 420(6420) Quality and Productivity Improvement Tools (1)

Exploration of the foundations of quality, including Deming's 14 points for effective management, process capability and improvement studies, control charts, brainstorming and root cause analysis, continual improvement cycles and graphical presentation of results. Readings also provide insights into the application of quality principles and processes to personal and professional development.

### 422(6422) Decision Analysis (1)

Estimation, hypothesis testing, and prediction for biological and health science data are examined. Uncertainty and risk in Decision Making, tools for static and sequential decisions, excellence in graphical presentation and the effective presentation of statistical results to a variety of audiences are stressed.

### 424(6424) Modeling and Understanding Statistical Relationships (1)

Focus is on correlation and regression models in analyzing healthcare data. Interactive model-building skills are developed with the use of statistical software. An overview of statistical software systems is presented, ranging from spreadsheet tools appropriate for analyzing small or moderate data sets when limited resources are available to statistical packages appropriate for manipulating massive data sets.

### 426(6426) Outcomes Research Methods (1)

Exploration of the theory and methods of outcomes research. Focus is on various topics important to understanding the outcomes research approach, including: the measurement of costs, the difference between accounting costs and real resource costs, the measurement of quantity and quality, and the methods for distinguishing between inputs and outputs. Also compare and contrast various approaches to outcomes research, including cost-benefit analysis, cost minimization analysis, cost-effectiveness analysis, and cost analysis. Explore the methods for relatively simple therapeutic interventions, screening and secondary prevention activities, and in assessment of diagnostic tests.

**440(6440) Total Quality Management in Healthcare Organizations (1)**

Examination of Total Quality Management: an integrated, structured approach that aims at delighting customers by delivering exceptional products or services. Key elements include customer involvement, leadership and team dynamics, and building achievements into a lasting culture of ongoing improvement within the organization. Examines success stories from private practitioners, hospitals, managed care organizations, and consumer/buyer alliances that have resulted in significant and long-lasting improvements in both improved clinical outcomes and reduced costs.

**450(6450) Consumer Behavior in Healthcare Markets (1)**

Build the tools necessary to understand how consumers behave in healthcare markets. Applying standard microeconomic techniques, analyze the incentives facing patients and explore the ways in which their behavior when purchasing healthcare might differ from their behavior in other consumer decisions. Several topics are explored, but emphasis is on the role of health insurance and how it influences consumer behavior, and the important role of information (or the lack thereof) in consumer decisions.

**452(6452) Health Provider Decision Making (1)**

Apply standard microeconomic techniques to analyze the incentives facing decision makers in the healthcare system and the ways in which they are altered by government policy. We specifically focus on the market for insurance, and the specific markets for health services (e.g., physicians, hospitals, pharmaceuticals). We explore how the institutional setting for these markets has been changing in recent years, the role of consolidations and mergers, and the impact of government regulations on supplier decisions. The role of information and technological changes in health markets are also examined.

**454(6454) The Role of Government in the Healthcare Sector (1)**

Explore the rationale for government intervention in the health market, from an economic perspective. Also investigate the impact of government policy on health care provision and financing, focusing especially on the effect of entitlement programs (e.g., Medicare and Medicaid), tax policy, and government regulation. Review and analyze various current proposals for health care reform, addressing such potential topics as Medicare and Medicaid reform, insurance reform, Medical Savings Accounts (MSAs), and reform of managed care.

**456(6456) Outcomes Research Applications in the Healthcare Sector (1)**

Explore empirical applications of outcomes research to medical Decision Making, familiarizing students with the basic ideas and tools of cost-effectiveness analysis in healthcare as it may be applied to medical interventions.

Focus is on the authoritative sources of outcomes data that administrative leaders can rely on for effective decision making. Topics covered may include provider ranking procedures, evaluation of provider treatment patterns, use of mortality and morbidity data in outcomes research, and the use of outcomes research in utilization management. A major goal of the course is to encourage thinking about how to incorporate the methods, ideas and results from cost-effective analysis into the management of contemporary health organizations. This is largely unexplored territory.

**460(6460) Information Technology Concepts and Elements (1)**

A broad view of aspects in health informatics, including its methodologies and applications. The concepts and elements covered include data models, data bases, data as a resource, process models, and information systems.

**462 Health Information Resource Management (1)**

Focus is on the techniques, methods, and philosophies associated with the introduction and maintenance of new information systems in healthcare organizations. We concentrate on the management of information resources such as database design, system make versus buy decisions, information systems right-sourcing, and information systems implementation, operation and management.

**464(6464) Decision Support for Healthcare Management (1)**

Successful applications of intelligent decision support systems (including executive information systems and organizational and medical support systems) and data mining in the healthcare environment are studied. Issues pertaining to the maintenance of data, construction of decision models, and provision of supporting technologies are explored.

**466(6466) Health Information Systems Evaluation (1)**

Develop skills needed to effectively identify and integrate technology, human components, and strategic needs of healthcare information systems. Of particular emphasis are the tools and methods for user information needs assessment, user information requirements, information use assessment, systems prototyping and evaluation.

**468(6468) Health Data Warehousing and Security (1)**

The benefits and difficulties inherent in designing data warehouses to collect, integrate, and store legacy information from several databases are described. Procedural issues related to data access and security are discussed, in light of emerging technologies such as smart cards, wireless Intranet and Internet communications, electronic data exchange among patients, healthcare providers, suppliers, insurers, and other entities.

**480(6480) Practitioner's Forum (1)**

Students will work in teams to analyze and present solutions to case studies which address problems or opportunities currently faced by healthcare organizations. Potential topics include work flow analysis, human resource management, healthcare accounting and finance, entrepreneurship, health services marketing, health law compliance and regulation.. This course may be repeated for credit.

**490(6490) Practicum in Healthcare Managerial Decision Making and Informatics (6)**

Capstone course is a concentrated, experiential opportunity to function as part of a supervised team on informatics and decision making projects within a regional healthcare organization. Special emphasis is given to the synthesis of previous course work, resulting in a cross-functional approach to problem-solving within the organization.

## Public Policy Administration

### Faculty

**George J. McCall**, Interim Director, Professor of Public Policy Administration and Sociology\*  
Ph.D., Harvard University

**E. Terrence Jones**, Professor of Public Policy Administration and Political Science\*  
Ph.D., Georgetown University

**Carol W. Kohfeld**, Professor Emeritus of Public Policy Administration and Political Science\*  
Ph.D., Washington 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

**Andrew D. Glassberg**, Associate Professor of Public Policy Administration and Political Science\*  
Ph.D., Yale University

**J. Germain Gros**, Associate Professor of Public Policy Administration and Political Science  
Ph.D., University of California-Berkeley

**Timothy D. McBride**, Associate Professor of Public Policy Administration, Gerontology, and Economics\*  
Ph.D., University of Wisconsin-Madison

**Lana Stein**, Professor\* of Political Science and Public Policy Administration  
Ph.D., Michigan State University

**Anne E. Winkler**, Associate Professor of Public Policy Administration and Economics\*  
Ph.D., University of Illinois

**Deborah B. Balsler**, Assistant Professor of Public Policy Administration and Business Administration  
Ph. D., Cornell University

**Brady Baybeck**, Assistant professor of Public Policy Administration and Political Science  
Ph.D., Washington University

**Nancy T. Kinney**, Assistant Professor of Political Science and Public Policy Administration  
ABD, University of Colorado at Denver  
Ph.D., University of Denver

**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

**John McClusky**, Director of Non-Profit Management and Leadership Program\*  
Ph.D., University of California-Berkeley

**Anne Zerr**, Director. Local Government Management and Leadership Program  
MBA, Lindenwood University

**Gerald J. Blasi**, Affiliate Assistant Professor of Public Policy Administration and Political Science  
Ph.D., SUNY, Binghamton University

\*Members of Graduate Faculty

### General Information

The Master's Program in Public Policy Administration (MPPA) is an interdisciplinary program designed to prepare students for managerial and policy analysis positions in the public and nonprofit sectors or in organizations having substantial interaction with the public and nonprofit sectors. The program is a unit of the Graduate School and is accredited by the National Association of Schools of Public Affairs and Administration. Core faculty are on joint appointments in public policy administration and disciplines such as economics, political science, sociology, or business administration. The program includes courses in policy analysis, public administration, management, budgeting, and economics in the basic curriculum. The University of Missouri-St. Louis' MPPA program differs from existing programs available in the Missouri-Illinois region in its interdisciplinary nature and emphasis on the development of analytic and administrative skills. It is designed to meet the needs of prospective full-time students, as well as those who wish to earn a degree in the evening while continuing to work.

In addition to the distinguished doctoral-level faculty in public policy administration, students have access to courses and faculty in business and other social sciences, in the Center for Metropolitan Studies, and in the Center for International Studies. The MPPA program serves as an editorial home of the *American Review of Public Administration*.

The full facilities of Campus Computing, and the Laboratory for Quantitative Analysis are available. UM-St. Louis is a member of the Inter-University Consortium for Political and Social Research.

### Admission Requirements

Applicants to the MPPA program must meet the general requirements for admission to Graduate School as explained in the Graduate Study section of this *Bulletin*. Students entering the MPPA program may be required to take up to 9 hours of prerequisites in mathematics.

### Degree Requirements

The program includes 40 hours, 28 in the core curriculum sequence and 12 in a special field chosen by students in consultation with their advisors.

### Prerequisites

Students must demonstrate competency in microcomputer-based applications, including spreadsheets, databases, and Internet use. 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, by successfully completing approved non-credit courses in spreadsheets

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and databases, or by completing PPA 480(6800), Management Information Systems.

**Core Curriculum**

All candidates for the MPPA degree must complete 28 hours in the core curriculum sequence composed of the following public policy administration courses:

**Administration**

440(6400), Proseminar in Public Policy Administration  
460(6600), Organizational Behavior and Administrative Processes

**Budgeting**

418(6180), Governmental Budgeting and Financial Control

**Economics**

408(6080), Microeconomics for Policy Analysis  
421(6210), Public Sector Microeconomics

**Policy Analysis**

410(6100), Introduction to Policy Analysis  
419(6190), Cases in Public Policy Analysis

**Statistics and Applications**

401(6010), Introduction to Policy Research  
475(6750), Introduction to Evaluation Research Methods

**Exit Project**

499(6990), Exit Project Research

A thesis is not required, but students must complete written analyses as part of their course work and/or internships. There is also a 1 credit hour exit project PPA 499(6990) examining a problem in public policy administration in the final semester. PPA 419(6190) is a capstone course and should be taken toward the end of the program.

Students may select one of five emphasis areas in which to concentrate their advanced studies: (1) managing human resources and organizations, (2) policy research and analysis, (3) local government management, (4) health policy, (5) nonprofit organization management, or they may select an individualized focus area in consultation with their advisors.

Prior to the completion of 15 hours in the MPPA program, students should identify a specialization. Specific requirements for each focus area are as follows:

**1) Managing Human Resources and Organizations**

**a. Required (3 hours)**

PPA 449(6490), Human Resources in the Public Sector

**b. Electives – 9 hours chosen from:**

MGMT 462(5611), Advanced Organizational Behavior and Administrative Processes

MGMT 463(5624), Organizational Training

Econ 480(6400), Labor Economics

PPA 468(6680), Negotiating Workplace Conflict  
Soc 424(5424), Conflict Management in Organizations  
Pol Sci 341(3470), Collective Bargaining  
PPA 495, Internship – 3 hours (in assignment relevant to specialization)

**2) Policy Research and Analysis**

**a. Required (6 hours)**

PPA 365(4650), Introduction to Econometrics or  
Pol Sci 402(6402), Intermediate Techniques in Policy Research

**AND one of the following:**

Pol Sci 411(6411), Seminar in Policy Analysis OR  
Soc 331(4331), Qualitative Methods in Social Research  
OR Pol Sci 403(6403), Advanced Techniques in Policy Research

**b. Electives – 6 hours** Chosen from (may include courses listed above but not counted towards specialization requirement)

Econ 317(3510), Public Finance

Econ 360(4550), Natural Resource Economics

Econ 480(6400), Labor Economics

Econ 490(6900), Advanced Topics in Economic Analysis

Pol Sci 404(6404), Multi-Method Research

Pol Sci 422(6422), Law, Courts, and Public Policy

Soc 432(5432), Survey Research Methods

PPA 495, Internship (in assignment relevant to the specialization)

Students cannot receive credit for both Econ 365(4100) and Pol Sci 402(6402) or for both Econ 366(4110) and Pol Sci 403(6403)

**3) Local Government Management**

**a. Required - 6 hours**

PPA 434(6340), Seminar in City Administration AND EITHER

Pol Sci 470(6470), Seminar in Urban Politics OR

Pol Sci 471(6471), Seminar in Urban Politics

**b. Electives – 6 hours** Choose from:

PPA 449(6490), Human Resources in the Public Sector

PPA 394(4940), Leadership and Management in Nonprofit Organizations

PPA 451(6510), Urban and Regional Planning and Public Policy

PPA 435, Issues in Urban Management

Econ 317(3510), Public Finance: State and Local

Econ 470(6700), Political Economy of Metropolitan Areas

Soc 426(5426), Community and Regional Conflict Intervention

Pol Sci 432(6432), Intergovernmental Relations

PPA 495, Internship (in assignment relevant to specialization)

NOTE: Students interested in careers in local government management are strongly encouraged to take PPA 449(6490), Human Resources in the Public Sector, as one of their electives.

## Public Policy Administration

## Graduate Degree Program

There currently exists a need for well-trained policy administrators and analysts. Frequent contact is maintained with public and nonprofit practitioners and public officials in the St. Louis metropolitan area, providing valuable input for program development, creation of a wide variety of internship possibilities, and assistance with a vigorous placement program for MPPA graduates. Interns may be placed in planning agencies, city managers' offices, administrative departments, or budgeting offices.

An internship is required for students without substantial experience in the public or nonprofit sectors. MPPA students employed in public agencies may receive up to 3 hours of credit for internships in those agencies. To do so, students must develop, in consultation with their advisors, special research projects outside the scope of their regular employment duties. Credit is granted after successful completion of the project and a written paper at the end of the semester.

## Graduate Certificate Program in Nonprofit Organization Management and Leadership

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

A. The graduate certificate in nonprofit management and leadership requires the completion of 18 credit hours. Nine of these are the following core courses:

1. Leadership and Management in Nonprofit Organizations (3 hours) (Political Science 394(4940) same as Public Policy Administration 394(4940), Sociology, or Social Work 308(4940))
2. Management Issues in Nonprofit Organizations: Staff Management Issues (1 hour) (Political Science, Public Policy Administration, and Social Work 391-A(4911))
3. Management Issues in Nonprofit Organizations: Legal Issues in Governing and Managing Nonprofit Organizations (1) (Political Science, Public Policy Administration, and Social Work 391-B(4912))
4. Management Issues in Nonprofit Organizations: Financial Issues (Political Science, Public Policy Administration, and Social Work 391-C(4913))
5. American Philanthropy and Nonprofit Resource Development (3 hours) (Pol Sci and Soc Wk 396(4960))

## 4) Health Policy

## a. Required 9 hours:

PPA 443(6430), Health Care Policy

PPA 446(6460), Selected Topics in Health Care Policy:

Econ 471(6750), Political Economy of Health Care OR

Econ 472(6760), Health Economics

b. Electives - 3 hours Chosen from (may include courses listed above but not counted toward specialization requirement):

PPA 446(6460), Selected Topics in Health Care Policy (with different substantive area from comparative health policy)

Soc 447(5447), Health Policy and the Elderly

Ger 376(4376), Mental Health and Aging

Ger 401(6401), Health and Wellness in the Elderly

Ger 441(6441), Aging and Health Behavior

PPA 495, Internship (in assignment relevant to the specialization)

## 5) Nonprofit Organization Management and Leadership

## a. Required 9 hours

PPA 391-A, B, C, (4911,4912,4913), Management Issues in Non-Profit Organizations: Staff Management Issues; Legal Issues; Financial Issues

PPA 394(4940), Leadership and Management in Non-Profit Organizations

PPA 396(4960), American Philanthropy and Non-Profit Resource Development

b) Electives - 3 hours chosen from:

PPA 449(6490), Human Resources in the Public Sector

PPA 455(6550), Strategic and Program Planning for Nonprofit Organizations

Soc 424(5424), Conflict Management in Organizations

Soc 426(5426), Community and Regional Conflict Intervention

Soc 430(5430), Policy Mediation Processes

Soc 444(5444), Social Policy and Community Planning

BA 343(3451), Accounting for Governmental and Nonprofit Entities

BA 405(5100), Managerial Communication

BA 412(5900), Public Policies Toward Business

BA 470, Contemporary Marketing Concepts

Psych 412(7412), Social Psychology

PPA 495, Internship (in assignment relevant to the specialization)

## Individualized Focus Area

Prior to the completion of 15 hours in the MPPA program, the student must present a proposal for 12 hours of specific coursework for approval by the MPPA faculty. The 12 hours must include PPA 495, Internship (in an assignment relevant to the focus area) unless the student has significant public or nonprofit sector experience.

## Internships

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**B.** Six hours of electives are to be taken from selected courses in accounting, business administration, economics, management, marketing, political science, psychology, public policy administration, and sociology. A student may choose among these courses or other courses approved by the program director. (All Graduate electives must be at the 400 course level.)

**C.** Three hours of internship are also required, or graduate students should demonstrate either a professional field experience equivalent to the internship or be required to participate. Any request for an exemption from the internship requirement must be approved by the nonprofit program director after a review of the student's professional or managerial field experience with appropriate documentation. Students who receive an exemption must take another 3 hours of electives from the selection in area B.

The internship will include learning activities in management and governance processes in nonprofit organizations, as well as a seminar in which students will critically reflect on their field experience with a faculty supervisor.

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

### **Career Outlook**

The current outlook for graduates of the interdisciplinary Master's Degree in Public Policy Administration Program is quite promising. Recent graduates of this program have found careers as budget analysts, personnel analysts, transportation planners, and human resources planners with local, regional, state, and federal agencies, and the nonprofit sector.



## Course Descriptions

### 365(4650) Introduction to Econometrics (3)

Prerequisites: Econ 51 (1001) and 52(1002); Econ 265(3100) or Math 132(1320); Math 80(1800) or 101 or consent of instructor. (Same as Econ 365(4100)). 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.

### 391A(4911) Management Issues in Nonprofit Organizations: Staff Management Issues (1)

Prerequisite: Junior Standing. (Same as Pol Sci 391A (4911) and Soc Wk 391A (4911)). This course addresses issues involved in managing staff in nonprofit organizations. The course will cover the following topics: fundamentals of staff supervision; balancing supervisory processes with counseling and coaching; selecting, hiring, evaluating, and terminating staff; legal issues that affect these processes.

### 391B(4912) Management Issues in Nonprofit Organizations: Legal Issues in Governing and Managing Nonprofit Organizations (1)

(Same as Pol Sci 391B(4812) and Soc Wk 391B(4912)). This course addresses legal issues involved in managing and governing nonprofit organizations. The course will cover the following topics: The Board as steward of the organization; Director and officer liability; tax laws concerning charitable giving; legal issues in managing staff and volunteers (e.g., hiring, evaluating, and terminating employees); Missouri nonprofit law.

### 391C(4913) Management Issues in Nonprofit Organizations: Financial Issues (1)

(Same as Pol Sci 391C(4913) and Soc Wk 391C(4913)). This course addresses financial issues involved in governing and managing nonprofit organizations. The course will cover the following topics: Cash flow analysis; budgeting; fund accounting; cost accounting (determining costs for programs and services); understanding and using standard financial statements, including balance sheets, cash flow statements, statements of activity, and operating and capital budgets.

### 394(4940) Leadership and Management in Nonprofit Organizations (3)

Prerequisite: Junior standing. (Same as Pol Sci 394(4940), Soc Wk 394(4840), and Soc 308(4940)). Addresses the role and scope of the independent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent sector,

the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include the dynamics, functions and membership structure of NPOs, especially staff-board and other volunteer relations; governance and management of NPOs; resource mobilization; and program development management and evaluation.

### 396(4960) American Philanthropy and Nonprofit Resources Development (3)

Prerequisite: Junior standing or consent of instructor. (Same as Pol Sci 396(4960) and Soc Wk 396(4960)). This course addresses the history, philosophy, roles and scope of philanthropy in the United States, including its role in the nonprofit, voluntary sector. It further examines the contemporary forces which impact philanthropy and charitable giving, both by institutions and individuals. The course examines the effective planning and management of development programs (e.g., annual giving), fund raising vehicles (e.g., mail solicitations) and the fund raising process, form planning through donor relations.

### 401(6010) Introduction to Policy Research (3)

(Same as Pol Sci 401(6401)). Procedures for testing explanations, including research design, principles of measurement, probability sampling, methods of data collection, and techniques for analyzing data.

### 408(6080) Microeconomics for Policy Analysis (3)

Prerequisites: Graduate student standing. (Same as Econ 408(5010)). This course introduces microeconomic analysis of consumers, firms, and government, with an emphasis on policy applications. It assumes no prior training in economics and is appropriate for graduate students in public policy administration, nonprofit management, political science, gerontology, criminology and criminal justice, and other related fields.

### 410(6100) Introduction to Policy Analysis (3)

(Same as Pol Sci 410(6410)). Systematic development of a critical/analytic base for dealing with public policy.

### 415(6150) Directed Reading and Research in Public Policy (1-10)

(Same as Pol Sci 415(6415)). Prerequisite: Consent of Instructor. Independent study through readings, reports, research projects, and conferences. May be repeated for credit, provided the subject matter is different.

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**417(6417) Income and Pension Policy for the Aged (3)**

Prerequisite: Graduate standing or consent of instructor.

(Same as Pol Sci 417(6417), Ger 417, and Soc Wk 417(6417). (MSW students normally take the social policy foundation course prior to enrolling in this course.)

Examination of federal, state, and local policies that affect the economic well being of the elderly. The development of social security programs and pension programs is explored within a historical context. Emphasis is placed on the analysis of current policy problems and proposed solutions.

**418(6180) Governmental Budgeting and Financial Control (3)**

Prerequisite: BA 440. (Same as BA 418(5450). 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(6190) Cases in Public Policy Analysis (3)**

(Same as Pol Sci 419(6419). 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(6210) Public Sector Microeconomics (3)**

Prerequisites: Econ 251(3001), or BA 410(5001), or PPA 408(6080). (Same as Econ 421(6500). Application of tools of intermediate microeconomics to address public sector issues. Special emphasis is placed on critically analyzing current public policy debates using the models developed. Topics covered include: cases in which competitive market fails to allocate resources efficiently (e.g., externalities and public goods), importance of property rights, incentive effects of the tax and transfer system, and the fundamentals of cost-benefit analysis.

**434(6340) 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.

**435 Issues in Urban Management (3)**

Designed to evaluate management issues that confront managers in local government from a political perspective. The format will include an intense review and discussion of original case studies from actual local government

situations. The specific focus of this course will vary. Course may be repeated

**440(6400) Proseminar in Public Administration (3)**

(Same as Pol Sci 440(6440). 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(6430) Health Care Policy (3)**

Prerequisites: Graduate standing and consent of instructor.

(Same as Pol Sci 443(6443), Ger 443, and Soc Wk 443(6443). (MSW students will normally take the social policy foundation course prior to enrolling in this course). Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

**444(6440) Seminar in Public Policy and Aging (3)**

Prerequisite: Consent of instructor. (Same as Ger 444 and Pol Sci 444(6444). 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(6460) Selected Topics in Health Care Policy (3)**

Prerequisite: Consent of instructor. (Same as Pol Sci 446(6446) and Soc 446(6446). The study of specialized issues and methods relating to health care policy. May be repeated for credit, provided the subject matter is different.

**449(6490) Human Resources in the Public Sector (3)**

Prerequisite: PPA 460(6600) or consent of instructor. (Same as Pol Sci 449(6449) and Soc Wk 469(6449). Presents an overview of personnel and labor relations in the public sector. Particular emphasis placed on issues which are unique to the public sector, such as the merit system, the questions of representative bureaucracy and the constraints of personnel in the nonprofit sector. The topics include personnel reforms in the federal sector, equal employment and affirmative action policies, testing, selection, hiring, comparable worth, job evaluation, and labor relations including grievance arbitration and collective bargaining.

## Public Policy Administration

## Graduate Degree Program

**451(6510) Urban and Regional Planning and Public Policy (3)**

Prerequisites: Graduate standing or consent of instructor. Focuses on the interdependent processes of urbanization and public policy. Students will acquire an understanding of urban planning and public policy in North America.

**455(6550) Strategic and Program Planning for Nonprofit Organizations (3)**

Prerequisites: Graduate standing or consent of instructor. (Same as Pol Sci 491(6490) and Soc Wk 455(6491). Strategic and program planning enable an organization to concentrate on efforts and set priorities guided by a mission, vision, and an understanding of its environment. Focus is on preparing a strategic plan and a program plan for a nonprofit organization and analyzing an organization's ability to deliver goods and/or services to its constituents in today's economic, social and political climate.

**460(6600) Organizational Behavior and Administrative Processes (3)**

(Same as MGMT 460(5600)). 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.

**468(6680) Negotiating Workplace Conflict (3)**

Prerequisites: PPA/MGMT 460(5600), and Graduate Standing. (Same as MGMT 419(5612) and Soc 468(5451). Examines conflict and cooperation between individuals, groups, and organizations over the control of work. A central theme is how this conflict is expressed, controlled, and resolved. Students will participate in exercises to learn the basics of two-party negotiations.

**475(6750) Introduction to Evaluation Research Methods (3)**

Prerequisites: At least one course in Research Design and Statistics at the graduate level. (Same as Psych 475(5475), Soc 475(5475), and CCJ 475(5475). 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(6800) Management Information Systems (3)**

Prerequisite: Econ 301(3150). (Same as MS/IS 480(6800)). An overview of management information systems is presented, including various information systems concepts and technologies. Students are introduced to a mainframe operating system, a microcomputer-based operating

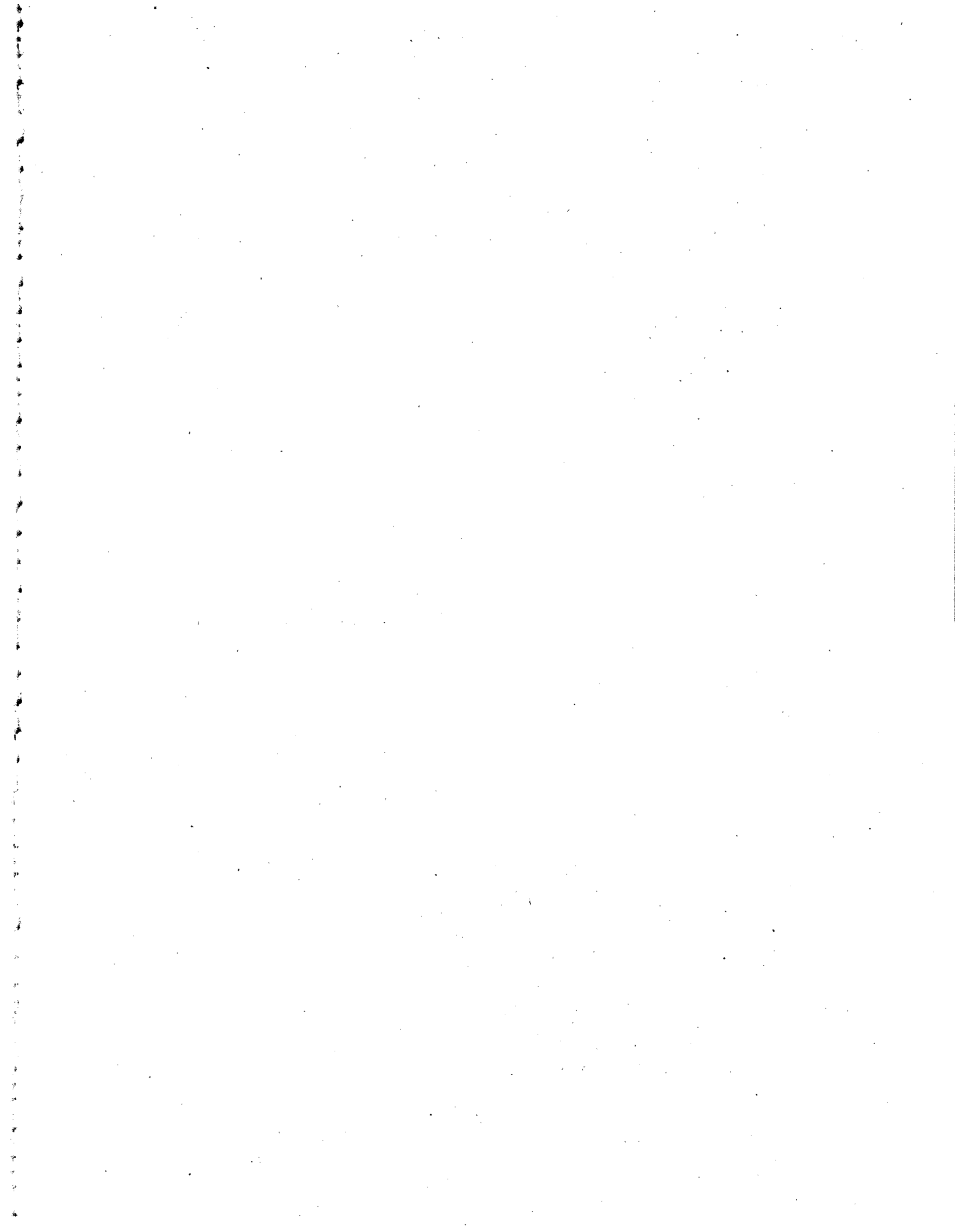
system, and a programming language. Students are also exposed to several common microcomputer-based software applications.

**495 Internship (3)**

Independent study involving work with an appropriate public, private, or nonprofit agency.

**499(6990) Exit Project Research (1)**

Prerequisites: Completion of or simultaneous enrollment in other degree requirement courses. The exit project is viewed as the capstone of the MPPA program. As such, it is meant to be undertaken toward the end of a student's program, usually during the final semester. Its purpose is to provide evidence to the faculty that the degree candidate has mastered the skills acquired in the various courses completed during residence at the University and can apply them to the analysis of a practical research problem.



# Pierre Laclede Honors College





## Pierre Laclède Honors College

The Pierre Laclède Honors College mission is to enrich significantly the educational experience of a select group of highly motivated and intelligent undergraduates. With this in mind, it enrolls promising students who give clear indication that they are ready to accept academic challenges and become creatively involved in the learning process.

Given this special mission, the college has a unique structure and identity. Unlike the university's other schools and colleges, it has no academic departments or areas of its own, and it grants no degrees. Instead, it brings together a cross section of the university's students and teachers in a special curriculum in which courses are designed to meet students' general education and other breadth of study requirements.

- A four-year program open to entering freshmen and extending over a student's entire undergraduate career;
- A two-year program open to a select group of third-year students who are either continuing at or have transferred to the university and are engaged in work on a major.

### The Honors College Writing Portfolio

Both programs include participation in the Honors College writing program, Writing through the Curriculum, which involves formal courses in composition (including *at least two* of Honors 10(1200), 210(3100), and 310(4100)) and informal consultations with the director of the writing program. In the final year, this culminates in the compilation of a personal Honors College writing portfolio.

### Undergraduate Research

All Honors College students must fulfill a 6-credit-hour independent study requirement (see below under Curriculum). Many students meet all or part of this requirement by undertaking a research project supervised by faculty in their major department. Additional financial support is available for supervised undergraduate research projects in all majors.

### Faculty

Honors College instructors are drawn from faculty in all academic divisions of the university but mainly from the "traditional disciplines" of the College of Arts and Sciences. What all these teachers share in common is a willingness to work closely with intellectually curious and academically high-achieving students. Faculty design courses directed toward such an audience and based on small discussion seminars. Thus the honors faculty is an organic body, growing each semester as new faculty join in the honors project. Their talents add to the Honors College's already rich instructional pool of more than 100 regular and full-time faculty, many of whose teaching and

scholarship have been singled out for special professional and university awards.

### Honors Scholars

Honors College scholars are our students, highly qualified and motivated individuals from a broad range of public and private secondary schools and colleges. They enter the college with diverse backgrounds and interests and remain part of it while simultaneously enrolling in classes and pursuing bachelor's degrees in other academic divisions of the university.

Most honors students major in the traditional liberal arts disciplines spanning the humanities, social sciences, mathematics, and natural sciences, but about a third focus on using their undergraduate education to prepare for careers in business, education, nursing, or engineering. Whatever their undergraduate majors, most Honors College students plan to go on to graduate study or professional schools, although a significant number successfully seek employment immediately after graduation. Honors faculty and staff provide advice and guidance in both course choice and career plans.

### Curriculum

Pierre Laclède Honors College offers both a four-year program (for students admitted as freshmen) and a two-year program (for transfer students from within the UM-St. Louis or from outside the university).

#### Four-Year Program (40 credit hours total):

Approximately one-third of the 120 hours honors students earn toward graduation are taken in the Honors College or under its auspices. Most of these credits are associated with a sequence of honors courses designed specifically for the college, the majority of which are taken during the first two years. During this period, these students fulfill virtually all of the university's general education requirements, usually in innovative ways. In their junior and senior years, honors scholars also earn honors credit for work done within their major fields, work which includes the possibility of internships, independent study projects, and advanced undergraduate research.

#### First Year (15 credit hours):

Scholars take Honors 10(1100), 20(1200), and 30(1300), and one course each from the Western Traditions and Non-Western Traditions seminar series. Students may take a seminar from the American Traditions series as an elective or in place of *either* a Western *or* a Non-Western Traditions seminar.

10(1100), Freshman Composition

20(1200), Cities and Good Lives: Knowledge, Decisions, and Consequences.

30(1300), Critical Analysis

111-5(1110), The Western Traditions Series

121-5(1210), The American Traditions Series (elective)

131-5(1310), The Non-Western Traditions Series

**Second Year (6 credit hours):**

Scholars take two of the following Honors classes:

- 201(2010), Inquiries in the Humanities
- 202(2020), Inquiries in the Fine and Performing Arts
- 203(2030), Inquiries in the Social and Behavioral Sciences
- 204(2040), Inquiries in Mathematics and Computing
- 205(2050), Inquiries in the Sciences
- 206(2060), Inquiries in Business
- 207(2070), Inquiries in Education
- 208(2080), Inquiries in Nursing

Honors students in the four-year program may also take **Honors 210(3100)** to meet their advanced composition graduation requirement.

During the first two years, honors scholars will take additional course work in other areas, such as mathematics, natural science, foreign language, and major prerequisite classes to satisfy various university, Honors College, and specific degree requirements.

**Third and Fourth Years (19 credit hours):**

Honors scholars in the four-year program *take at least four* seminars (12 credit hours) from the Advanced Seminar (301-308)(3010-3080) and/or Research Seminar (351-358)(3510-3580) series. They may take more, and many do where this is compatible with their major and/or minor requirements. In addition, honors students do 6 credit hours in independent study projects, normally in or closely related to their major field. These independent study projects normally carry credit in the major, but can be done as Honors College independent study or research projects (**Honors 390-399(4900-4990)**). During the final year, students also take **Honors 310(4100)**, a 1-credit capstone for the Honors College writing program.

**Two-Year Program (22 credit hours total):**

Scholars in this program will take a combination of Honors College courses and also earn honors independent study credit for work done in their major fields. The 22 credit hours must include 6 credits of independent study, as for the four-year program.

**Third Year (9 credits):**

During the first year of the two-year program, students take three honors seminars, including **210(3100)**, Advanced Composition: Writing the City; one course from the **Inquiries series (201(2010)-208(2080))**; one course from *either* the Advanced Seminar (301(3010)-308(3080)) *or* Research Seminar (351(3510)-358(3580)) series. In addition, 3 credit hours of independent study may be taken during this year, normally in or closely related to their major.

**Fourth Year (7 credits):**

The final year of the two-year program involves three courses chosen from the 200 and 300 level options, including **310(4100)**, the honors writing portfolio (1 credit hour) and at least one course chosen from the **301(3010)-**

**308(3080) or 351(3510)-358(3580) series.** In addition, students will complete their independent study requirements with 3 or 6 hours of project, internship, or research work.

**Other academic features and requirements.**

**Pass/Fail.**

The satisfactory/unsatisfactory option does not apply to any course work undertaken for Honors College credit.

**Admission and Retention.**

To be considered for admission to either the two-year or four-year honors program, a candidate must file a special Honors College application as well as a general university application. These application forms and additional information concerning scholarship and stipend awards, general eligibility guidelines, and the admissions process are available from the Honors College administrative office at (314)516-6870 or from the office of admissions.

**Scholarships and stipends.**

Every new freshman or transfer student admitted to the Honors College receives academic scholarship support. Scholars continue to receive these awards as long as they meet the criteria associated with their particular scholarship grant.

**Good academic standing.**

To remain in good standing, a student must maintain a cumulative GPA, in all his or her UM-St. Louis courses, of at least 3.2, and must continue to meet the requirements of the honors program for which he or she was initially admitted. Unless other arrangements have been made, Honors College students are also expected to be full time, that is, to register for and satisfactorily complete at least 12 credit hours per semester. Students wishing to enter the Honors College as part-time students, or to change to part-time status, must make prior arrangements with the Honors College dean.

**UM-St. Louis: an Urban Land Grant Institution**

Given its location in St. Louis, and because it is part of an urban land grant university, Pierre Laclède Honors College seeks to encourage awareness of the manifold benefits of pursuing an undergraduate education in a dynamic and varied urban community. This is accomplished partly through the Honors Curriculum (for instance, **Honors 20(1200)** and **210(3100)** are focused on "the city") through facilitating cultural and other outings in the city, and by encouraging students to include in their academic program courses, research projects, and/or internships which exploit the university's manifold connections with city people and its partnerships with leading city institutions such as the Missouri Botanical Gardens, the Missouri Historical Society, and the Mercantile Library of St. Louis. Many honors students fulfill all or part of their independent study requirements working through such partnerships.



**International Study and Other Exchange Programs**

Honors students are encouraged to consider a semester's or a year's study at another institution. This can be done through the University's Center for International Studies, which administers exchanges with more than 70 universities in Europe, Africa, Asia, Australia, and South and Central America. Students in the **Honors and International Business** program are normally required to spend at least a semester abroad as an exchange student or on an approved international business internship.

Or students may, through the **National Student Exchange**, which is administered for the university by the Honors College, attend any one of more than 100 universities in the United States and Canada.

## Course Descriptions

Please note that all honors courses are planned to fulfill UM-St. Louis graduation requirements, primarily in general education and the state requirement for American history and government. For further guidance on these requirements, please see the university general education matrix.

Selected Honors courses may also meet divisional area study requirements, for instance in international studies or cultural diversity. Please note also that several Honors courses in the 200- and 300- levels, can be used to fulfill major, minor, and certificate requirements, where that has been agreed by other divisions or departments of the university.

Honors course lists and descriptions, published each semester before the beginning of the registration period, identify clearly those seminars that fulfill these various requirements. When in doubt, students are urged to consult their Honors College advisor.

**Important note:** Unless otherwise indicated, all Honors seminars and courses require students to obtain the consent of the dean or associate dean of the Honors College at registration.

### 10(1100) Freshman Composition (3) [C]

Prerequisite: Consent of the dean of the Honors College. Theory and practice of writing expository prose. Emphasis on individual tutorial. Assignments will be linked with topics discussed in Honors 101.

### 20(1200) Cities and Good Lives: Knowledge, Decisions, and Consequences (3) [ML, SS]

Prerequisite: Consent of the dean of the Honors College. Introduces students to the city and to a wide range of academic disciplines relevant to acquiring knowledge about the city, to making decisions about the city, and to understanding the impact of those decisions on the lives of people who work, play, and live in the city. Involves students with city institutions, organizations, and people, and introduces several main disciplinary areas offered by the University of Missouri-St. Louis.

### 30(1300) Critical Analysis (3) [C, H]

Prerequisite: Consent of the dean of the Honors College. An introduction to the forms and techniques of rational discussion. The emphasis is on improving skills in identifying, analyzing, evaluating, and formulating arguments. Topics include deductive and non-deductive reasoning, causal analysis, analogical arguments, logical fallacies, vagueness and ambiguity, methods of definition, and argumentative writing.

### 111-115(1110-1150) Western Traditions (3)

Prerequisite: Consent of the dean of the Honors College. All Western Traditions seminars will be based on the reading and discussion of works of exceptional importance in the development of western culture and civilization. The works to be discussed in each seminar will follow a central theme (defined by its particular relevance to the traditional academic disciplinary areas of the humanities, arts, social sciences, mathematics, or sciences) but will relate that theme to wider developments in Western Traditions and to the American concept of a liberal education.

#### 111(1110) Western Traditions: Humanities [C, H].

#### 112(1120) Western Traditions: Arts

#### 113 (1130) Western Traditions: Social and Behavioral Sciences [C, SS]

#### 114(1140) Western Traditions: Mathematics

#### 115(1150) Western Traditions: the Sciences

### 121-125(1210-1250) American Traditions (3)

Prerequisite: Consent of the dean of the Honors College. Honors seminars in the American Traditions series involve readings and discussion of major importance in the development of the culture, politics, ideologies, and values which are or have been characteristic of the United States of America. Every American Traditions seminar will cover a broad range of time, and each may include contemporary issues. American Traditions 123(1230) (Social Sciences) satisfies the American history and government requirement, and any course in the American Traditions sequence may be taken to satisfy one of the core requirements for the American Studies minor.

#### 121(1210) American Traditions: Humanities (C, H)

#### 122(1220) American Traditions: The Arts

#### 123(1230) American Traditions: Social and Behavioral Sciences (V, SS)

#### 124(1240) American Traditions: Mathematics

#### 125(1250) American Traditions: The Sciences

### 131-135(1310-1350) Non-Western Traditions (3)

Prerequisite: Consent of the dean of the Honors College. Study of Non-Western societies, "traditional" or "modern," offers a reminder that, however defined, "the West" does not encompass the full range of human potentiality whether in terms of culture, values, behavior or ideas. Based on reading of significant primary texts and/or important secondary works, these seminars remind us of the realities of human diversity and provide perspectives on our own world. Non-Western Traditions seminars may be used to satisfy cultural diversity general education requirements.

- 131(1310) Non-Western Traditions: Humanities [MI, CD, H]**  
**132(1320) Non-Western Traditions: The Arts [CD]**  
**133(1330) Non-Western Traditions: Social and Behavioral Sciences [C, V, CD, SS]**  
**134(1340) Non-Western Traditions: Mathematics [CD]**  
**135(1350) Non-Western Traditions: The Sciences [CD]**

**201-208(2010-2080) Honors Inquiries (3)**

Prerequisite: Consent of the dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate, laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one or more disciplinary strategies. Inquiries courses may be used to meet relevant General education requirements. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

- 201(2010), Inquiries in the Humanities [C, H]**  
**202(2020) Inquiries in the Fine and Performing Arts [C, H]**  
**203(2030) Inquiries in the Social and Behavioral Sciences [SS]**  
**204(2040) Inquiries in Mathematics and Computing [MS]**  
**205(2050) Inquiries in the Natural Sciences [C, MS]**  
**206(2060) Inquiries in Business**  
**207 (2070) Inquiries in Education**  
**208 (2080) Inquiries in Nursing**

**210(3100) Honors Advanced Composition: Writing the City (3)**

Prerequisite: Consent of the Dean of the Honors College. Enhances critical thinking, research, discussion, and writing skills by focusing on the city of St. Louis and on the specific fields of study of those enrolled in the course. Issues such as depth and development of content, voice, style, tone, correct expression, and research techniques are among the topics emphasized. Students maintain a Commonplace Book of journals, drafts, and creative writings; they also submit a minimum of four formal papers. This course is required for transfer students (two-year Honors Program) and an elective for students on the four-year program. For students on either program, Honors 210(3100) meets the Advanced Composition requirement of the university.

**301(3010) Advanced Honors Seminar (3)**

Prerequisite: Consent of the dean of the Honors College. Open only to Honors College Students and not acceptable for graduate credit. Usually restricted to juniors and seniors, these advanced seminars focus on in-depth study of a significant body of subject matter. The perspective employed will normally be interdisciplinary or multi-

disciplinary and will underscore the value of making connections between diverse areas of study. These courses will not usually require specific prerequisites, but may (with the consent of the appropriate department or division) be taken as major or minor courses. The course number may be repeated for credit whenever the topic is substantially different.

**301(3010) Advanced Honors Seminar in the Humanities**

**302(3020) Advanced Honors Seminar in the Fine and Performing Arts**

**303(3030) Advanced Honors Seminar in the Social and Behavioral Sciences**

**304(3040) Advanced Honors Seminar in Mathematics and Computing**

**305(3050) Advanced Honors Seminar in the Sciences**

**306(3060) Advanced Honors Seminar in Business**

**307 (3070) Advanced Honors Seminar in Education**

**308 (3080) Advanced Honors Seminar in Nursing**

**310(4100) Independent Portfolio Writing (1)**

Prerequisites: Consent of the Dean of the Honors College and senior status. Open only to Honors College students and not acceptable for graduate credit. Students in this course will meet on a regular basis with the Director of Writing and other appropriate Honors faculty to revise and polish samples in the Honors writing portfolio which the student has compiled during his or her Honors College enrollment. With the assistance of the Director, the student will write an in-depth analysis of his or her writing and will select the best examples of writing in his or her Honors Portfolio. During this independent study, the student may request help with research skills, writing issues, or application procedures for post-graduate courses or employment. Required of all students admitted and enrolled after August 1998; optional for others.

**351-358(3510-3580) Research Seminar (3)**

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Modeled on and for some students affording a preview of the postgraduate or professional research seminar, Honors Research seminars bring students face to face with primary research, as appropriate in the library, the laboratory, and/or field work, utilizing appropriate disciplinary perspectives and secondary reading. These courses may be cross-listed with other advanced courses in appropriate departments/divisions of the university, and as such may carry specific course prerequisites and/or require the specific consent of the instructor.

**351(3510) Research Seminar in the Humanities**  
**352(3520) Research Seminar in the Fine and Performing Arts**  
**353( 3530) Research Seminar in the Social and Behavioral Sciences**  
**354(3540) Research Seminar in Mathematics and Computing**  
**355 Research Seminar in the Sciences**  
**356(3560) Research Seminar in Business**  
**357(3570) Research Seminar in Education**  
**358(3580) Research Seminar in Nursing**

**396(4960) Honors Independent Research in Business**  
**397(4970) Honors Independent Research in Education**  
**398(4980) Honors Independent Research in Nursing**  
**399(4990) Honors Independent Research in Engineering**

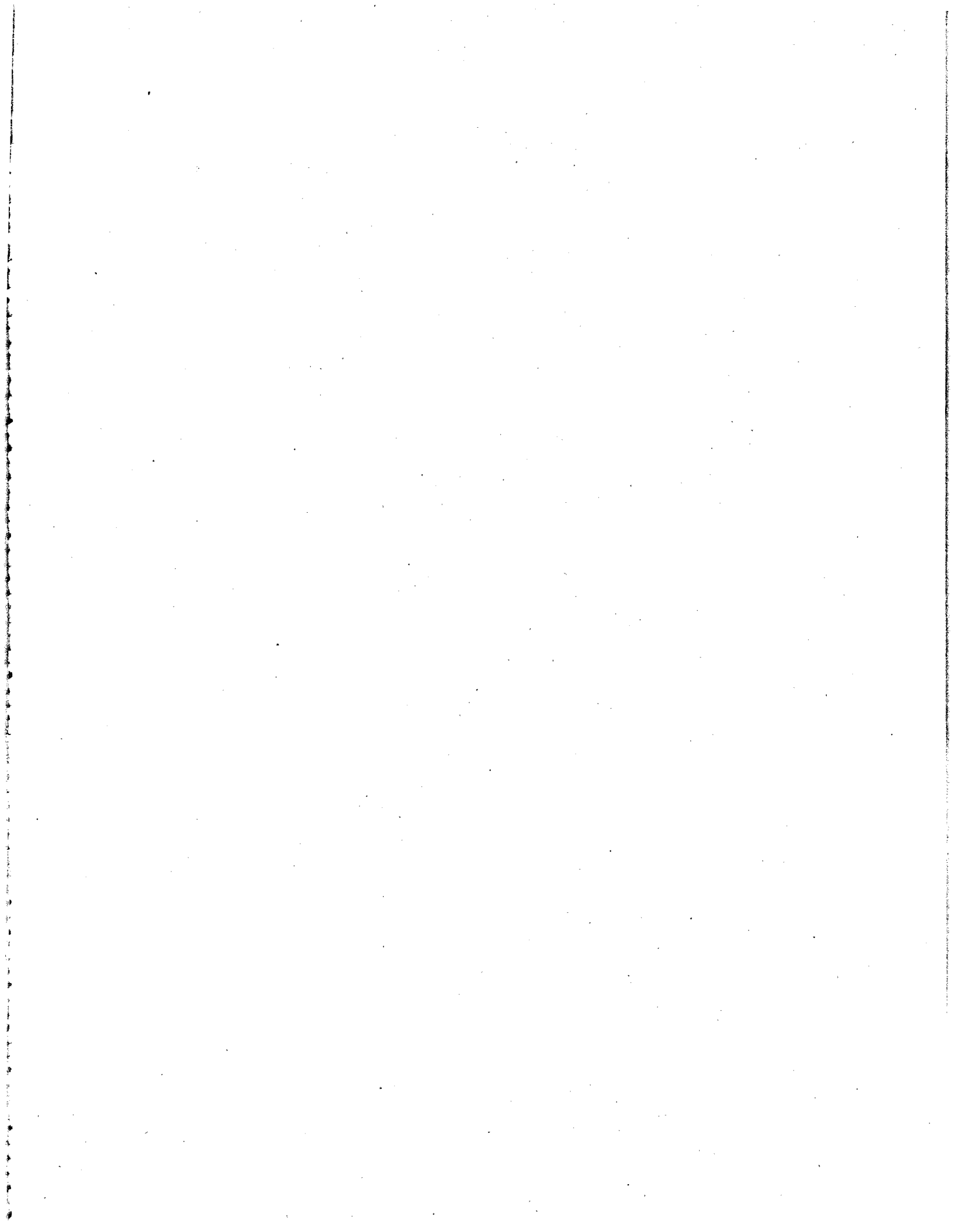
**390(4900) Independent Study in Honors (1-6)**  
 Prerequisites: Consent of the Dean of the Honors College.  
 Open only to Honors College students and not acceptable for graduate credit. Most Honors students will fulfill their Honors independent study requirements in another department or division of the university. Where this is not possible, and where academic credit seems an appropriate reward for the independent study in question, the project may be undertaken as Honors 390(4900), normally as a 3-credit course. This will involve substantial reading, research, and/or field work, and will be supervised by a permanent member of the Honors College academic staff. Completed proposal forms for this course must be submitted to the Honors College no later than the deadline for university registration.

**391-399(4910-4990) Honors Independent Research (3)**  
 Prerequisites: Consent of the Dean of the Honors College.  
 Open only to Honors College students and not acceptable for graduate credit. Honors students who wish to conduct individual research projects under the supervision of a member of the university's regular or full-time faculty may register for undergraduate credit and receive financial support on a cost-of-research basis. Such projects will usually be given appropriate course numbers in the student's major (or minor) department. Where this is not possible or otherwise inappropriate, students may register for credit in the Honors 39XX Independent Research series. In order to qualify for financial support and academic credit, completed proposal forms, together with a brief description of the research project, must be approved and signed by an appropriate member of the faculty and submitted to the Honors College not later than the semester deadline for university registration. May be repeated for credit where the research topic/problem is substantially different or where it can be significantly extended. Faculty approval must be obtained for repeat credit.

**391(4910) Honors Independent Research in the Humanities**  
**392(4920) Honors Independent Research in the Fine and Performing Arts**  
**393(4930) Honors Independent Research in the Social and Behavioral Sciences**  
**394(4940) Honors Independent Research in Mathematics and Computing**  
**395(4950) Honors Independent Research in the Sciences**

# Barnes College of Nursing and Health Studies





## **Barnes College Of Nursing And Health Studies**

### **Faculty**

**Connie K. Koch**, Clinical Associate Professor\*, Interim Dean  
Ed.D., Southern Illinois University-Edwardsville  
**Roberta K. Lee**, Hubert C. Moog Endowed Professor of Nursing\*  
Dr. PH, University of Texas-Houston  
**Jerry D. Durham**, Vice-Chancellor Academic Affairs, Professor\*  
Ph.D., Saint Louis University  
**Sally Hardin**, Professor\*, Ph.D. Program Director  
Ph.D., University of Illinois-Urbana  
**Shirley A. Martin**, Dean Emerita, Professor Emerita\*  
Ph.D., Saint Louis University  
**Jean Bachman**, Associate Professor\*  
D.S.N., University of Alabama  
**Anne Fish**, Associate Professor\*  
Ph.D., University of Michigan-Ann Arbor  
**Ruth L. Jenkins**, Associate Professor\*  
Ph.D., Saint Louis University  
**Nancy Magnuson**, Student Health Administrator and Clinical Professor  
DSN, University of Alabama at Birmingham  
**Judith Maserang**, Clinical Professor\*, Extended Learning Director  
Ph.D, Saint Louis University  
**Mary Jo Stralka**, Clinical Professor\*  
Ph.D., PNP Saint Louis University  
**Dotye Akerson**, Clinical Associate Professor  
Ph.D., Saint Louis University  
**Gretchen Drinkard**, Clinical Associate Professor  
MSN, FNP, University of Missouri-Columbia  
**Peggy A. Ellis**, Clinical Associate Professor\*, MSN Program Director  
Ph.D., ANP, FNP, Southern Illinois University-Carbondale  
**Gail Rea**, Clinical Associate Professor  
Ph.D., St. Louis University  
**Sandy Lindquist**, Clinical Associate Professor\*  
Ph.D., Saint Louis University  
**Teri Murray**, Clinical Associate Professor\*, BSN Program Director  
Ph.D., Saint Louis University  
**Donna Bridgman Musser**, Clinical Assistant Professor  
Ph.D., University of Missouri -St. Louis  
**Wilma Calvert**, Clinical Assistant Professor  
Ph.D., University of Missouri-St. Louis  
**Dawn Garzon**, Clinical Assistant Professor  
MSN, PNP, University of Florida  
Ph.D., University of Missouri-St. Louis  
**Deborah Kiel**, Clinical Assistant Professor  
MSN, Saint Louis University

**Cynthia Mitchell**, Clinical Associate Professor  
MSN, University of Missouri-Columbia  
**Susan M. Kendig**, Clinical Assistant Professor,  
MSN, WNP, University of Missouri-Kansas City  
**Melodie Rowbotham**, Clinical Assistant Professor  
MSN, University of Missouri-St. Louis  
**Linda Sherman**, Clinical Assistant Professor  
MSN, Southern Illinois University-Edwardsville  
**Jean Nelson**, Clinical Assistant Professor  
Ph.D., University of Missouri-St. Louis  
**Lee Ann Blue**, Adjunct Associate Professor  
MS, RN  
**Carol W. Trotter**, Adjunct Assistant Professor\*\*  
RNC, Ph.D., NNP  
**Lyn Vargo**, Adjunct Assistant Professor\*\*  
RNC, MSN, NNP  
\* Members of Graduate Faculty  
\*\*Affiliated Adjunct Faculty

### **General Information**

Barnes College of Nursing & Health Studies offers nursing studies at the undergraduate and graduate levels. Knowledge and skills needed to complete the professional licensure examination to become a registered nurse are available through a basic baccalaureate option. Nurses who have obtained their basic nursing education through associate degree or diploma nursing programs may complete the B.S.N. completion option without repetition of previous nursing education. The master of science in nursing program is offered in cooperation with the School of Nursing at University of Missouri-Kansas City. The Ph.D. in Nursing is offered in cooperation with the Schools of Nursing at University of Missouri- Columbia and Kansas City. Admission to the Ph.D. is available at the post B.S.N. and M.S.N. levels.

### **Undergraduate Studies**

The Barnes College of Nursing provides course work leading to the Bachelor of Science in nursing. The program is accredited by the Commission on Collegiate Nursing Education and the Missouri Board of Nursing. The undergraduate program offers two means for achieving the bachelor's degree in nursing: studies that are preparatory for completion of the professional nurse licensure examination (pre-licensure track) and advanced placement for the professional registered nurse without repetition of fundamental nursing courses (RN/BSN track). An accelerated prelicensure option is available for qualified persons who hold earned degrees in nonnursing fields, for outstanding students who have completed all prescribed general education and science course work, and for highly motivated, qualified high school graduates. Baccalaureate students meeting admission criteria may participate in the Pierre Laclède Honors College.

**Admission Policies****Basic Baccalaureate****First-time freshman or students with fewer than 24 college credits:**

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Cumulative high school grade point average of 2.5 (4.0 scale).
- High school rank in upper third of graduating class.
- GED score, if applicable.
- ACT composite score of 21 or higher.
- Basic computer literacy prior to beginning nursing courses required in nursing major.
- Cumulative grade point average of 2.5 (on 4.0 scale) required prior to beginning nursing courses required in nursing major.
- Completion of a minimum of 45 semester hours of general education course work applicable to BSN degree NS010, NS 103(2103) (or equivalent), and NS 105(2105) (or equivalent) prior to beginning nursing courses required in nursing major.

**Students with 24 or more college credit hours:**

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Minimum cumulative grade point average of 2.5 (4.0 scale) on 24 transferable credits from an accredited college or university..
- Cumulative grade point average of 2.5 (on 4.0 scale) required prior to beginning nursing courses required in nursing major.

**Degree/Transfer Pathway to accelerated option**

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Baccalaureate or higher degree from regionally accredited college or university. Applicants not holding a baccalaureate degree must have completed 62 semester hours of general education academic credit before beginning the program, including prescribed course work, as evidenced by official transcript.
- Minimum grade point average of 3.0 on 4.0 scale for students with baccalaureate or higher degree or 3.2 on a 4.0 scale for students not holding a baccalaureate degree.
- Completion of all prerequisite general education and science courses for major in nursing with grade of C or higher.
- Two letters of recommendation that address applicant's ability to be a self-directed learner.

**Post High School Pathway to the accelerated option**

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- ACT score of 24 or higher
- Minimum high school grade point average of 3.2 on 4.0 scale.
- Two (2) letters of recommendation that address applicant's ability to be a self-directed learner
- Minimum cumulative grade point average of 3.2 on 4.0 scale on general education coursework prior to beginning nursing courses
- Completion of all prerequisite general education and science courses for the nursing major with grade of C or better.
- Completion of at least 45 semester hours of designated general education credits at UM-St. Louis, including credit earned through advanced standing.
- Basic computer literacy prior to beginning nursing courses required in nursing major.

**Honors pathway**

- Meet all requirements for admission to the traditional four-year option.
- Apply to the Pierre Laclède Honors College.

**Admission to Nursing Clinicals requirements**

- Basic computer literacy prior to beginning nursing courses required in nursing major.
- Completion of a minimum of 45 semester hours of general education course work applicable to BSN degree and NS010, NS 103 (2103)(or equivalent) prior to beginning nursing courses required in nursing major.

**RN/BSN**

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Graduate of either an accredited diploma or associate degree program in nursing.
- Evidence of current licensure as a registered nurse with eligibility for licensure in Missouri.
- Cumulative grade point average of 2.5 (4.0 scale) on all previous college-level course work. (excluding nursing coursework)
- Minimum of 30 academic hours of college credit applicable to a degree.
- \*Cumulative GPA of 3.0 required of individuals seeking accelerated access to MSN option.

Students are required to furnish their own transportation to and from campus and clinical agencies. Students must have automobile access for all community experiences through the program. For specific information regarding the B.S.N. degree program, contact Nursing Student



Services and Records office at (314) 516-6066 or 1-888-NURSEUM or <http://www.umsl.edu/divisions/nursing>.

#### Credit by Transfer and Examination

Credit may be granted for selected general studies. See Admission and Application Procedure section in this *Bulletin* for credit information.

#### Degree Requirements

The bachelor of science in nursing degree requires comprehensive course work in general education and nursing. Basic undergraduate nursing course work includes theory, on-campus laboratory and clinical activities. Clinical experiences require weekday, evening, and/or weekend commitments. Full-time study in the prelicensure baccalaureate track can be completed in four academic years. The prelicensure accelerated track requires full-time study and can be completed in 15 months. RN/BSN course work is offered via interactive telecommunication at various sites throughout eastern Missouri, on-campus, and by Internet. Clinical activities are community-based and may be completed in the student's home community.

#### Satisfactory/Unsatisfactory

Undergraduate nursing majors may not take required related area general education or nursing courses on a satisfactory/unsatisfactory basis.

#### Support Course Requirements

Nursing majors must complete all general education requirements of the university as outlined in this *Bulletin* (see Undergraduate Studies, General Education Requirements).

In addition to meeting the university's general education requirements, the following specific courses must be completed prior to initiation of the nursing major. See a curriculum planning guide for specific courses and proper sequencing.

##### 1) Natural science course work

Biology 113(1131), Human Physiology and Anatomy I  
Biology 114(1141), Human Physiology and Anatomy II  
Biology 116(1162), General Microbiology  
Chem 5(1052), Chemistry for Health Professions (or equivalent)

##### 2) Behavioral science course work

Psych 3(1003), General Psychology  
Psych 268(1268), Human Growth and Behavior  
Econ 40(1000), Introduction to American Economy (or equivalent)

##### 3) Humanities

Phil 156(2256), Bioethics (or equivalent)

##### 4) Nursing

Nursing 010, Orientation to Nursing  
Nursing 103(2103), Nutrition and Health (or equivalent)

Nursing 105(2105), Communication in the Nursing Profession (or equivalent)  
Nursing 373(3799), Quantitative Analysis in the Health Sciences (or equivalent)

#### Nursing Course Work Requirements

##### Prelicensure

101(3101), Nursing and Health\*  
106(3106), Assessment of Clients in Health and Illness\*  
110(3110), Pathophysiological Bases of Nursing Practice  
111(3111), Pharmacotherapeutics in Nursing Practice  
205(3205), Adult Health Nursing I\*  
206(3206), Adult Health Nursing II\*  
207(3807), Nursing Research  
214(3214), Psychiatric Mental Health Nursing\*  
215(3215), Nursing of Women and Childbearing Families\*  
216(3216), Child and Family Health Nursing\*  
217(3817), Information Systems Utilized in Health Care  
300(4300), Community Health Nursing\*  
304(3804), Ethical and Legal Dimensions of Nursing Practice  
308(3808), Management and Leadership in Nursing  
310(4310), Senior Synthesis\*

##### RN/BSN

200(3900), Dimensions of Professional Nursing  
207(3807), Nursing Research (or equivalent)  
217(3817), Information Systems Utilized in Health Care\*  
220(3920), Health Assessment\*  
301(4901), Family and Community Nursing\*  
305(4905), Values in Professional Nursing  
308(3808), Management and Leadership in Nursing  
311(4911), Synthesis in Nursing Practice\*

\* Includes a laboratory and/or clinical component

#### Bachelor of Health Sciences with Emphasis in Clinical Laboratory Science or Cytotechnology

The bachelor of health science degree (B.H.S.) is designed to prepare students for two career areas: clinical laboratory science (CLS) and cytotechnology (CT). The B.H.S. combines course work taken at UM-St. Louis with clinical experiences at Barnes Jewish Hospital and throughout the BJC Systems of member hospitals and clinics.

The clinical laboratory science program prepares students to perform analytical tests on body fluids, cells and products. The students will learn to identify possible discrepancies in data, confirm abnormal results, and develop solutions to problems concerning the generation of laboratory data.

The cytotechnology program prepares students to be knowledgeable about all of the normal cells from numerous body sites, as well as those changes encountered due to neoplasia, infectious agents, viruses, and other causative agents. Graduates will be able to perform cytologic evaluations of body fluids, cells, and fine-needle aspirations.

Courses in clinical laboratory science and cytotechnology are offered for students who are pursuing a career in one of these fields. Students develop a program of studies through the bachelor of health sciences degree.

The following courses are offered in this area through the Barnes College of Nursing and Health Studies. These courses are not acceptable for graduate credit:

**Clinical Laboratory Science:**

Courses (specific course or distribution area and credits):

**Humanities (9)**

**State requirement (3):**

BIO 011(1811) Intro Biology I (5)  
 BIO 113(1131), Anatomy & Physiology I (4)  
 BIO 114(1141), Anatomy & Physiology II (4)  
 BIO 116(1162), General Microbiology (3)  
 BIO 118, General Microbiology Lab (2)  
 BIO 317(4842), Immunobiology (3)  
 BUS 103(1800), Comp and Info Systems (3)  
 BUS 210(3600), Mgt & Org Behavior (3)  
 CHEM 11(1111), Intro to Chemistry I (5)  
 CHEM 12(1121), Intro to Chemistry II (5)  
 CHEM 122(2223), Quantitative Analysis (3)  
 CHEM 261(2612), Organic Chemistry I (3)  
 CHEM 262(2622), Organic Chemistry II (3)  
 COM 30(1030) or 40(1040), Interpersonal Com or Public Speaking (3)  
 EN 010(1100), English Comp (3)  
 Math 35(1035), Trigonometry (2)  
 NS 110(3110), Patho Bases of Nrsng Practice (3)  
 PSY 003(1003), General Psychology  
 PSY 268(1268), Growth & Development  
 SOC 10(1010), Intro to Sociology

**Clinical Requirements:**

BIO 303a(4810), Issues and Trends in Role Development (3)  
 BIO 303b(4010), Clinical Bacteriology (3)  
 BIO 303c(4110), Bacteriology Practicum (4)  
 BIO 303d(4250), Parasitology and Mycology (2)  
 BIO 303e(4410), Clinical Immunology (2)  
 BIO 303f(4450), Immunology Practicum (1)  
 BIO 303g(4510), Immunohematology (3)  
 BIO 303h(4550), Immunohematology Practicum (3)  
 BIO 303i(4601), Hematology (4)  
 BIO 303j(4661), Hematology Practicum (3)  
 BIO 303k(4701), Clinical Chemistry (3)  
 BIO 303l(4750), Chemistry Practicum (4)  
 BIO 393(3807), Research Methods Health Sciences (3)

**Cytotechnology:**

Courses (specific courses of distribution area and credits):

**Humanities (9):**

**State requirement (3)**

BIO 011(1811), Intro Biology I (5)  
 BIO 113(1131), Anatomy & Physiology I (4)  
 BIO 114(1141), Anatomy & Physiology II (4)  
 BIO 116(1162), General Microbiology (4)  
 BIO 118, General Microbiology Lab (4)  
 BIO 234(3631), Histology and Microtech (5)  
 BIO 317(4842), Immunobiology (3)  
 BUS 103(1800), (or CIS 101(1010) Intro to Computers (3)  
 BUS 210(3600), Mgt & Org Behavior (3)  
 CHEM 11(1111), Intro to Chemistry I (5)  
 CHEM 12(1121), Intro to Chemistry II (5)  
 CHEM 261(2612), Organic Chemistry I (3)  
 COM 30 (1030) or 40(1040), Interpersonal or Public Speaking (3)  
 EN 010(1100), English Comp (3)  
 EN 213(3130), Technical Writing (3) OR EN 216(3160) Writing in the Sciences (3)  
 MATH 30(1030), College Algebra (3)  
 MATH 35(1035), Trigonometry (2)  
 NS 110(3110), Pathophysiological Bases of Nursing Practice (3)  
 PSY 003(1003), General Psychology  
 PSY 268(1268), Growth and Development  
 SOC 10(1010), Intro to Sociology (3)

**Clinical requirements:**

HS 302a(4000), Intro to Cytology (3)  
 HS 302b(4100), Female Genital Tract I (4)  
 HS 302c(4200), Female Genital Tract II (3)  
 HS 302d(4300), Processing Lab (2)  
 HS 302e(4400), Respiratory and Order (3)  
 HS 302f(4600), Body Fluid Cytology (3)  
 HS 302g(4700), Gastro Genitourinary Cytology (3)  
 HS 302h(4800), Fine Needle Aspiration (4)  
 HS 302i(4900), Adv Practices in Cytology (12)  
 HS 302j(3520), Leadership and Mgmt Cytology (3)  
 HS 393(3807), Research Methods Health Science (3)

The B.H.S. curricula were developed in collaboration with the Jewish Hospital College of Nursing and Allied Health. Following are course descriptions for the cytotechnology/clinical requirements.

Request for additional information concerning the B.H.S. degree and academic advising can be obtained through the Barnes College of Nursing and Health Sciences.

## Graduate Studies

### Cooperative Graduate Programs in Nursing

#### Master of Science in Nursing

The College of Nursing at St. Louis, in cooperation with the School of Nursing at University of Missouri-Kansas City, offers graduate nursing studies in three areas of clinical specialization:

- Health care of the adult.
- Health care of children.
- Health care of women.

This graduate program offers students three ways of completing the master of science in nursing degree: completion of a minimum of 36 credit hours with emphasis in the role of the nurse educator; completion of a minimum of 36 credit hours with emphasis in the role of the nurse leader of health systems; and completion of a minimum of 43 credit hours with emphasis in the role of advanced practice nurse (clinical nurse specialist or nurse practitioner). Those selecting the practitioner functional role option will be eligible to complete national certifying examinations. Opportunities are also available for completion of post M.S.N. requirements leading to eligibility for practitioner certification. Graduates completing the clinical specialization or practitioner functional options are eligible for endorsement as advanced practice nurses in Missouri.

#### Admission Requirements

##### Nurse Educator:

- B.S.N. from an accredited nursing program or B.S.N. program comparable to UM-St. Louis College of Nursing and Health Studies B.S.N. degree.
  - Minimum cumulative grade point average of 3.0 (4.0 scale).
  - Current professional licensure with eligibility for licensure in Missouri.
  - Successful completion of an undergraduate descriptive and inferential statistics course
6. Successful completion of an undergraduate health assessment course or equivalent
  7. Computer literacy.
  8. Basic cardiac life support certification

##### Nursing Leadership of Health Systems

- B.S.N. from an accredited nursing program or B.S.N. program comparable to UM-St. Louis College of Nursing and Health Studies B.S.N. Program
- Minimum cumulative grade point average of 3.0 (4.0 scale)
- Current professional licensure with eligibility for licensure in Missouri
- Successful completion of an undergraduate descriptive and inferential statistics course

- Computer literacy
- Successful completion of an undergraduate health assessment course or equivalent.
- Basic cardiac life support certification

##### Advanced Practice Nurse (Clinical Nurse Specialist or Nurse Practitioner)

- B.S.N. from accredited nursing program or B.S.N. program comparable to UM-St. Louis College of Nursing and Health Studies B.S.N. Program
- Minimum cumulative grade point average of 3.0 (4.0 scale)
- Current professional licensure with eligibility for licensure in Missouri
- Basic cardiac life support certification
- Successful completion of an undergraduate descriptive and inferential statistics course
- Successful completion of an undergraduate health assessment course
- Computer literacy

##### The Nurse Practitioner option also requires:

- Two letters of reference
- Narrative outlining goals.
- Two years of clinical experience with chosen population

Availability of clinical resources may limit the number of applicants accepted to the practitioner option.

#### Degree Requirements

##### Nurse Educator

405(6105), Values in Health Care Decision Making  
406(6106), Policy, Organization, and Financing of Health Care  
408(6108), Health and Society  
409NE(6309), Role of the Nurse Educator  
410(6140), Health Promotion Across the Life Span  
411(6111), Theoretical Foundations of Nursing Practice  
412(6112), Quantitative Methods of Nursing Research  
414(6114), Research Utilization in Nursing  
420(6320), Nursing Program and Curriculum Development  
421(6321), Instructional Strategies in Nursing Education  
452(6952), Synthesis Practicum  
EDUC 410(6410), The Adult Learner  
ED REM 420(6707), Classroom Measurement and Evaluation OR  
ED REM 421(6709), Educational and Psychological Measurement

##### Nursing Leadership of Health Systems

405(6105), Values in Health Care Decision Making  
406(6106), Policy, Organization and Financing of Health Care  
408(6108), Health and Society  
409NL(6409), Role of the Nurse Leader  
410(6140), Health Promotion Across the Life Span

411(6111), Theoretical Foundations of Nursing Practice  
 412(6112), Quantitative Methods of Nursing Research  
 414(6114), Research Utilization in Nursing  
 425(6425), Managed Care Services  
 426(6426), Health Resources Management  
 428(6428), Theory and Practice in Nursing Leadership  
 452(6952), Synthesis Practicum  
 Elective from Nursing, Business, or Managerial Decision  
 Making and Informatics

**Advanced Practice Nurse (Clinical Nurse Specialist or  
Nurse Practitioner)**

405(6105), Values in Health Care Decision Making  
 406(6106), Policy, Organization and Financing of Health  
 Care  
 408(6108), Health and Society  
 409NS/NP(6509), Role of the Clinical Nurse Specialist/  
 Nurse Practitioner  
 410(6140), Health Promotion Across the Life Span  
 411(6111), Theoretical Foundations of Nursing Practice  
 412(6112), Quantitative Methods of Nursing Research  
 414(6114), Research Utilization in Nursing  
 418(6518), Pathophysiology for Advanced Nursing  
 Practice  
 424(6524), Health Assessment for Advanced Nursing  
 Practice  
 427(6520), Pharmacology for Advanced Nursing Practice  
 439(6730), Adult Primary Care I: Diagnosis &  
 Management in Advanced Nursing Practice OR  
 441(6741), Family Health I: Diagnosis & Management in  
 Advanced Nursing Practice OR  
 443(6743), Child Health I: Diagnosis & Management in  
 Advanced Nursing Practice OR  
 446(6746), Women's Health I: Diagnosis & Management  
 in Advanced Nursing Practice OR  
 440(6740), Adult Primary Care II: Diagnosis &  
 Management in Advanced Nursing Practice OR  
 442(6742), Family Health II: Diagnosis & Management in  
 Advanced Nursing Practice OR  
 444(6744), Child Health II: Diagnosis & Management in  
 Advanced Nursing Practice OR  
 447(6747), Women's Health II: Diagnosis & Management  
 in Advanced Nursing Practice  
 454A(6954), Advanced Practice Nursing: Internship I  
 454B(6955), Advanced Practice Nursing: Internship II

**Doctor of Philosophy in Nursing**

The Ph.D. in nursing program at the University of  
 Missouri-St. Louis affords students with academic,  
 clinical, and research resources of the University of  
 Missouri system through a cooperative arrangement with  
 the Schools of Nursing in Kansas City and Columbia.

Students receive a strong foundation in scientific inquiry  
 with a focus on a clinically relevant area for scholarship  
 and research, hands-on research skills, strategies to  
 promote nursing scholarship, and knowledge of the  
 discipline of nursing. The program provides knowledge in

theories, research methods, and empirical findings related  
 to nursing science and advanced nursing practice.

**Admission Requirements**

Applicants must meet the following:

- Graduate of CCNE Baccalaureate program or  
 equivalent with 3.2 minimum GPA (4.0 scale)
- Graduate of CCNE Master's program or  
 equivalent with 3.5 minimum GPA (4.0 scale).
- GRE (composite score of 1500 or better desired).
- Three letters of reference.
- Original essay (37 pages) addressing doctoral  
 study and research interests related to Health  
 Promotion and Protection, Health Restoration and  
 Support, and/or Health Care Systems.
- Interview by invitation contingent on ranking  
 related to above criteria.

**Degree Requirements**

While each program of study is individualized, B.S.N  
 graduates complete a minimum of 72 hours of graduate-  
 level course work that include a minimum of 12 hours for  
 the dissertation. M.S.N. graduate course work which  
 supports the chosen substantive area is individually  
 evaluated to determine eligibility for transfer. The  
 following defines the overall structure of the program:

**Modes of Inquiry**

**Research and Inquiry**, 8-16 hours external to the College  
 of Nursing, such as advanced statistics, research design,  
 computer applications, or philosophical foundations of  
 science.

**Nursing Research and Inquiry**, 8-16 hours within the  
 College of Nursing, such as advanced quantitative nursing  
 research design, advanced qualitative nursing research  
 design, health survey methods, issues in research design,  
 doctoral seminar.

**Dissertation**, 12 hours.

**Nursing Content Areas**

**Nursing Theory Analysis and Development**, 8-16 hours  
 within the College of Nursing which advances the chosen  
 substantive area, such as conceptual structures, nursing  
 practice models, theory development, theoretical  
 foundations, doctoral seminar.

**Nursing Applied Sciences**, 8-16 hours within selected  
 substantive area.

**Collateral Support Courses**, 12 hours external to the  
 College of Nursing which support selected substantive  
 area.

### **Professional Organizations**

#### **Sigma Theta Tau**

The college is an official chapter--Nu Chi--of Sigma Theta Tau International Honor Society. Membership is offered by invitation to those students graduating the upper third of their class and to those recognized as outstanding community nursing leaders.

#### **Student Nurses' Association**

The College of Nursing is a constituent of the national Student Nurses' Association. The purpose of this organization is to provide a means for nursing students in the basic baccalaureate program the opportunity to connect with the nursing profession prior to licensure.

#### **Black Student Nurses' Association**

The College is a constituent of the Black Student Nurses' Association. The purpose of this organization is to provide black nursing students in the prelicensure baccalaureate track the opportunity to serve as a support group for African-American students, collaborate with other African-American groups to compile archives relevant to African-American nurses, and to promote participation in interdisciplinary activities.

#### **Continuing Education-Extension**

Continuing Education offerings in the field of nursing are currently presented to provide nurses with new information, techniques, and trends within the nursing profession.

## Course Descriptions

All previous level nursing courses must be successfully satisfied prior to progressing to the next level nursing courses.

### 10(0100) Orientation to Professional Nursing (0)

Prerequisites: Admission to four-year baccalaureate program. Mandatory six-week introduction to the nursing program provides a comprehensive orientation to the program. Students are introduced to the academic and clinical expectations of the curriculum. Concerns critical for academic success (i.e., time management, effective study skills, stress management and dealing with test anxiety) are addressed.

### 100(2100) Introduction to the Nursing Discipline (3)

This course introduces the historical and theoretical development of nursing as a discipline. Nursing is examined as an emerging practice profession. Variables that influence nursing and health care are discussed. Concepts and skills introduced in this course guide the student's educational experience within the nursing major.

### 101(3101) Nursing and Health (6)

Prerequisites: Biology 114(1141), Biology 116(1162), Chemistry 5(1052), Nursing 10; pre- or co- requisites: Nursing 106(3106), Nursing 110(3110), Nursing 111(3111). An introduction to the discipline of nursing, the historical and theoretical development of nursing is explored with an emphasis on critical thinking, the teaching/learning process, and foundational practice concepts. Through modular laboratory experiences, the student acquires psychomotor skills to provide safe and effective nursing care to clients promoting health and wellness. Includes classroom, laboratory and clinical experiences.

### 103 (2103) Nutrition and Health (3)

This course examines the nutritional needs throughout the life span with emphasis on nutritional principles related to health promotion and protection. Content includes assimilation, digestion and absorption of nutrients and cultural and economic influences on dietary practices.

### 105(2105) Communication in the Nursing Profession (3)

Prerequisite: None. This course focuses on the development of communication abilities utilized in professional nursing. The individual's relationship with self, others, and groups is discussed. Students learn verbal and non-verbal communication skills, self-awareness, and sensitivity to others. Interpersonal skills are introduced to enable the student to develop effective human caring relationships with a diverse population of clients and colleagues.

### 106(3106) Assessment of Clients in Health and Illness (3)

Prerequisite: Biology 114(1141) Biology 116(1162), Chemistry 5(1052), Psychology 268(1268), Nursing 10(0100). This course integrates theoretical knowledge and interpersonal skills in the assessment of clients, focusing on differentiating normal from abnormal findings. It emphasizes the use of problem solving, critical thinking and cultural competency in identifying multidimensional health variations across the life span. The course includes classroom and laboratory experiences.

### 110(3110) Pathophysiological Bases of Nursing Practice (3)

Prerequisite: Biology 114(1141), Biology 116(1162), Chemistry 5(1052) (or equivalent), Nursing 10(0100). This course focuses on the nature of disease, its causes, and the bodily changes that accompany it. Includes a study of general principles of disease, specific diseases of individual organs and systems and the clinical implications.

### 111(3111) Pharmacotherapeutics in Nursing Practice (3)

Prerequisite: Biology 114(1141), Biology 116(1162), Chemistry 5(1052), Nursing 10(0100); pre/co requisite: Nursing 110(3110). This course introduces key terminology, legal foundations, general principles and clinical applications of pharmacology.

### 200(3900) Dimensions of Professional Nursing Practice (3)

Prerequisites: Admission to the College of Nursing as RN. Investigates the roles and responsibilities of the professional nurse within a rapidly changing health care delivery system. Key issues are explored with emphasis on health promotion and health. Graduates of diploma nursing programs will be awarded college credit for successful validation of basic nursing knowledge as part of this course.

### 205(3205) Adult Health Nursing I (5)

Prerequisite: All 100 level nursing courses, Psych 268(1268) This course focuses on the nursing care of the adult experiencing selected pathophysiological processes affecting body regulatory mechanisms. These mechanisms are related to immune responses, problems of oxygenation, ventilation, transport and perfusion; kidney function; regulatory mechanisms and digestion, absorption and elimination. Emphasis is placed on health restoration, maintenance and support as well as the continued development of the nurse-client relationship, critical thinking processes, and research-based nursing practice. This course includes classroom and clinical activities in a variety of settings.

**206(3206) Adult Health Nursing II (5)**

Prerequisite: All 100 level nursing courses, Psych 268(1268). This course focuses on the nursing care of the adult experiencing selected pathophysiological processes affecting body regulatory mechanisms. These mechanisms are related to endocrine, sensory-perceptual, gynecological, and genitourinary functions. Emphasis is placed on health restoration, maintenance and support as well as the continued development of the nurse-client relationship, critical thinking processes, and research-based nursing practice. This course includes classroom and clinical activities in a variety of settings.

**207(3807) Nursing Research (3)**

Prerequisite: Nursing 373(3799) (or equivalent). This course introduces the values and characteristics of quantitative and qualitative research within an ethical perspective. Students examine the research process through analysis and critique of nursing research.

**214(3214) Psychiatric Mental Health Nursing (4)**

Prerequisite: All 100-level nursing courses; Psychology 268(1268). This course focuses on health and illness across the lifespan of clients who have acute and chronic emotional and psychosocial difficulties and psychiatric illnesses. The course emphasizes development of students' decisional capabilities, self-awareness and professional behaviors as they utilize theory and research from nursing, psychology and related disciplines for the provision of nursing care to individuals, families and groups. Clinical experiences in community and acute care settings are designed for students to engage in individual and group strategies that promote and maintain mental health. Course includes classroom and clinical activities in a variety of settings.

**215(3215) Nursing of Women and Childbearing Families (4)**

Prerequisite: All 100 level nursing courses, Psychology 268(1268). This course focuses on the childbearing family and women's reproductive health, including family dynamics and growth and development. Health promotion, protection, maintenance and restoration are covered in experiences that include hospital and community settings. Health care policy and systems as relevant to these populations are included. Course includes classroom and clinical activities in a variety of settings.

**216(3216) Child and Family Health Nursing (4)**

Prerequisite: all 100 level nursing courses, Psychology 268(1268). This course focuses on pediatric health and illness with emphasis on family dynamics, growth and development and communication with children and their families. Health promotion, protection, restoration, maintenance and support concepts are covered in experiences that include hospital and community settings. Health care policy and systems are studied as relevant to this population. Course includes classroom and clinical activities in a variety of settings.

**217(3817) Information Systems Utilized in Health Care (3)**

Prerequisite: None. This laboratory course establishes competency in health information systems. The course incorporates the impact of information systems on health care delivery.

**220(3920) Health Assessment (3)**

Prerequisites: Nursing 200(3900) and Nursing 217(3817) (may be taken concurrently) or consent of instructor. This laboratory course focuses on the knowledge, communication abilities, and technical skills necessary for comprehensive assessment of individuals of all ages.

**300(4300) Community Health Nursing (4)**

Prerequisites: All 200-level nursing courses. This course provides a conceptual foundation for nursing that recognizes the community as client in society. The course examines socioeconomic, environmental, epidemiological, and legislative influences, ethical/legal issues, and the impact of health beliefs and practices on health promotion and protection in communities and society. The student applies various theories and concepts when encountering families, groups and communities with diverse value systems and cultural backgrounds. Course includes classroom and clinical activities in a variety of settings.

**301(4901) Family and Community Nursing (5)**

Prerequisites: Nursing 200(3900), 217(3817) and 220(3920). This practicum course introduces the concepts, principles, skills, and professional nursing roles essential to practice community-based professional nursing with families and groups.

**304(3804) Ethical and Legal Dimensions of Nursing Practice (3)**

Prerequisites: Philosophy 156(2256) or equivalent. This course explores the ethical and legal dimensions of nursing practice. The relationship between ethical and legal issues is examined within nursing situations. The student participates in dialogue addressing ethical-legal issues in professional nursing practice to explore personal value, increase sensitivity to others and to develop ethical reasoning abilities.

**305(4905) Values in Professional Nursing (3)**

Prerequisites: All 200 level RN/BSN nursing courses or consent of instructor. Explores values and beliefs as they shape professional nursing practice and influence clinical decision making and interventions in the evolving health care system. Attention is given to the impact of sociocultural factors and health/illness beliefs and practices of the diverse populations served by the professional nurse. Students examine their own understanding of the moral nature of professional nursing within the context of a diverse society.



**308(3808) Management and Leadership in Nursing (3)**  
Prerequisites: All 200-level nursing courses; Economics 40(1000) or equivalent. This course prepares the nurse to coordinate and manage client care in diverse health care settings. Emphasis is placed on leadership and management theory and related skills, collaboration, delegation, coordination, and evaluation of multi-disciplinary work and the application of outcome-based nursing practice.

**310(4310) Senior Synthesis (5)**

Prerequisites: all 200-level nursing courses, Nursing 300(4300) and 308(3808) may be taken concurrently. This course integrates theory and practice from previous nursing and general education courses with the goal of preparing the student for entry into professional nursing practice. Within a seminar context, students explore a variety of clinical and professional nursing topics. The course includes research-based strategies utilized for health promotion and protection, health restoration, maintenance and support. Areas of study are selected from across the lifespan, including diverse populations in a variety of health care systems. Course includes classroom and clinical experiences in a variety of settings. Not for graduate credit.

**311(4911) Synthesis in Nursing Practice (5)**

Prerequisites: Nursing 301(4901). This practicum course focuses on community-based application and synthesis of professional nursing roles and responsibilities with selected populations determined to be at risk for a variety of health related problems. The course includes assessment of cognitive and affective growth achieve while in the BSN Completion Program.

**320(4720) Perioperative Nursing (2)**

Prerequisite: Consent of instructor. Provides experiences in preoperative, intraoperative, and postoperative settings. Includes a clinical component.

**322(4722) 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.

**325(4725) Education and the Psychology of Human Sexuality(3)**

(Same as Ed Psy 325(3525)). 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.

**338(4338) Sociology of Health (3)**

(Same as Sociology 338(4338)). Prerequisites: Sociology 10(1010) 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.

**341(4741) 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.

**342(4742) Critical Care Nursing of the Adult (3)**

Prerequisite: RN or completion of N 205(3205) and 206(3206) or equivalent. Focuses on health restoration, health maintenance, and health support of individuals with dysfunctions or trauma to major organ systems. Emphasis is on understanding pathophysiology and psychosocial processes related to nursing and collaborative interventions, and the development of a functional framework for data organization and analysis.

**352(4752) Primary Care Nursing (3)**

Prerequisites: Completion of all junior level courses; Corequisite: Nursing 311(4911). This course introduces the role of the advanced practice nurse as a principal provider of primary health care to families across the life span. Major issues relate to health care provided in a variety of community settings are addressed.

**365(4765) 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(4770) Topics in Nursing (1-3)**

Prerequisite: Consent of instructor. Explores special topics in the areas of clinical practice, nursing education, nursing administration, and professional development. No more than six hours may be taken under this option.

**373(3799) Quantitative Analysis in the Health Sciences (3)**

Prerequisite: Math 30(1030) or equivalent. This course focuses on concepts and applications of statistics in the health sciences. Topics include descriptive and inferential statistics, probability distributions of random variables, sampling and estimation. The course uses examples and content from health sciences to provide the basic concept structure for quantitative analysis.



**399(3873) Guided Study in Nursing (1-3)**

Prerequisite: Consent of instructor. This course is an in-depth independent study of selected topics in nursing under the guidance of a specific instructor. No more than six hours may be taken under this option.

**401(5000) Health and Wellness in the Elderly (3)**

Prerequisite: Graduate standing and consent of instructor. (Same as Gerontology 401(6401)). Factors contributing to longevity and health in old age, including genetic predisposition, lifestyle, culture, and environment are related to aspects of maintaining health and promoting wellness. Through a holistic approach, explores aspects of nutrition, exercise and activity, prevention of hazards to health, maintaining self-responsibility, managing stress, and meeting continued developmental, emotional and spiritual needs. Considers cross-disciplinary interventions to promote health and wellness in the elderly. Introduces the "Putting Prevention into Practice" model adapted to health promotion in the elderly.

**405(6105) Values in Health Care Decision Making (2)**

Prerequisite: Admission to MSN program. This course explores values and beliefs as they shape professional nursing practice and influence clinical decision making. The course includes analysis of health care systems and how the values underpinning these systems influence nursing interventions and nursing care delivery.

**406(6106) Policy, Organization and Financing in Health Care (2)**

Prerequisite: Admission to MSN program or consent of instructor. This course presents an overview of health care policy, organization and financing and how they impact professional nursing practice. Attention is given to the relationship between current health care trends and improving nursing health care delivery and client care outcomes.

**408(6108) Health and Society (2)**

Prerequisite: Admission to the MSN program. This course addresses issues relevant to developing an understanding of the wide diversity of cultural influences on human behavior, including ethnic, racial, gender, and age differences. Emphasis is on recognizing and appropriately addressing comprehensive health care needs and implications for nursing interventions.

**409NE(6309) Role of the Nurse Educator (3)**

Prerequisite: Admission to the MSN program or consent of instructor. Examines roles and responsibilities of the nurse educator in a variety of settings.

**409NL(6409) Role of the Nurse Leader (3)**

Prerequisite: Admission to the MSN program or consent of instructor. Examines roles and responsibilities of the nurse leader in a complex health care system.

**409NS/NP(6509) Role of the Clinical Nurse Specialist/Nurse Practitioner (2)**

Prerequisite: Admission to the MSN program. In this course, the student explores professional role issues affecting advanced practice nurses (APNs). The course facilitates the role development of nurses who desire to function as primary care providers (nurse practitioners) or as specialists within a particular clinical area (clinical nurse specialists). Core concepts include: communication, collaboration, advocacy, negotiation, standards of practice, and subroles of advanced nursing practice.

**410(6140) Health Promotion Across the Life Span (3)**

Pre or corequisite: Nursing 411(6111). This course is designed to provide students with a conceptual basis of health promotion and health protection for clients across the life span. Clients are conceptualized as individuals, families and populations. An application of various developmental theories for the child, adult, older adult, and family will provide the basis to individualize health care needs for various age and family groups. Core concepts include theories of health, health promotion and protection, epidemiology, disease and injury prevention, health education, growth and development, nutrition, and family systems theory.

**411(6111) Theoretical Foundations in Nursing (3)**

Prerequisite: Admission to the MSN program. This course analyzes major concepts and theories relevant to nursing. Ethical issues and dilemmas inherent in advanced nursing practice are also addressed.

**412(6112) Quantitative Methods in Nursing Research (3)**

Prerequisites: Nursing 373(3799) or equivalent; Nursing 411(6111) (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.

**414(6114) Research Utilization in Nursing (3)**

Prerequisites: N 412(6112). This course prepares nurses to implement a research utilization model to validate practice. The theoretical basis for research utilization and practical instances of its application in nursing is examined. Opportunities are provided to develop a research utilization plan to address a clinical area of practice.

**417(5100) Nursing Case Analyses in Acute and Critical Care of the Elderly (3)**

Prerequisite: N451(5110), 440(6748), 442(6742). From clinical practice with elderly, case analyses of acutely and critically ill elderly are developed and discussed in seminar. This is a clinical course.

**418(6518) Pathophysiology for Advanced Nursing Practice (3)**

This course focuses on implications for advanced nursing practice through examination of selected pathophysiological phenomena which occur frequently in the diverse populations to whom advanced nurses provide care.

**418P(6519) Advanced Pediatric Pathophysiology (3)**

This course focuses on embryology of the major organ systems, as well as specific physiologic and pathophysiologic processes relevant to the child from birth through age 18. Implications for advanced nursing practice which result from alterations of normal physiologic functioning in cellular, tissue, and organ systems are examined. Emphasis is placed on the relationship between pathophysiology, decision making, and standards of advanced nursing practice.

**420(6320) Nursing Program and Curriculum Development (3)**

Prerequisite: Nursing 409NE(6309). Identifies and analyzes factors that determine content and organization of curricula in nursing programs and health care agencies. Addresses principles and processes for initiating and revising curricula. Examines systematic evaluation of curriculum at all levels.

**421(6321) Instructional Strategies in Nursing Education (3)**

Prerequisite: Nursing 420(6320) or consent-of instructor. Focuses on analysis and development of teaching and learning strategies and skills in nursing education. Considers relationship of content and learning style to instructional methods utilized. Attention given to integration of technology in instructional design and delivery. Techniques for evaluating learner and teacher also explored.

**424(6524) Health Assessment for Advanced Nursing Practice (3)**

Prerequisite: N418(6518)(may be taken concurrently). Designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals across the lifespan. This course builds on basic health assessment knowledge and skills, emphasizing advanced assessment skills, laboratory work interpretation, validation, documentation and analysis of assessment findings.

**425(6425) Managed Care Services (3)**

Prerequisite: Admission to MSN or consent of instructor. Provides analysis of health care environment in managed care and its impact on nurse's role.

**426(6426) Health Resources Management (3)**

Prerequisite: Nursing 409 NL(6409). Focuses on roles and responsibilities of nurse leader for fiscal and human resource management in both public and private sectors. Includes analysis of environment, health care organization within the system, and impact of resource management on nursing and health care.

**427(6520) Pharmacology for Advanced Nursing Practice (3)**

Prerequisite: Nursing 418(6518) or equivalent or consent of instructor. This course centers on clinical pharmacotherapeutics used for primary health care management. Emphasis is placed on the clinical use of drugs in the management of specific illnesses

**427N(6528) Pharmacology for the Neonate (3)**

Prerequisites: 418N or consent of the instructor. Pharmacological agents used in the management of neonates are discussed. Pharmacologic principles are reviewed and applied to the use of drugs in the level II or III NICU. The clinical use of drugs in the management of specific illnesses of the neonate are explored. In addition, legal considerations for the Advanced Practice Nurse are stressed.

**428(6428) Theory and Practice in Nursing Leadership (3)**

Prerequisite: Nursing 409NL(6409). Focuses on theories and practices of advanced nursing leadership and management within complex health care organizations.

**439(6739) Adult Primary Care I: Diagnosis & Management in Advanced Nursing Practice (5)**

Prerequisites: N 405(6105), 406(6106), 408(6108), 410(6140), 411(6111), 412(6112), 418(6518), 424(6524), 427(6520); N409NS/NP(6509) & N 414(6114) may be taken concurrently. Clinical course designed to provide a theoretical and practical base for advanced practice nursing students to diagnose and manage health problems of adults. Emphasis is placed on clinical assessment and decision-making in the provision of direct patient care within a defined scope of practice. The student is expected to clinically apply the concepts and theories discussed in class in the advanced nursing care of adults who are experiencing problems related to the upper and lower respiratory system, cardiovascular system, gastrointestinal system, skin and infectious diseases. Clinical experiences are designed to enhance assessment and technical skills needed in diagnosing common health problems.

**440(6740) Adult Primary Care II: Diagnosis & Management in Advanced Nursing Practice (5)**

Prerequisites: N 439(6739). Clinical course designed to provide a theoretical and practical base for advanced practice nursing students to diagnose and manage health problems of adults. Emphasis is placed on clinical assessment and decision-making in the provision of direct patient care within a defined scope of practice. The student is expected to clinically apply the concepts and theories discussed in class in the advanced nursing care of adults who are experiencing problems related to the musculoskeletal, neurological, endocrine/metabolic, genitourinary, reproductive systems, the eye, and mental health. Clinical experiences are designed to enhance assessment and technical skills needed in diagnosing common health problems.

**441(6741) Family Health I: Diagnosis & Management in Advanced Nursing Practice (5)**

Prerequisites: N406(6106), 408(6108), 410(6140), 411(6111), 412(6112), 418(6518), 424(6524), 427(6520), 409 NS/NP & N414(6114) may be taken concurrently. Clinical course designed to provide students with the opportunity to gain the concepts and skills essential to advanced practice nursing care of families experiencing acute and chronic health problems, with particular focus on women's and children's health issues. Emphasis is given to those health needs most commonly encountered by the Family Nurse Practitioner. A research- and theory-based approach to nursing interventions is used. Core concepts include family adaptation to acute and chronic conditions, health promotion, clinical decision-making and ethical decision-making.

**442(6742) Family Health II: Diagnosis and Management in Advanced Nursing Practice (5)**

Prerequisites: N441(6741). Clinical course designed to provide students with the opportunity to gain the concepts and skills essential to advanced practice nursing care of families experiencing acute and chronic health problems, with particular focus on adult clients. Emphasis is given to those health problems most commonly encountered by the Family Nurse Practitioner. A research- and theory-based approach to nursing interventions is used. Core concepts include family adaptation to acute and chronic conditions, health promotion, clinical decision-making, and ethical decision-making.

**443(6743) Child Health I: Diagnosis & Management in Advanced Nursing Practice (5)**

Prerequisites: N405(6105), 406(6106), 408(6108), 410(6140), 411(6111), 412(6112), 418(6518), 424(6524), 427(6520), N409 NS/SP & N414 (6114) may be taken concurrently. Clinical course designed to provide students the opportunity to apply skills from advanced physical assessment, pathophysiology, pharmacology, and theory to advanced nursing care of the child and family. Emphasis is placed on child and family developmental issues for advanced practice pediatric nurses. Normal cognitive,

motor, social/emotional and language development and usual developmental challenges of each age group are addressed. Implications of the developmental stage of the child and family, level of developmental skill and developmental problems for the maintenance of health and management of illness by the advanced practice nurse are discussed. Core content includes information related to APN management of cultural and ethnic variations of growth and development problems; health maintenance; common pediatric behavioral problems; and recognition of circumstances that require interdisciplinary collaboration and referral. Clinical practice opportunities are arranged in collaboration with the instructor and planned in a variety of pediatric settings.

**444(6744) Child Health II: Diagnosis & Management in Advanced Nursing Practice (5)**

Prerequisite: N443(6743). Clinical course designed to provide students the opportunity to apply skills from advanced physical assessment, pathophysiology, pharmacology, and theory to advanced nursing care of the child and family. Emphasis is placed on using models and theories that guide advanced practice care for clients with common pediatric problems. Implications of the developmental stage of the child and family, level of developmental skills and developmental problems for the maintenance of health and management of illness by the APN nurse are discussed. The SOAP format is used and includes pertinent history, physical examination, laboratory findings and differential diagnosis relevant to the individual client. Focus is on development of a plan of care that encompasses the various treatment modalities used in managing common pediatric health problems including specific pharmaceutical and symptomatic treatment. Clinical practice opportunities are arranged in collaboration with the instructor and planned in a variety of pediatric settings.

**446(6746) Women's Health I: Diagnosis & Management in Advanced Nursing Practice (5)**

Prerequisites: N405(6105), 406(6106), 408(6108), 410(6140), 411(6111), 412(6112), 418(6518), 424(6524), 427(6520), N409NS/SP & N414(6114) may be taken concurrently. Clinical course designed to provide students the opportunity to apply knowledge and skills from advanced physical assessment, pathophysiology, pharmacology, and theory to advanced nursing care of women and families throughout the childbearing continuum. Emphasis is placed on using models and theories that guide advanced nursing practice and research-based care. Focus is on educating the advanced practice nurse to collaborate with women and their families to promote health and prevent disease. Within this context, the focus is on assessing, diagnosing, and planning care for women and families experiencing an uncomplicated childbearing continuum, as well as acute and/or chronic health care problems during preconception, pregnancy and the postpartum period, within a health promotion framework. The format includes pertinent history, physical examination, laboratory findings and differential diagnoses relevant to the individual client. Core concepts include adaptation of women through developmental stages, health risk assessment, health promotion, disease prevention, health education, primary care of women throughout the childbearing continuum, reproductive options, ethical decision-making, and grief and loss.

**447(6747) Women's Health II: Diagnosis & Management in Advanced Nursing Practice (5)**

Prerequisite: N446(6746). Clinical course designed to provide students the opportunity to apply knowledge and skills to advanced practice nursing care of women and families throughout the lifespan. Emphasis is placed on using models and theories that guide advanced nursing practice and research-based care. Focus is on educating the advanced practice nurse to collaborate with women and their families to promote health and prevent disease. Within this context, the focus is on assessing, diagnosing, and planning care for women, as well as women experiencing common health problems within a health promotion framework. The format includes pertinent history, physical examination, laboratory findings and differential diagnoses relevant to the individual client. Core concepts include adaptation of women through developmental stages, health risk assessment, health promotion, disease prevention, health education, primary care of well women, ethical decision-making, and grief and loss. Focus is on the development of a plan of care that encompasses the various treatment modalities used in managing common women's health problems including specific pharmacological and non-pharmacological therapies.

**451(5110) Nursing Assessment of the Elderly (3)**

Prerequisite: N424(6524). Practice in adaptations of the traditional health history and physical examination of adults is addressed in this course focusing on the elderly.

This is a clinical course, requiring a geriatric physician or advanced practice nurse preceptor.

**452(6952) Synthesis Practicum (3)**

Prerequisites: All required courses in Nurse Educator or Nursing Leadership of Health Systems option or consent of instructor. Serves as opportunity to operationalize role of nurse educator or nurse leader in selected academic and/or clinical settings. Includes frequent clinical seminars.

**454A(6954) Advanced Practice Nursing: Internship I (2)**

Prerequisite: All required courses in the Advanced Practice Nurse option or consent of instructor. Provides opportunity to initiate the Advanced Practice Nurse role with selected populations. Students participate in precepted experiences with clinical nurse specialists, certified nurse practitioners, and/or primary care physicians for a minimum of 225 hours. Frequent clinical seminars included.

**454B(6955) Advanced Practice Nursing: Internship II (2)**

Prerequisite: 454A(6954). Continuation of precepted clinical experiences with selected populations initiated in Nurse 454A(6954). Students satisfy a minimum of 225 precepted hours with clinical nurse specialists, certified nurse practitioners, and/or primary care physicians and participate in frequent clinical seminars.

**454C(6956) Advanced Practice Nursing: Internship III (2)**

Prerequisite: All required courses in the Advanced Practice Nurse neonatal option or consent of instructor; may be taken concurrently with Nursing 454A(6954) and Nursing 454B(6955). Serves as culminating precepted experience for students enrolled in the neonatal nurse practitioner option. Students work within Level III neonatal unit with certified neonatal nurse practitioners and/or neonatologists for a minimum of 150 clinical hours. Must be taken final semester of study.

**457(6115) Qualitative Methods in Nursing Research (3)**

Prerequisites: Nursing 411(6111) and 412(6112) 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.

**462(5100) Nursing Case Analyses in Long-term Care of the Elderly (3)**

Prerequisite: N451(5110), 440(6740) or 442(6742). From clinical practice with the elderly, nursing case analyses in long-term care of commonly living/frail elderly and nursing care of elderly in residential long-term care are developed. This is a clinical course, requiring an approved preceptor.

**470(6870) Special Topics in Advanced Practice Nursing (1-3)** Prerequisite: Consent of Instructor. Explore special topics for the advanced practice nurse in the areas of research, theory, education and administration. No more than three hours shall be applied toward the degree. This course is for graduate MSN or Ph.D. levels.

**473(6220) Measurement of Nursing Phenomenon (3)** The theoretical basis of measurement is presented in a foundation for the development and evaluation of measurement instruments and procedure for use in nursing research. Content is presented regarding measurement theories, techniques of construction, statistical analysis of reliability and validity and strengths and limitations of selected measures of nursing research.

**475(6875) Special Study in Graduate Nursing (1-3)** Prerequisites: Admission to the MSN program and/or consent of the instructor. In-depth study of selected topics in nursing under the guidance of a specific instructor. No more than three hours may be applied to the master's program of study.

**477(6877) Thesis/Directed Research Seminar (1)** Prerequisites: Nursing 412(6112) and permission of thesis/directed research chair. Presentation and discussion of selected research problems in nursing.

**478(6878) Directed Research (1-6)** Prerequisites: Nursing 412(6112) 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(6879) Research Thesis (1-6)** Prerequisites: Nursing 412(6112) 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(6980) Guided Nursing Research Seminar (3-6)** Prerequisites: Advanced graduate status and/or consent of instructor. Provides opportunity to work in collaboration with senior faculty and peers on a focused research topic relevant to nursing. May be repeated twice on unduplicated topics.

**481(7481) Nursing Theory Analysis and Development (3)** Prerequisites: Admission to Ph.D. in Nursing Program and N411(6111) 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(7485) Nursing Research I: Quantitative Methods in Nursing Research (3)**

Prerequisites: Admission to the Ph.D. in Nursing program. Focuses on quantitative research methods appropriate for nursing. Students examine research questions related to nursing phenomena and methods to address these questions. This course is designed to provide in-depth analysis of research design including such areas as measures, designs and interpretation. There is an emphasis on outcomes research related to relevant clinical nursing problems.

**487(7487) Integrative Review of Nursing Literature (3)** Prerequisites: Admission to Ph.D. in Nursing program and consent of instructor. Focuses on critical analysis of theoretical and conceptual models that are commonly used as a basis for nursing research projects. Students examine the frameworks that are commonly used to guide research on nursing problems. Students prepare an integrative research review, including areas such as conceptual models, measurement, statistical analysis and interpretation of findings.

**488(7488) Qualitative Methods in Nursing Research (3)** Prerequisites: N485(7485) or consent of instructor. Explores qualitative research methods used to build nursing's body of knowledge. Emphasis is placed on design, data generation and analysis, and dissemination of findings. Issues regarding qualitative research are identified and analyzed in respect to traditional and emerging designs.

**490(7490) Nursing Research II: Advanced Methods in Nursing Research (3)** Prerequisites: N485(7485). Focuses on advanced methods in nursing research that are applied in the student's preparation of a National Research Award Grant Application. Peer and faculty panels assist students in the critique and revision of their grant applications. Designed to provide students with hands-on experience in the preparation of grant applications that focus on outcomes research related to relevant clinical nursing problems.

**491(7491) Nursing Theory Analysis and Development (3)** Prerequisites: N487(7487). Examines conceptual and theoretical development in nursing through in-depth scholarly inquiry. A concept map showing relationships between and among terms in accomplished.

**492(7492) Nursing Research II: Quantitative Analysis of Nursing Data (3)** Prerequisites: N490(7490). Consolidates prior knowledge of quantitative analysis methods as applied to nursing phenomena, focusing on design and analysis issues that affect validity. Techniques commonly used in the analysis of health data are considered.

**493(7493) Psychometrics (3)**

Prerequisites: N490(7490) and doctoral level statistics course and/or consent of instructor. Focuses on application of psychometric theories and practices related to instrumentation in nursing research. Basic methodologies and techniques for constructing, testing, and evaluating instruments will be discussed and applied. Content will focus on theoretical foundations of measurement, item construction, instrument design, item analysis, validity and reliability assessment. Criteria for evaluating existing instruments will also be discussed.

**494(7494) Structural Equation Modeling (3)**

Prerequisites: Working knowledge of SPSS and consent of instructor. An advanced seminar in statistical techniques commonly used in nursing data analysis. Students develop a working knowledge of several covariance-modeling techniques including path analysis, confirmatory factor analysis and covariance structural modeling.

**498(7498) Doctoral Seminar (1-12)**

Prerequisites: Admission to Ph.D. in Nursing Program and consent of instructor. Presentation and discussion of pertinent methodological and clinical issues related to doctoral candidate's research. Continuous enrollment is required.

**499(7499) Dissertation Research (1-12)**

Prerequisites: All required course work; successful completion of written comprehensive examination. Investigation of an advanced nature culmination in successful defense of dissertation. Continuous registration is required.

**HS 302a(4000) Introduction to Cytotechnology (3)**

Prerequisite: Admission to the Cytotechnology program at Jewish Hospital College of Nursing and Allied Health. An introduction to the profession of cytotechnology including basic cell biology, ethics, the microscope, and the history of the profession. Basic concepts of pathology, anatomy, normal histology, and benign cellular processes are taught.

**HS 302b(4100) Female Genital Tract I (4)**

begin to differentiate diagnosis presented diseases on kodachromes and glass slides. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 302c(4200) Female Genital Tract II (3)**

Prerequisite: Biology 302b or consent of instructor. Emphasis on the study of lesions of the uterine corpus, metastatic lesions, and lesions of the vulva and vagina. The student is expected to differentiate between malignant and premalignant diseases of the uterine corpus and to begin differential diagnosis of endometrial adenocarcinoma and endocervical adenocarcinoma from glass slides and kodachromes. Offered exclusively for students meeting clinical lab science or cytotechnology

requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 302d(4300) The Processing Laboratory (2)**

Prerequisite: Biology 302c or consent of instructor. Includes routine procedures for processing, receipt, staining, coverslipping, and filing of specimens. Cytology laboratory experience includes performing laboratory techniques under the supervision of a cytotechnologist. Offers exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 302e(4400) Respiratory and Order (3)**

Prerequisite: Biology 302d or consent of instructor. Designed to acquaint the student with the anatomy and histology of the upper and lower respiratory areas. Epithelial appearances and changes associated with normal, benign, and malignant processes are emphasized. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 302f(4600) Body Fluid Cytology (3)**

Prerequisite: Biology 302e or consent of instructor. Examines the cytopathology of effusions, cerebral spinal fluid and other body fluids, and the cytologic changes associated with benign and malignant processes. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 302g(4700) Gastrointestinal Genitourinary Cytology (3)**

Prerequisite: Biology 302f or consent of instructor. The study of the cytology of the gastrointestinal and genitourinary systems. The anatomy of each body site is discussed along with the Normal, benign and malignant cellular changes of each system. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 302h(4800) Fine Needle Aspiration Cytology (4)**

Prerequisite: Biology 302g or consent of instructor. Examines the anatomy and histology of the breast, thyroid, and lymph nodes with emphasis on the cytologic patterns associated with normal benign, and malignant processes. In addition, the student will have the opportunity to observe and assist the cytopathologist and/or cytotechnologist with fine needle aspiration procedures from various body sites to observe techniques for processing and rapid cytologic assessment. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.



**HS 302i(4900) Advanced Practices in Cytology (12)**

Prerequisite: Biology 302h or consent of instructor. This clinical course requires the student to examine a variety of specimens for cytologic evaluations from all body sites. Students must have achieved minimum screening accuracy in prerequisite courses to begin practicum. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 302j(3520) Leadership and Management Cytology (4)**

Prerequisite: Economics 51(1001) or Business 210(3600) or equivalents. Examines theories of leadership, management and organizations as applied to cytotechnology. Healthcare economics, political issues and healthcare systems are investigated within a systems theory framework. Utilizes computer spreadsheets and delivery patterns. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303a(4810) Issues and Trends in Role Development (3)**

Prerequisite: Admission to the clinical laboratory science program at Jewish Hospital College of Nursing and Allied Health. Presents overview of educational principles and teaching. Selected laboratory management issues considered.

**HS 303b(4010) Clinical Bacteriology (3)**

Prerequisite: Biology 216(2482) and 218(2483) or consent of instructor. Studies morphology, cultural and growth characteristics of bacteria and viruses which cause infectious disease. Specimen and media selection, collection, transport, storage and processing are also studied. Students learn to differentiate normal from pathogenic microorganisms. Disease correlation with laboratory data is stressed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303c(4110) Bacteriology Practicum (4)**

Prerequisite: Biology 303b or consent of instructor. Morphology, cultural and growth characteristics of bacteria and viruses which cause infectious diseases. Specimen and media selection, collection, transport, storage, and processing covered. Differentiation between normal and pathogenic microorganisms and disease correlation with laboratory data stressed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303d(4250) Parasitology and Mycology (2)**

Prerequisite: Biology 216(2482) or 218(2483) or consent of instructor. Lectures and laboratory exercises focus on identification and differentiation of selected parasites, medically important fungi, and common contaminants. Common methods and techniques and instruments explored. Classification, diagnostic states of fungi and parasites, and life cycles and vectors for parasites studied. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303e(4410) Clinical Immunology (2)**

Prerequisite: Biology 317(4842) or consent of instructor. Introduce the principles of both normal and abnormal responses of the immune system through the molecules, cells, organs, and systems responsible for the recognition and disposal of foreign materials. Immunological manifestations of diseases are discussed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303f(4450) Immunology Practicum (1)**

Prerequisite: Biology 303e or consent of instructor. The focus of the clinical practice is on serologic and immunologic testing. Data interpretation, troubleshooting in test systems and disease correlation with laboratory data are stressed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303g(4510) Immunohematology (3)**

Prerequisite: Biology 317(4842) or consent of instructor. Studies theory and principles in immunology and genetics that determine blood types. Transfusion services stressed. Aspects of red cells, platelets and components discussed regarding selection, collection, transport, storage, processing, and their use for transfusion. Donor requirements and laboratory operations included. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303h(4550) Immunohematology Practicum (3)**

Prerequisite: Consent of instructor. Clinical practice focuses on basic and special testing to assure safe blood supply and safe transfusion therapy. Adverse reactions investigated to identify cause of reaction. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303i(4601) Hematology (4)**

Prerequisite: Consent of instructor. Study of fundamentals of hematology and hemostasis. Hematopoiesis, pathogenesis of anemia and disease process resulting in abnormal erythrocyte morphology will be presented. Focus on leukocyte disorders, leukemias, lymphomas, and lipid storage disease. Platelet structure and function, vascular and platelet disorders, defects of clotting factors, and interaction of fibrinolytic coagulation and kinin systems discussed. Provides an overview of the use of flowcytometric and molecular diagnostics in hematology. Laboratory component will be part of comprehensive clinical experience in hematology. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303j(4661) Hematology Practicum (3)**

Prerequisite: Biology 303i or consent of instructor. Clinical practice focuses on basic and special testing in hematology as well as phlebotomy. Identification of normal and abnormal cell morphology is studied, and diseases are correlated with abnormal cells. Coagulation testing to identify coagulation defects and hemostatic diseases performed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303k(4701) Clinical Chemistry (3)**

Prerequisite: Consent of instructor. Focus on biochemical theory and physiology of carbohydrates, lipids, and lipoproteins, heme derivatives, liver and renal function, non-protein nitrogenous compounds, proteins, enzymes, electrolytes, and acid-base balance, hormones, and endocrine system. Normal and abnormal manifestations of diseases and correlation with other laboratory tests presented. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303l(4750) Chemistry Practicum (4)**

Prerequisite: Consent of instructor. Clinical practice focuses on basic and special test methods and focuses on basic and special test methods and instrumentation used in quantifying metabolites and analytes discussed in Biology 303k. Quality control, correlation of test data and disease states presented. Biological and chemical safety practiced. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

**HS 303N(3520) Leadership and Management (3)**

Prerequisite: Economics 51 (1001) or Business 210 (3600) or equivalent. Examines theories of leadership, management, and organization as applied to Healthcare Systems, Healthcare economics, political issues, and

healthcare systems investigated within a systems theory framework. Computer programs used for development of financial spreadsheets and delivery patterns. Offered exclusively for students meeting Clinical Lab Science or Cytotechnology requirements in the Clinical Program at Jewish Hospital College of Nursing and Allied Health.

**HS 393(3807) Research Methods in the Health Sciences (3)**

Prerequisite: Psychology 201 (2201) or equivalent. Develops an understanding of the research process as applied to allied health. The value and purpose of research within an ethical/legal context is explored. Qualitative and quantitative research methods and approaches to solve problems are examined. Students are actively involved in evaluating, critically analyzing and interpreting data to determine implications for practice. Offered exclusively for students meeting Clinical Lab Science or Cytotechnology requirements in the Clinical Program at Jewish Hospital College of Nursing and Allied Health.



# College of Optometry





## College of Optometry

This section contains an abbreviated version of the College of Optometry Bulletin. Some information is omitted.

For the most complete and accurate information regarding the Optometry program at UM-St Louis, please go to:

<http://www.umsl.edu/divisions/optometry/optometry.html> and link to the College of Optometry Bulletin. It is a downloadable document in PDF format.

### Administration and Faculty

**Larry J. Davis**, Dean, Associate Professor\*

O.D., Indiana University; Residency, Contact Lenses, University of Missouri-St. Louis

**Gerald A. Franzel**, Associate Dean for Continuing Education and E-Learning, Clinical Associate Professor, O.D., University of Houston

**Ralph P. Garzia**, Assistant Dean for Clinical Programs; Associate Professor and Program Coordinator for Residency in Pediatrics and Binocular Vision\*

O.D., Residency, Pediatric Optometry, Pennsylvania College of Optometry

**Jerry L. Christensen**, Professor\*

O.D., Ph.D., The Ohio State University

**Carol K. Peck**, Director, Graduate Programs, Professor\*, Ph.D., Postdoctoral Fellow, University of California-Los Angeles

**W. Howard McAlister**, Director, Residency Programs, Associate Professor\*

M.A., Webster College, M.P.H., University of Illinois at the Health Sciences Center - Chicago, O.D., The Ohio State University

**William G. Bachman**, Associate Professor\*

M.S., University of Alabama-Birmingham, O.D., Southern College of Optometry

**Carl J. Bassi**, Associate Professor\*

Ph.D., Vanderbilt University, Postdoctoral Fellow, University of Southern California, Doheny Eye Institute

**Edward S. Bennett**, Director of Student Services; Co-Chief, Contact Lens Service; Associate Professor\*

M.S.Ed., O.D., Indiana University-Bloomington

**Vinita A. Henry**, Co-Chief Contact Lens Service and Program Coordinator for Residency, Contact Lenses

O.D., Residency, Contact Lenses, University of Missouri-St. Louis

**Vasudevan Lakshminarayanan**, Associate Professor\*

M.Sc., University of Madras, India, Ph.D., University of California-Berkeley

**William F. Long**, Associate Professor\*, Coordinator for Informatics

Ph.D., Michigan State University, O.D., Indiana University

**Timothy A. Wingert**, Associate Professor\*, Chief of Third-year Primary Care Service

O.D., Illinois College of Optometry

**Raymond I. Myers**, Clinical Associate Professor,

O.D., Indiana University

**Leonard L. Naeger**, Adjunct Associate Professor of Pharmacology

Ph.D., University of Florida; Residency, Hospital-Based Pharmacy, VA Medical Center, St. Louis

**Larry G. Brown III**, Clinical Assistant Professor Chief of Low Vision and Coordinator of Emergency Services

O.D., Residency, Geriatric Optometry, University of Missouri-St. Louis

**Lee J. Browning**, Clinical Assistant Professor

O.D. University of Missouri-St. Louis

Residency, Northeastern State University, Talequah, OK

**John Crane**, Clinical Assistant Professor

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

**James A. DeClue**, Clinical Assistant Professor

O.D., Illinois College of Optometry

**Lisa Dibler**, Clinical Assistant Professor

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

**Aaron S. Franzel**, Clinical Assistant Professor, Chief Pediatric/Binocular Vision Service

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

**Alexander J. Harris**, Clinical Assistant Professor,

Director of Externship Programs and Minority Affairs Advisor

M.A., Washington University, O.D., University of Missouri-St. Louis

**Melissa Helfrich**, Clinical Assistant Professor

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

**Beth A. Henderson**, Clinical Assistant Professor

O.D., The Ohio State University

**Vivian Kloke**, Clinical Assistant Professor

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

**John A. McGreal, Jr.**, Clinical Assistant Professor

O.D., Pennsylvania College of Optometry

**Bruce Morgan**, Clinical Assistant Professor

O.D., Northeastern State University

**Lori L. Paul**, Adjunct Assistant Professor

Ph.D., Washington University

**Stuart Ross**, Adjunct Assistant Professor

Ph.D., University of Wisconsin-Madison, NIH

Postdoctoral Fellow, Dartmouth Medical School

\*members of Graduate Faculty

Off-Campus Adjunct Faculty

**Joseph H. Maino**, Clinical Associate Professor

O.D., Illinois College of Optometry; Residency, Rehabilitative Optometry, VA MEDICAL Center, Kansas City

**Francis E. O'Donnell, Jr.**, Clinical Associate Professor of Ophthalmology

M.D., Johns Hopkins University, Residency, Ophthalmology, Wilmer Institute, Johns Hopkins University

**Paul Ajamian**, Clinical Assistant Professor

O.D., New England College of Optometry

**Ronald Bateman**, Clinical Assistant Professor

O.D., Indiana University-Bloomington

**P. Douglas Becherer**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**James Bureman**, Clinical Assistant Professor  
O.D., Illinois College of Optometry

**Ron Brackenbury**, Clinical Assistant Professor  
O.D., Indiana University, Residency, Hospital-Based  
Optometry, Danville, Illinois VA

**Robert Brusatti**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Michelle Call**  
O.D., VA, Wichita, Kansas

**Carmen Castellano**, Clinical Assistant Professor  
O.D., Illinois College of Optometry

**Daniel Cerutti**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Gail B. Doell**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**John Galanis**  
M.D., St. Louis University

**John M. Garber**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**N. Rex Ghormley**  
O.D., Southern California College of Optometry

**Timothy Harkins**, Clinical Assistant Professor  
O.D., Southern California College of Optometry

**Debbie L. Hettler**, Clinical Assistant Professor  
O.D., The Ohio State University, M.P.H., University of  
Illinois

**Deborah Kerber**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Lisa Klein**  
O.D., University of Missouri-St. Louis

**Robert A. Koetting**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**Steven F. Lee**, Clinical Assistant Professor  
M.D., University of Maryland  
Residency, Ophthalmology, Washington University

**Elizabeth M. McLemore**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Sean Mulqueeny**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Thomas I. Porter**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**Paul Resler**, Clinical Assistant Professor  
O.D., Illinois College of Optometry

**Byron A. Santos**, Clinical Assistant Professor  
M.D., University of San Carlos

**Carol Scott**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**David Seibel**  
O.D., University of Missouri-St. Louis

**Don Simpson**, Clinical Assistant Professor  
O.D., Indiana University

**Craig Sorce**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Scott Tomasino**  
O.D., Illinois College of Optometry

**Paul Varner**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Claude Valenti**, Clinical Assistant Professor  
O.D. University of Pennsylvania

**Matt Wickham**  
O.D., University of Missouri-St. Louis

**Scott Yager**  
O.D., The Ohio State University

**Dwayne Young**  
Clinical Assistant Professor  
O.D., Indiana University

### General Information

The UM-St. Louis College of Optometry enrolled its first class in 1980, graduating 32 students in May 1984. The school 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, library, and the Center for Eye Care campus facility (the University Eye Center).

### Center for Eye Care

The Center for Eye Care provides a patient care learning environment for third-year and fourth-year optometric students and residents. The Center for Eye Care includes four locations: the University Eye Center on the UM-St. Louis south campus, the Optometric Center in the Central West End of St. Louis, the East St. Louis Eye Center, and the Harvester Eye Center in St. Charles, MO. The main purpose of these and other smaller centers in the St. Louis area is to provide an instructional setting where student interns are exposed to a wide variety of patients under the direct supervision of full-time or part-time clinical faculty. Equally important is that these Centers provide exemplary, comprehensive and state-of-the-art optometric care to their patients.

The Centers provide a full range of optometric services to patients including primary eye care, contact lens, pediatric/binocular vision, low vision, and eye health management. These services are described below in greater detail.

Situated in Missouri's largest metropolitan area, the 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 and the College of Optometrists in Vision Development, approximately twelve miles from the campus.

The curriculum leading to the doctor of optometry degree is a four-year, full-time program of study. The first year of the professional curriculum stresses optics and basic health sciences and introduces students to optics of the visual

system. The second year covers vision science and training in eye examination techniques. The third year emphasizes patient care and introduces the student to various specialty areas within optometry, such as contact lenses, pediatric and geriatric vision care, binocular vision and vision training, and low vision rehabilitation. The second and third years also include course work and clinical training in ocular disease and pharmacology. The fourth year provides additional patient care experiences and includes rotations through a variety of outreach programs, giving the student added experience in the treatment of eye diseases, as well as valuable experience in other optometric clinical specialties.

#### **Fourth-Year Externship Program**

In addition to the patient care experiences available through the University Eye Center, Optometric Center, the East St. Louis Center, the Harvester Eye Center, and the College of Optometry has an diverse Externship Program. Students must receive approval from the faculty and the Director of Externships for assignments to each Externship site. This program allows fourth-year students to spend a portion of their final year of training in a variety of patient care environments (i.e., military bases, Veterans Administration Hospitals, Indian Health Services Hospitals various specialty practices and private practices).

These eight (8) week Externships are selected and scheduled according to the individual student's interest, needs and future practice intentions. In this program, students leave the academic environment and begin working with selected practicing optometrists while continuing to be monitored by the Centers through weekly reports of all patient experiences and activities. These are some of the most frequently used sites: Becherer and Becherer, Belleville, IL; Carl Albert Indian Health Service, Ada, OK; Colorado Optometric Center, Denver, CO; Koetting and Associates, St. Louis, MO; Missouri Eye Institute, Springfield, MO; Morey/Mulqueeny Eye Center, St. Louis, MO; O'Donnell Eye Institute, St. Louis, MO; Omni Eye Services of Georgia, Atlanta, GA; Optometric Clinic, Kaneohe Bay, HI; Resler-Kerber Optometric, Inc., St. Louis, MO; St. Louis Comprehensive Neighborhood Health Center, St. Louis, MO; Southwest Medical Center, St. Louis, MO; Veterans Administration Hospital, Columbia, MO; Veterans Administration Hospital-Cochran/Jefferson Barracks, St. Louis, MO; Veterans Administration Hospital, Kansas City, MO; Veterans Administration Hospital, Marion, IL; Washington University Eye Center, St. Louis, MO. Students may arrange their own off-campus clinical experiences with the approval of the director of externships.

In 1986 the Missouri Optometry Practice Act was revised by the state legislature to include treatment of certain eye diseases utilizing pharmaceutical agents. Thus optometry students at UM-St. Louis are uniquely situated to receive excellent training in this aspect of optometric practice.

Roughly half of the states in the United States now have laws authorizing optometrists to prescribe drugs in the treatment of certain eye diseases. The training and clinical experience optometry students receive at UM-St. Louis in the diagnosis, treatment, and management of ocular disease is excellent and qualifies UM-St. Louis graduates to practice optometry in any state in the nation.

A student who satisfactorily completes all four years of the professional curriculum will be eligible to receive the doctor of optometry degree.

The College of Optometry is a member of the Association of Schools and Colleges of Optometry and is accredited by the 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 College of Optometry are eligible for membership in the student optometric association, which is affiliated with the American Optometric Association. Through this organization, students become involved in local and national optometric activities. The organization provides an environment for the cultivation of professional leadership skills, and members have organized and participated in a variety of community service activities, including community health screenings and vision care to residents of nursing homes, convalescent hospitals, and mental institutions. Furthermore, optometry students have formed local chapters of SVOSH (Student Volunteer Optometric Services to Humanity), an international organization of optometrists providing free vision care to people in impoverished nations, and the NOSA (National Optometric Student Association), which strives to recruit minority students into optometry and encourages retention of minority students.

In addition to the many activities through the College of Optometry, optometry students are able to take advantage of all the activities provided by the university to the entire university community. These include intramural sports, movies and cultural activities, a modern, fully-equipped gymnasium, and access to many social and cultural opportunities in St. Louis at reduced cost.

#### **"3+4" Scholars Programs**

The College of Optometry currently has a program with the Pierre Laclède Honors College which allows students to complete both their undergraduate studies and a Doctor of Optometry degree in seven years. Students can qualify for this program while they are seniors in high school. Exceptional academic performance is required. They are granted provisional acceptance into the College of Optometry after admission to the Honors College. This program offers professional and academic advisement by the College of Optometry faculty throughout the Honors

College undergraduate experience, as well as offering early exposure to clinically related activities and participation in Optometry student association activities. Undergraduate students in this program may apply for formal admission to the College of Optometry after completion of Optometry prerequisites and three years at the Honors College. The first year of Optometry School will complete the undergraduate requirements. Similar 3 + 4 programs also exist in cooperation with the departments of Biology, Physics and Chemistry.

### College of Optometry

#### Admission Requirements

##### Semester:

English - 2

Biology (including laboratory)\* - 3

Physics (including laboratory) - 2

##### Chemistry\*\*

General (including laboratory) - 2

Organic (including laboratory) - 1

##### Mathematics\*\*\*

Calculus - 1

Statistics - 1

Psychology - 2

Social and Behavioral Sciences - 2 or

##### Quarter:

English - 3

Biology (including laboratory)\* - 4

Physics (including laboratory) - 3

##### Chemistry\*\*

General (including laboratory) - 3

Organic (including laboratory) - 2

##### Mathematics\*\*\*

Calculus - 1

Statistics - 1

Psychology - 2

Liberal Arts - 2

\*One semester (or one quarter) of Microbiology is a requirement. One semester of Anatomy or Physiology is recommended.

\*\*One semester of Biochemistry is recommended.

\*\*\*Trigonometry as a prerequisite course for Calculus must be completed either in high school or college.

All courses used to satisfy the admission requirements must have been taken at a fully accredited institution or must be acceptable by an accredited institution toward degree credit. Specific prerequisite courses must be taken for a letter grade; they cannot be taken as an audit or on a pass/fail or satisfactory/unsatisfactory basis. Applicants must have completed 90 semester or 135 quarter hours (the equivalent of three years of college education) before the start of classes. The applicant cannot apply more than 60 semester hours or 90 quarter hours which were earned at a two-year institution toward the credit-hour requirement. Applicants holding a bachelor's degree will be given

preference over applicants with similar academic credentials who do not have a degree. Applicants to the 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 each year in February and October. Results are sent to the applicant and schools of optometry approximately six to eight weeks after the date of testing. Official test scores are acceptable for up to three years from the testing date.

Applicants are encouraged to take the examination in February or October of the year preceding anticipated application to the College of Optometry. If applicants wish to enhance their scores, they are encouraged to repeat the examination. For an OAT application packet and additional information, contact:

Optometry Admission Testing Program  
211 East Chicago Ave.  
Suite 1846  
Chicago, IL 60611  
(312) 440-2693

#### Application Procedures

The Admissions Committee begins to process applications on August 1 for the class entering the following year. An applicant's file will be considered complete and ready for consideration by the Admission Committee when the following material has been received:

1. Application.
2. \$50.00 non-refundable application fee.
3. Official high school and college transcripts, followed by updated transcripts as they become available.
4. Academic record form.
5. Official Optometry Admission Test (OAT) results.
6. A composite evaluation prepared by the preprofessional advisory committee at the educational institution the applicant is attending. Those applicants not currently attending college or who are at an institution that does not offer a committee evaluation will be required to submit four letters of recommendation.

Official transcripts must be mailed from every college attended, regardless of whether or not credit was earned.

Letters of recommendation must be mailed directly to the school by the originator. All applicants will be required to sign a form to waive their right to review the letters of recommendation. It is the applicant's responsibility to ensure all application materials are received in the office of Student Services by March 15 to be considered for

Students offered admission have two weeks from the date on the offer of admission letter to make a required \$200 acceptance deposit. The \$200 deposit will be credited toward tuition when the student matriculates. The deposit is considered a non-refundable administration fee should the student not matriculate. A certain number of applicants are placed on an alternate list. If an applicant who has been offered admission declines the offer, their position will be allocated to the next individual on the alternate list.

Notification of denial is sent by mail. If an applicant is interested in reapplying, they should contact the College of Optometry's Office of Student Services and request a reapplication packet.

#### Financial Aid

The University of Missouri-St. Louis maintains an Office of Student Financial Aid to assist students with the cost of their education.

Financial assistance is available in the form of grants, loans, scholarships, and work-study. Funds for these programs are available from federal, private, state, and institutional resources. To apply for financial aid, students must complete a Free Application for Federal Student Aid (FAFSA). Preference will be given to those students who have completed the FAFSA by April 1. Preference means that the Student Financial Aid Office will begin awarding FWS (Federal College Work-Study), Federal SEOG (Federal Supplemental Educational Opportunity Grant) and Federal Perkins Loan funds. A completed financial aid application means that the Financial Aid Office has received an official Student Aid Report from the Federal Processing Center.

The Student Financial Aid Office maintains a Web site at [www.umsl.edu/services/finaid](http://www.umsl.edu/services/finaid), where students will find useful information along with the ability to contact the office electronically via e-mail. Also included is a scholarship directory that is updated biweekly.

To be considered for all university scholarships offered through the Financial Aid Office, a student must be accepted for admission. A scholarship application must be completed to apply for scholarships awarded through Student Financial Aid. All incoming students should complete the Incoming Freshman Scholarship Application. Continuing students should complete the Continuing Student Scholarship Application.

Many state optometric associations and their auxiliaries offer scholarships and grants. Application is generally made directly to the state association or auxiliary and selection is generally made on the basis of state residence and other criteria. Information may be obtained by writing to the various state optometric associations and/or auxiliaries.

The College of Optometry will provide additional information about scholarships and the school's Handbook of Loans, Scholarships, Grants, and Awards to applicants during the interview process.

#### Fees

Detailed information regarding current fees and residency regulations is furnished in the *Schedule of Courses*, a newspaper schedule distributed before each semester registration, available at the Registrar's Office in Woods Hall. Students should be aware that fees shown are current as this publication goes to press, but fee changes may occur while this *Bulletin* is still in use.

The university reserves the right to change fees and other charges at any time without advance notice.

#### Education Fees

All students enrolled in the University must pay educational fees based on either the schedule for Missouri residents or the schedule for non-residents. All optometry students will be required to pay the non-resident educational fee if they do not meet the University of Missouri residency requirements at the time of enrollment.

	Resident	Non-resident
Fall 2002	7,934.40	15,961.60
Winter 2003	7,934.40	15,961.60
Summer 2003*	\$3,967.20	\$7,980.80

The Educational Fees plateau is 16.0 credit hours. Any student enrolled for less than 16.0 credit hours will be charged per credit hour at \$495.90. Nonresidents pay a nonresident fee of \$501.70 per credit hour.

\*A Summer Session is required between the third and fourth professional year.

#### Other Required Fees

All students are required to pay the following fees each semester: Instructional Computer Fee \$9.60 per credit hour (no maximum); Student Facility, Activity, and Health Fee \$27.22 per credit hour (maximum six credit hours for Summer/12 credit hours for the Fall and Winter).

#### Parking Fee

All vehicles parked on campus require a parking permit. It is the responsibility of the student to be aware of the parking policies and procedures while using the lots at the University of Missouri St. Louis. The College of Optometry cannot be responsible for violations from students who do not purchase parking permits or adhere to the campus policies and procedures.

Parking fee \$18.00 per credit hour for Summer Session; \$20.00 per credit hour during the Fall and Winter Semesters. All fourth year students who are away on externship rotation must pay a minimum of \$18.00 per semester for parking.

admission to the class entering in August of the same year. Facsimile (faxed) application material will be not accepted or acknowledged. Application material received after March 15 will not be evaluated for the class entering in August of the same year. To be considered for merit scholarships, there is an early enrollment deadline. All materials must be received by January 10 in order to be considered for the early application deadline. Applications received after that time will still be considered for admission but not additional awards.

All correspondence, inquiries and application material should be addressed to:

UM-St. Louis College of Optometry  
Office of Student Services  
8001 Natural Bridge Road  
St. Louis, MO 63121-4499

Applications may also be submitted online by accessing an application at  
[www.umsl.edu/divisions/optometry/programs/applpro.html](http://www.umsl.edu/divisions/optometry/programs/applpro.html)

#### Students From Other Countries

In addition to the standard application procedures, applicants living outside the United States and its possessions must take the Test of English as a Foreign Language (TOEFL) and receive a minimum score of 500. Write to:

Test of English as a Foreign Language (TOEFL)  
Educational Testing Service  
Princeton, NJ 08530

To complete their credential file, applicants are required to furnish original and official transcripts from each school and college attended both in this country and abroad. The Educational Credentials Evaluators, Inc. or the World Education Services must evaluate all foreign school and college transcripts and their evaluation submitted as part of the application requirement. For information contact:

Educational Credentials Evaluators, Inc.  
Post Office Box 514070  
Milwaukee, WI 53203  
(414) 289-3400  
Fax: (414) 289-3411  
E-mail: [eval@ece.org](mailto:eval@ece.org)

World Education Services  
P.O. Box 745  
Old Chelsea Station  
New York, N.Y. 10113-0745  
(212) 966-6311  
Fax: (212) 966-6395

The University of Missouri-St. Louis maintains an Office of International Student Services to assist applicants who have been offered admission. All new international

students are required to attend a formal orientation program before matriculation. For more information, contact:

University of Missouri-St. Louis  
Office of International Student Services  
8001 Natural Bridge Road  
St. Louis, MO 63121-4499  
(314) 516-5229

#### Selection Procedures

Applications are reviewed beginning September 1 with interviews scheduled and initiated starting October 1. The School uses a 'rolling admissions' process which allows qualified applicants to be admitted on an ongoing basis until the class is filled. Therefore, applicants are encouraged to apply as early as possible ensure full consideration for admission.

The Admissions Committee has the responsibility to review and evaluate all applicants and select the best qualified candidates. The committee considers: an applicant's overall grade point average, the grade point achieved in the sciences, any grade trends over the years in college, and the scores on the OAT. Concurrently, candidates are evaluated on less quantitative measures such as extracurricular activities and interests, related or unrelated work experience, written narrative, and letters of recommendation.

Those applicants whom the committee feels to be most competitive will be invited for an on-campus interview. The on-campus interview facilitates an assessment of the applicant's communication skills, interests, motivation, and personal characteristics. In addition, the on-campus interview allows the applicant to tour the facilities, meet with currently enrolled students, present questions regarding financial aid and housing, and learn more about the University of Missouri-St. Louis and the College of Optometry. From this group of interviewed applicants, the entering class of approximately 44 students will be selected.

The policies of the University of Missouri-St. Louis and the College of Optometry comply with the provisions under those laws which forbid discrimination on the basis of race, color, sex, national origin, religion, age, handicap, or veteran status.

#### Admission Process

Notices of acceptance may be received as late as June of the year in which the students enter the program. If acceptance to the class is conditional, the terms of the condition must be completed prior to matriculation. Applicants who have indicated that degree requirements will be completed prior to matriculation, and who have been selected for admission, may receive a conditional offer of acceptance contingent upon completion of the degree.



**Student Health Insurance (optional)**

An Accident and Sickness Insurance plan is available to students and their dependents. Information concerning premiums and coverage is available upon request from University Health Services. Their phone number is: (314) 516-5671.

**\*Nonresident Students**

Students who do not meet the residency requirements must pay the nonresident educational fee according to the schedule above. A definition of "residency" is outlined in *Tuition and Residency Rules*, available in the cashier's office. Students are responsible for registering under the proper residence and paying the proper educational fees.

Currently, five nonresident positions are allocated by state reciprocal agreements for residents of Kansas. Individuals who are admitted under these agreements will pay reduced educational fees. For additional information, contact:

Optometry Program  
Kansas Board of Regents  
700 S.W. Harrison, Suite 1410  
Topeka, KS. 66603  
(785) 296-3517.

Optometry students will be required to pay nonresident educational fees if they do not meet the university's residency requirements at the time of their enrollment. The definition of "residency" is outlined in the pamphlet *Tuition and Residency Rules* available from the Cashier's Office, (314) 516-5151.

**Four-Year Professional Degree (O.D.) Curriculum****First Year**

	Credit Hours	Lecture	Lab
<b>Fall Semester</b>			
504(8040) Neuroanatomy	4	3	2
505(8020) Geometric Optic	4	3	2
506(8030) Practice Management I	2	2	-
509(8010) Gross Anatomy, Physiology and Disease Processes	5	4	2
512(8060) Biochemistry	3	3	-
<b>Winter Semester</b>			
513(8140) Physical Optics and Photometry	2	2	-
514(8180) Clinical Optometry I	2	1	2
515(8120) Ocular Optics	3	3	-
516(8130) Physiological Optics Laboratory	1	-	2
518(8160) Anatomy and Physiology of the Eye	5	4	2
519(8150) Physical Optics and Photometry Lab	1	-	2
510(8110) Gross Anatomy, Physiology and Disease Processes II	4	3	2

**Second Year****Fall Semester**

520(8220) Ophthalmic Optics	4	3	2
521(8280) Clinical Optometry II	5	3	4
524(8250) Monocular Sensory Processes	4	4	-
8290 Physiological Optics Lab II	1	-	2
555(8260) General Pharmacology	3	3	-
541(8230) Practice Management II	2	1	2
517(8240) Ocular Motility	3	3	-

**Winter Semester**

530(8320) Ophthalmic Dispensing	1	-	2
531(8380) Clinical Optometry III	5	3	4
532(8340) Binocular Vision and Space Perception	4	3	2
533(8370) Ocular Disease I	4	3	2
535(8350) Epidemiology	2	2	-
565(8360) Ocular Pharmacology	3	3	-
568(8390) Clinical Medicine	2	2	-

**Third Year**

	Credit Hours	Lecture	Lab
<b>Fall Semester</b>			
550(8500) General Clinic I	6	-	2
553(8520) Contact Lenses I Binocular Vision Anomalies	3	2	2
554(8540)			
556(8570) Ocular Disease II	4	3	2
596(8560) Public Health	2	2	-
565(8550) Low Vision	3	2	2

**Winter Semester**

557(8610) Environmental Vision	2	2	-
559(8680) Ophthalmic Lasers I	1	-	-
560(8600) General Clinic II	6	-	12
561(8690) Pediatric /Binocular Specialty Clinic I	1	-	2
563(8660) Contact Lens Specialty Clinic	1	-	2
563(8620) Contact Lenses II	3	3	-
558(8650) Geriatric Optometry	2	2	-
566(8670) Ocular Assessment	1	1	-
567(8640) Pediatric Optometry	3	3	-
565(8630) Practice Management III	3	3	-

**Fourth Year****Category 1 UM-St. Louis**

*Note: Must enroll in 573(8700), 574(8710), and 575(8720) concurrently*

573(8700) UM-St. Louis Pediatric/Binocular Vision Patient Care

3 - 6

574(8710) UM-St. Louis Contact Lens

Patient Care 3 - 6

575(8720) UM-St. Louis Eye Health

Management Patient Care 1 - 2

**Category 2 Institutional**

586(8780) External Rotation in

Institutional Patient Care 7 - 14

**Category 3 Ocular Disease**

585(8790) External Rotation in

Ocular Disease Patient Care 7 - 14

**Category 4 Intern**

*Note: Must enroll in 576(8730) and 577(8740) concurrently*

571(8770) Community Service in  
Rotation in Patient Care 7 - 14

572(8750) East St. Louis Center  
Patient Care 7 - 14

576(8730) Optometric Center Patient  
Care 6 - 12

577(8740) Optometric Center Eye Health  
Management Patient Care 1 - 2

(8760) Harvester Eye Center  
Patient Care 7 - 14

**Credit**

**Category 5 Specialty** Hours Lecture Lab

578(8810) External Rotation in  
Contact Lens Patient Care 7 - 14

579(8800) External Rotation  
in Pediatric/Binocular Vision  
Patient Care 7 - 14

592(8820) External Rotation  
in Low Vision Patient Care 7 - 14

**Category 6 Elective**

570(8830) External Rotation  
in General Patient Care 7 - 14

580(8850) Supplementary Rotation  
in General Patient Care 7 - 14

581(8840) External Supplementary  
Rotation in General Patient Care 7 - 14

**Required Courses**

583(8870) Practice Management IV  
Vision Science 2 2 -

593(8880) Clinical Seminar 1 1 -

**Elective Courses in the College of Optometry**

589(8400) Directed Readings

588(8410) Directed Research

569(8420) Ocular Photography

598(8440) Clinical Applications of Current

**Topics in Visual Science****Graduate Physiologic Optics Courses Approved for Elective Credit\***

400(6400) Sensory Processes and Perception

401(6401) Visual Optics

402(6402) Ocular Anatomy and Physiology

403(6403) Psychophysical Methods and Experimental Design

404(6404) Sensory Neuroscience

405(6405) Neuroanatomy

406(6406) Geometric Optics

451(6451) Corneal Physiology

452(6452) Growth and Development of the Visual System

453(6453) Advanced Physiology of Other Sensory Systems

454(6454) Binocular Vision

455(6455) Visual Information Processing

456(6456) Oculomotor Systems

457(6457) Comparative and Evolutionary Aspects of Vision

458(6458) Noninvasive Assessment of the Visual System

459(6459) Introduction to Computer Programming for Vision  
Research

470(6470) Individual Studies in Physiological Optics

490(6490) Graduate Research in Physiological Optics

497(6497) Interdisciplinary Geriatric Care

499(6499) Current Topics in Optometry and Vision  
Science

\*Due to advances in the optometric profession, sequencing of courses may change. The courses listed above are subject to change through normal academic procedures.

**Grades**

All courses taken for credit in the professional program must be passed with a "C-" or better in order for a student to qualify for graduation. Furthermore, in order to qualify for graduation, a student must be in good academic standing and the cumulative professional GPA must be 2.5 or higher. Beginning in May 2003, students must submit evidence to the Office of Student Services that they have taken the 3 part NBEO examinations prior to graduation. Such evidence may include a copy of the score report received from NBEO.

To assure graduating at the end of a specific semester, all work for that semester and any delayed grades from previous semesters must be completed with the grades sent to the Office of Student Services no later than the official date for submission of final semester grades.

**Time limitations**

All of the required courses during the first 6 semesters of first course enrollment and all required courses for the O.D. degree must be completed within 6 years after the first course enrollment.

**Graduate Studies****Physiological Optics**

Physiological optics is a multidisciplinary area concerned with the study of normal and anomalous vision. The goal

of this program is to train the next generation of researchers in clinical and basic vision science, to conduct research, and to educate faculty for schools of optometry. Students will be required to integrate basic skills in vision science with focal studies in an area of research emphasis.

This program will emphasize research aimed at new treatments and cures for vision disorders, as well as research in basic mechanisms of visual functions. The College of Optometry offers both an M.S. degree and a Ph.D. degree. Students may apply to the Graduate School for admission to either the M.S. or the Ph.D. program.

#### Admission Requirements

Students should have the appropriate background for graduate training in physiological optics and appropriate undergraduate courses for their anticipated research emphasis. Applicants must have a bachelor's degree from an accredited college or university within the United States or from an equivalent institution outside the United States. To be admitted as regular graduate students, applicants must have a grade point average of at least 3.0 in their overall undergraduate work, in their undergraduate major, and in any postbaccalaureate academic work. Students must arrange for transcripts to be submitted from all postsecondary academic work and to have at least three letters of recommendation sent by faculty members at previously attended colleges and universities. Students must also submit GRE scores (verbal, quantitative, and analytic). Applicants to the M.S. program must have combined scores on the verbal and quantitative sections of at least 1000; applicants to the Ph.D. program must have combined scores of at least 1100. In addition, students from countries where English is not a primary language must submit TOEFL scores of 550 or better. All materials and scores must be submitted by March 1 if an applicant wishes to be considered for financial assistance for the fall semester.

#### Master of Science in Physiological Optics

##### Degree Requirements

The M.S. degree requires 30 semester hours of course work, including the core courses. At least 25 of these hours will normally be taken from courses offered by the College of Optometry, with no more than 10 of these in Physiological Optics 490, Graduate Research in Physiological Optics. Each M.S. student will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

The core courses for this program are:

- Physiological Optics 400(6400), Sensory Processes and Perception (3 credits)
- Physiological Optics 401(6401), Visual Optics (3 credits)
- Physiological Optics 402(6402), Ocular Anatomy and Physiology (3 credits)
- Physiological Optics 403(6403), Psychophysical Methods and Experimental Design (3 credits)

Physiological Optics 404(6404), Sensory Neuroscience (3 credits)

Special Topics, Individual Studies, and Advanced Topics courses in Physiological Optics are also offered.

Each M.S. student must also complete a thesis based on research conducted during the program. The thesis must be approved by a committee of at least three members of the graduate faculty, at least two of whom must be from the graduate faculty in physiological optics.

#### Ph.D. in Physiological Optics

##### Degree Requirements

The doctoral degree requires 60 semester hours of course work, including the core courses. Each Ph.D. student will also be required to demonstrate proficiency in a foreign language, computer language, advanced statistical methods, or another acceptable tool skill. The tool skill and level of proficiency must be selected in advance in consultation with the Graduate Committee in Physiological Optics. Students will be required to teach at least two semesters in areas determined by the graduate committee.

Written qualifying examinations will be offered each semester. Students must declare their intent to take the examinations at least one month prior to the beginning of that semester or summer session. Full-time students must attempt qualifying examinations before beginning their third year of study. Students must declare their intent to take the examinations at least one month prior to the beginning of that semester or summer session.

The preparation of the dissertation will be supervised by a dissertation committee which will be appointed by the Graduate Dean upon the recommendation of the Director of Graduate Programs in the College of Optometry. Input from the student's advisor will be solicited by the Director prior to finalization of the recommendation by vote of the Graduate Faculty. An oral examination of the written dissertation proposal will be conducted by the Committee. A public oral defense of the completed written dissertation is also required.

The core courses for this program are:

- Physiological Optics 400(6400), Sensory Processes and Perception
- Physiological Optics 401(6401), Visual Optics
- Physiological Optics 402(6402), Ocular Anatomy and Physiology
- Physiological Optics 403(6403), Psychophysical Methods and Experimental Design
- Physiological Optics 404(6404), Sensory Neuroscience

Special Topics, Individual Studies, and Advanced Topics courses in Physiological Optics are also offered.

## Continuing Education

The College of Optometry offers continuing education programs for optometrists throughout the Midwest region as well as nationwide. Courses on management of ocular diseases, ocular anomalies, and visual skills are held on a frequent basis. In addition to College of Optometry faculty, optometric specialists, medical educators, and researchers have input into course development as well as participation in course presentations. All CE courses offered by the school are accepted by those states requiring continuing education credit for relicensure.

Continuing Education course information may be obtained by contacting:

University of Missouri-St. Louis College of Optometry  
Office of Continuing Education  
8001 Natural Bridge Road  
St. Louis, MO 63121-4499  
(314) 516-5615

## Career Outlook

### Doctor of Optometry Degree

A doctor of optometry is an independent health care professional who is specifically educated, clinically trained, and licensed to examine, diagnose, and treat conditions or impairments of the human vision system. They examine the eyes and related structures to determine the presence of vision problems, eye disease, and other ocular abnormalities.

Doctors of optometry are the major providers of vision care. They provide treatment by prescribing ophthalmic lenses or other optical aids, provide vision therapy to preserve or restore maximum efficiency in vision, and in most states (including Missouri) are authorized to prescribe drugs in the treatment of certain eye diseases.

Doctors of optometry can also detect certain general diseases of the human body such as diabetes, hypertension, and arteriosclerosis that have the potential capacity to affect vision. When an eye examination reveals diseases in other parts of the body, the optometrist will refer patients to the appropriate health care practitioner for treatment. Like physicians and dentists, optometrists are primary health care professionals.

The scope of optometry practice requires an understanding of the development of vision from infancy through adulthood, and the therapeutic and rehabilitative methods required to care for the problems of vision from infancy through the declining years.

Optometry is the largest eye care profession and one of the largest independent health care professions in the United

States. Currently, some 28,900 doctors of optometry practice in America. They are widely distributed across the nation, practicing in more than 7,100 different municipalities. In more than 4,300 of these communities, they are the only primary care provider. As such, doctors of optometry provide the major portion of primary eye care services in the United States.

Studies have indicated that a ratio of one practicing doctor of optometry to every 7,000 people (a ratio of 14.3 practicing doctors of optometry per 100,000 population) is a reasonable average for the United States. Despite recent growth in the profession, few states meet this criteria.

As our society becomes more technically oriented, vision requirements become more exacting. The number of persons needing professional help for reading and other near-point visual tasks, including both older citizens and school children, is steadily growing. Increased demands for vision care result not only from population growth but also from increased understanding of how good vision relates to industrial production, student achievement, adjustments to aging, and other areas crucial to modern society.

The patients whom the practicing doctors of optometry treats may have varied and challenging needs. On any given day, an optometrist might be involved in restoring vision to a partially sighted patient; fitting glasses for a child whose vision problem is affecting academic achievement; treating an eye infection with antibiotics; improving the function of a patient's eyes through vision training; helping an elderly patient in a nursing home cope with changing vision through critical eye health education; and performing comprehensive eye examinations for those who need glasses or contact lenses to correct astigmatism, nearsightedness, and numerous other vision problems.

The practice of optometry offers independence, flexibility, and diversity. Doctors of optometry have a wide range of modes of practice. They may choose to practice in the inner cities, suburbs, and rural areas. Opportunities exist for solo practice, associateship, optometric or multidisciplinary group practice, government or military service, clinical or hospital practice, teaching, and research.

Optometry is a rewarding career, both economically and personally. Based on data from the Bureau of Labor Statistics and surveys by professional associations, optometry is one of the top 10 income-earning professions in the country.

### Graduate Degrees

The master of science program provides research-oriented training beyond that offered in the professional program in optometry. Many optometry schools require that applicants for faculty positions hold an M.S. or Ph.D. degree as well

as an O.D. degree. Additional employment possibilities for individuals with M.S. degrees are found in industry and in public and private research foundations.

The Ph.D. program prepares students as research professionals in vision science. Employment opportunities are available in college or university teaching and research, in research institutes, and in industry. Within academic optometry, individuals with both O.D. and Ph.D. degrees are in high demand as faculty members.

## Course Descriptions

The following 8000 (500)-level courses are taken in the Doctor of Optometry (O.D.) program.

### **509(8010) Gross Anatomy, Physiology and Disease Process I (5)**

First in a two-semester course sequence that will detail the general anatomy of the human body along with the histology (microanatomy), physiology and disease processes of major organ systems. Course content will be presented in a modular format. Areas of discussion will include cardiovascular, respiratory, endocrine, digestive, reproductive, integumentary, and peripheral and autonomic nervous systems. The laboratories will emphasize and augment important concepts introduced in the classroom environment.

### **505(8020) Geometric Optics (4)**

Prerequisite: Consent of instructor. The principles of geometric optics as applied to refracting and reflecting surfaces, thin lenses, thick lenses, and lens systems. The optics of various ophthalmic instruments and techniques will be examined.

### **506(8030) Practice Management I (2)**

An introduction to the profession of optometry, including a consideration of the characteristics of a profession, the history of optometry, the profession's legal limitations, and major optometric organizations. The ethical basis of the practice of optometry will be explored, including a consideration of the theories and principles of normative ethics, biomedical ethics and the responsibilities of the health care practitioner, professional codes of ethics and ethical issues that arise in the practice of optometry. Ethical case studies will be extensively used. This is an interactive course, requiring active participation on the part of the student.

### **504(8040) Neuroanatomy (4)**

Prerequisite: Consent of instructor. Detailed gross and microscopic anatomy of the human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system.

### **512(8060) 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.

### **510(8110) Gross Anatomy, Physiology and Disease Process II (4)**

Prerequisite: Opt 509(8010). Continuation of Human Anatomy and Physiology and Disease Processes I.

### **515(8120) Ocular Optics (3)**

Prerequisite: Opt 505(8020). The eye as an image forming mechanism, the schematic eyes, the optical role of the

pupil, the retinal image and its evaluation. Nature, classification, and etiology of ametropia. Experimental models of refractive errors. Entoptic phenomena. Mechanism and optical aspects of accommodation.

### **515(8130) Physiological Optics Laboratory (1)**

Experiments designed to accompany Opt 515(8120).

### **513(8140) Physical Optics and Photometry (2)**

Prerequisite: Optometry 505(8020) or consent of instructor. Basic photometric concepts, measurements of light levels, applications in ergonomics, visual and photographic optics. Physical optics including diffraction, interference, polarization, birefringence, and lasers.

### **519(8150) Physical Optics and Photometry Laboratory (1)**

Prerequisite: Concurrent enrollment in Opt 513(8140). Experiments designed to accompany Opt 513(8140).

### **518(8160) Anatomy and Physiology of the Eye (5)**

Prerequisite: Opt 504(8040) and Opt 508(8090) or consent of instructor. Vegetative anatomy and physiology of the eye, optic nerve, orbit, and adnexa will be discussed. This includes discussion of embryology and the dynamics of ocular fluids and includes a two-hour laboratory.

### **514(8180) Clinical Optometry I (2)**

Selected tests for ocular assessment including case history, visual acuity, and ophthalmoscopy.

### **520(8220) Ophthalmic Optics (4)**

Prerequisite: Opt 513(8140), 515(8120) and 519(8150). Ophthalmic materials, physical characteristics of lenses and frames, paraxial optics of ophthalmic lenses, ophthalmic prisms, lens specifications, special lenses, multifocal lenses, unique designs, aniseikonic lenses, aberration theory and its application to lens design, lenses for low vision, protective eyewear, selecting and dispensing eyewear, management of a dispensary.

### **541(8230) Practice Management II (2)**

Prerequisite: Opt 506(8030). Principles of human interpersonal relationships. The enhancement of listening and verbal skills will be provided. Emphasis will be preparing the student to understand and manage the many human interpersonal relationships necessary in the practice of optometry.

### **517(8240) Ocular Motility (3)**

Prerequisite: Opt 504(8040) or consent of instructor. The anatomy, physiology, neurology, measurement, characteristics, and control of the intra and extraocular system.

**524(8250) Monocular Sensory Processes (4)**

Prerequisite: Opt 518(8160) or consent of instructor. Monocular sensory mechanisms of vision, photoreception, visual neurophysiology, spatial and temporal effects, visual acuity and resolution, adaptation, brightness discrimination, and color vision. Topics include a consideration of both the psychophysical aspects and neurophysiological bases of these mechanisms.

**555(8260) General Pharmacology (3)**

Prerequisite: Opt 510(8110). General principles of drug actions on the organ systems, central and peripheral nervous systems, methods of administration, pharmacological actions, side effects, and drug interactions. Regulatory agencies, laws, and drug abuse.

**521(8280) Clinical Optometry II (5)**

Prerequisite: Opt 514(8180). Continuation of clinical optometry. Patient care in the areas of refraction, binocular integration, perimetry, and bimicroscopy.

**8290 Physiological Optics Lab II (1)**

Prerequisite: Opt 516(8130). Experiments designed to accompany Opt 517(8240) and Opt 524(8250),

**530(8320) Ophthalmic Dispensing (1)**

Prerequisite: Opt 520(8220). Clinical experience in verification and dispensing of ophthalmic materials.

**532(8340) Binocular Vision and Space Perception (4)**

Prerequisite: Opt 517(8240) 521(8280), and 524(8250) or consent of instructor. Binocular vision and space perception. Visual direction, theory of correspondence, fusion, rivalry, ocular dominance, and stereopsis. Developmental aspects and neurophysiological mechanisms.

**535(8350) 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.

**565(8360) Ocular Pharmacology (3)**

Prerequisite: Opt 555(8260). Pharmacology principles, methods of administration, doses, contraindications, and adverse effects of drugs used for the diagnosis and treatment of abnormalities of the eye, adnexa and visual system. Ocular manifestations of systemic medications.

**533(8370) Ocular Disease I (4)**

The etiology, epidemiology, symptoms, signs, and course sequelae of ocular disease and anomalies. Disease and anomalies of lids, orbit, conjunctiva, cornea, sclera, iris, ciliary body, lens, vitreous, retina, choroid, and optic nerve.

**531(8380) Clinical Optometry III (5)**

Prerequisite: Opt 521(8280). Correlation and analysis of optometric data. Emphasis on diagnosis, prognosis, and therapy of visual problems.

**568(8390) Clinical Medicine (2)**

Prerequisite: Opt 522(8290) and 555(8260)). Diagnostic principles and medical management. Comprehensive health history, physical examination and neurological screening with particular association to ocular health conditions. Clinical chemistry and interpretation of clinical laboratory tests, criteria for referral to other providers and emergency office procedures. Comanagement practice with other primary care physicians will be emphasized.

**589(8400) 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.

**588(8410) 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.

**569(8420) Ocular Photography (2)**

Prerequisite: Consent of instructor. Optical principles and clinical techniques in photographing the internal and external eye and its adnexa. Includes laboratory exercises on use of the most common types of clinical cameras.

**598(8440) Clinical Applications of Current Topics in Visual Science (2)**

(elective) Prerequisite: Consent of instructor. A seminar on the use of new discoveries in visual science in clinical optometry. Students will participate in selecting the topics, which will change from year to year, with the guidance of the instructor. The course will also include laboratory demonstrations of seminar topics.

**550(8500) General Clinic I (6)**

Prerequisite: Opt 8380 (531) and successful completion of all first and second year course work. The clinical examination and care of general clinic patients, along with the fitting and dispensing of lenses and frames.

**553(8520) Contact Lenses I (3)**

Prerequisite: Opt 531(8380). Historical development of the contact lens and its use. Basic lens terminology, specifications, physiochemical characteristics, optics, fabrication, and verification. Preliminary patient evaluation, indications and contraindications for contact lenses. Basic fitting philosophies for all lens types. Lens care and patient education. Patient and practice management considerations.

**554(8540) Binocular Vision Anomalies (4)**

Prerequisite: Opt 531(8310) and 532(8340) or consent of instructor. The etiology, epidemiology, symptoms, signs, and course sequelae of the obstacles to binocular vision - sensory, integrative, and motor. The detection, diagnosis, prognosis, and orthoptic treatment of such anomalies. Clinical care of aniseikonia.

**564(8550) 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.

**596(8560) 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.

**556(8570) Ocular Disease II (4)**

Prerequisite: Opt 533(8370). The etiology, epidemiology, systems, signs, course sequelae and management of posterior segment ocular disease and the anomalies and ocular manifestations of systemic diseases. Disease, abnormalities and management of neurological conditions which affect the lids, pupils, extraocular muscles, optic nerve and visual system.

**560(8600) General Clinic II (6)**

Prerequisite: Opt 550(8500) and successful completion of all Fall semester third year course work. Same as General Clinic I.

**557(8610) Environmental Vision (2)**

This course considers the relationship of the eye and vision to all aspects of one's environment including home, work, recreation, and transportation. Emphasis will be placed on protecting the eye from injury and maximizing vision performance.

**563(8620) Contact Lenses II (3)**

Prerequisite: Opt 553(8520). Advanced contact lens fitting, theories, and clinical methods for astigmatic, presbyopic, keratoconic, and aphakic designs. Special considerations include the use of corneal topography, orthokeratology,

disposable lenses, lenses for extended wear and lenses for color deficiencies.

**582(8630) Practice Management III (3)**

Prerequisite: Opt 506(8030) and Opt 541(8230). 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.

**567(8640) Pediatric Optometry (3)**

Prerequisite: Opt 531(8380). 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.

**558(8650) Geriatric Optometry (2)**

(Same as Gerontology 458(6458)). 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.

**562(8660) Contact Lens Specialty Clinic (1)**

Prerequisite: Opt 553(8520) and successful completion of all Fall semester third year course work. The clinical examination and care of patients in the optometric specialty area of contact lenses.

**566(8670) Ocular Assessment (1)**

Prerequisite: Enrollment in General Clinic I or II. Discussion of the diagnosis and management of common clinic patient encounters via Socratic teaching techniques. Interns are encouraged to present actual cases which have been particularly challenging for them.

**559(8680) Ophthalmic Lasers (1)**

Principles and applications of lasers for ophthalmic use. Emphasis will be placed on demonstration where possible. Topics will include the principles, physics and safety concerns of ophthalmic lasers. Lasers used in retinal imaging, and in the care of glaucoma, cataract, refractive conditions, and cosmetic conditions will be discussed and demonstrated. Comanagement of patients requiring ophthalmic laser treatment will also be covered.

**561(8690) Pediatric/Binocular Vision Specialty Clinic (1)**

Prerequisite: Opt 554(8540) and successful completion of all Fall semester third year course work. The clinical examination and care of patients in the optometric specialty areas of binocular vision and pediatric vision.



**573(8700) UM-St. Louis Pediatric/Binocular Vision Patient Care (3)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients in pediatric/binocular vision clinic at the University of Missouri-St. Louis University Eye Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with 574(8710) Opt and Opt 575(8720).

**574(8710) UM-St. Louis Contact Lens Patient Care (3)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care in the contact lens clinic at the University of Missouri-St. Louis University of Eye Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 573(8700) and Opt 575(8720).

**575(8720) UMSL Eye Health Management Patient Care (1)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care in the eye health management clinic with ophthalmologists at the University of Missouri-St. Louis University Eye Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 573(8700) and Opt 574 (8710).

**576(8730) Optometric Center Patient Care (6)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients at the University of Missouri-St. Louis Optometric Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 577(8740).

**577(8740) Optometric Center Eye Health Management Patient Care (1)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients in the eye health management clinic with ophthalmologists at the University of Missouri-St. Louis Optometric Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 576(8730).

**572(8750) East St. Louis Center Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients at the East St. Louis Eye Center. This course fulfills one of the clinic courses required for graduation.

**8760 Harvester Eye Center Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients in a private practice setting. This course fulfills one of the clinic courses required for graduation.

**571(8770) Community Service Rotation in Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients at St. Louis area community health centers. This course fulfills one of the clinic courses required for graduation.

**586(8780) External Rotation in Institutional Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of primary care patients at external sites approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

**585(8790) External Rotation in Ocular Disease Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients with ocular disease at external sites approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

**579(8800) External Rotation in Pediatric/Binocular Vision Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of pediatric/ binocular vision patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

**578(8810) External Rotation in Contact Lens Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of contact lens patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

**592(8820) External Rotation in Low Vision Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of low vision patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

**570(8830) External Rotation in General Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of a general population of optometric patients at external sites approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

**580(8850) Supplementary Rotation in General Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of general population of optometric patients at the UM-St. Louis University Eye Center, UM-St. Louis Optometric Center, or the UM-St. Louis East St. Louis Eye Center.

**581(8840) External Supplementary Rotation in General Patient Care (7)**

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of general population of optometric patients at an external site approved by the College of Optometry's Externship Council.

**583(8870) Practice Management IV (2)**

Prerequisite: Successful completion of all first, second, and third year course work. Further in-depth discussion in practice management.

**593(8880) Clinic Seminar (1)**

Prerequisite: Successful completion of all first, second, and third year course work. Presentation and discussion of interesting clinical patients. Additional clinical testing techniques and concepts. Further discussion of patient data analysis - the process of determining diagnosis, prognosis, and therapy. Further discussions in the optometric specialties.

**594(8910) Topics in Geriatric Optometry (3)**

Prerequisite: Opt 558(8910). 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.

**591(8970) Geriatric Patient Care Delivery (3-6)**

Prerequisite: Consent of Geriatric Residency Instructors. Direct optometric patient care to a population that is largely geriatric. Emphasis will be on integrating specialty care available for these patients to provide comprehensive vision care. Two hours of direct patient care per week are required per hour of credit. In addition, the student will attend weekly supervisory meetings. May be repeated with consent of instructor for a total of 18 credits. Patient care will become more independent of direct supervision and the type of patients seen will be more varied with each repeat.

The following 400-level courses may be taken in the master of science or doctor of philosophy programs in Physiological Optics.

**400(6400) 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(6401) Visual Optics (3)**

Prerequisite: Opt 406(6406), Opt 505(8020), 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(6402) 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(6403) 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 (6404) Sensory Neuroscience (3)**

Prerequisite: Opt 405(6405), Opt 504(8040), 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(6405) Neuroanatomy (5)**

Prerequisite: Graduate standing. Detailed gross and microscopic anatomy of the human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system. Students may not receive credit for both Opt 405(6405) and Opt 504(8040).

**455(6455) Visual Information Processing (2)**

Prerequisite: Completion of core or consent of instructor. This course covers a variety of topics related to the computer modeling of visual problems, such as the detection of surfaces and three-dimensionality, the perception of color, and the encoding of motion. Computer models will be evaluated in terms of their efficiency, veridicality, and relation to biology.

**456(6456) 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.

**470(6470) 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(6490) 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(6497) Interdisciplinary Geriatric Care (2)**

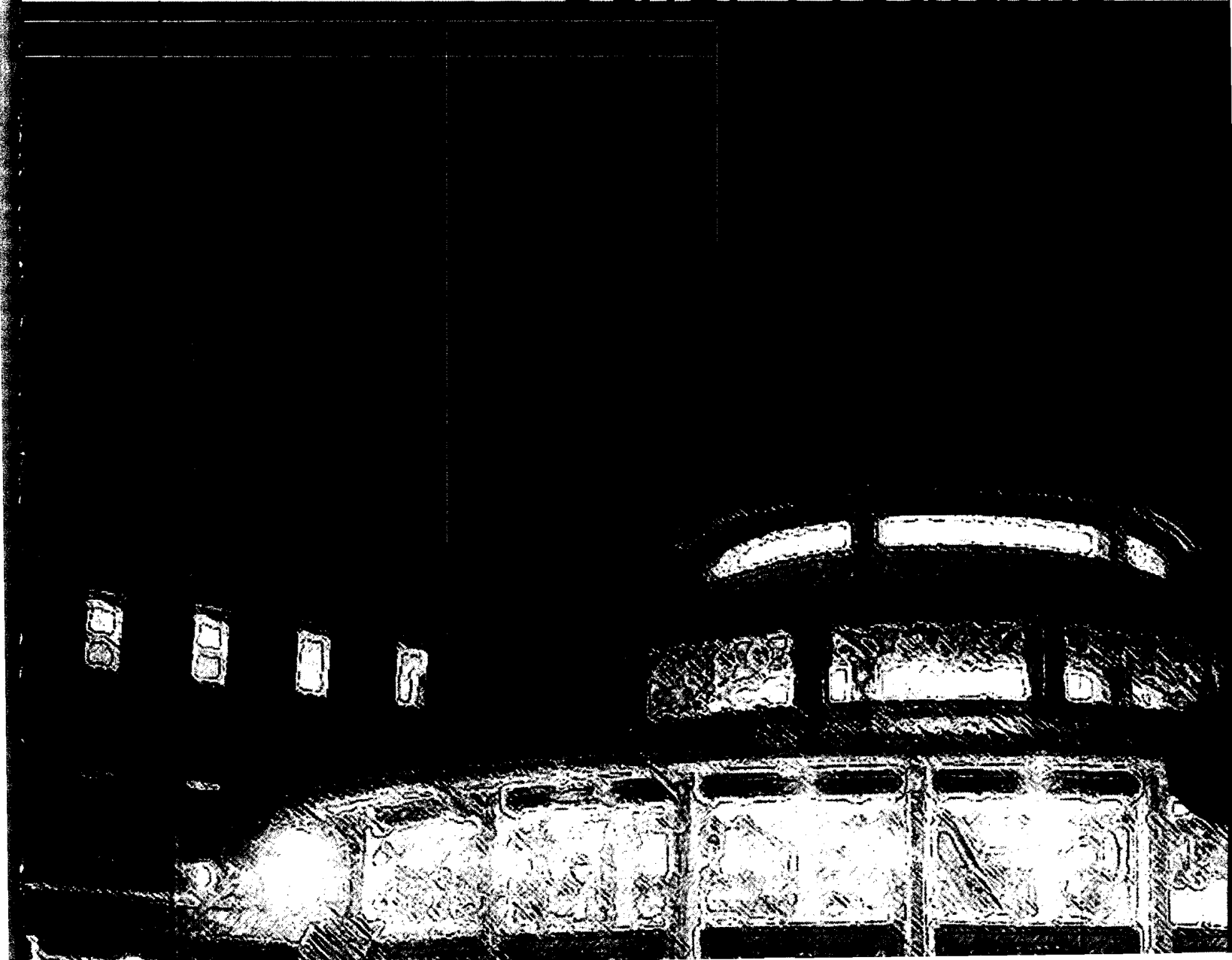
(Same as Gerontology 497(6497)). Prerequisite: Consent of instructor. Interdisciplinary approaches that address the medical and social needs of the elderly will be examined. Information about geriatric care and social issues affecting the well-being of older adults will be provided. Clinical, theoretical, and educational perspectives will be presented.

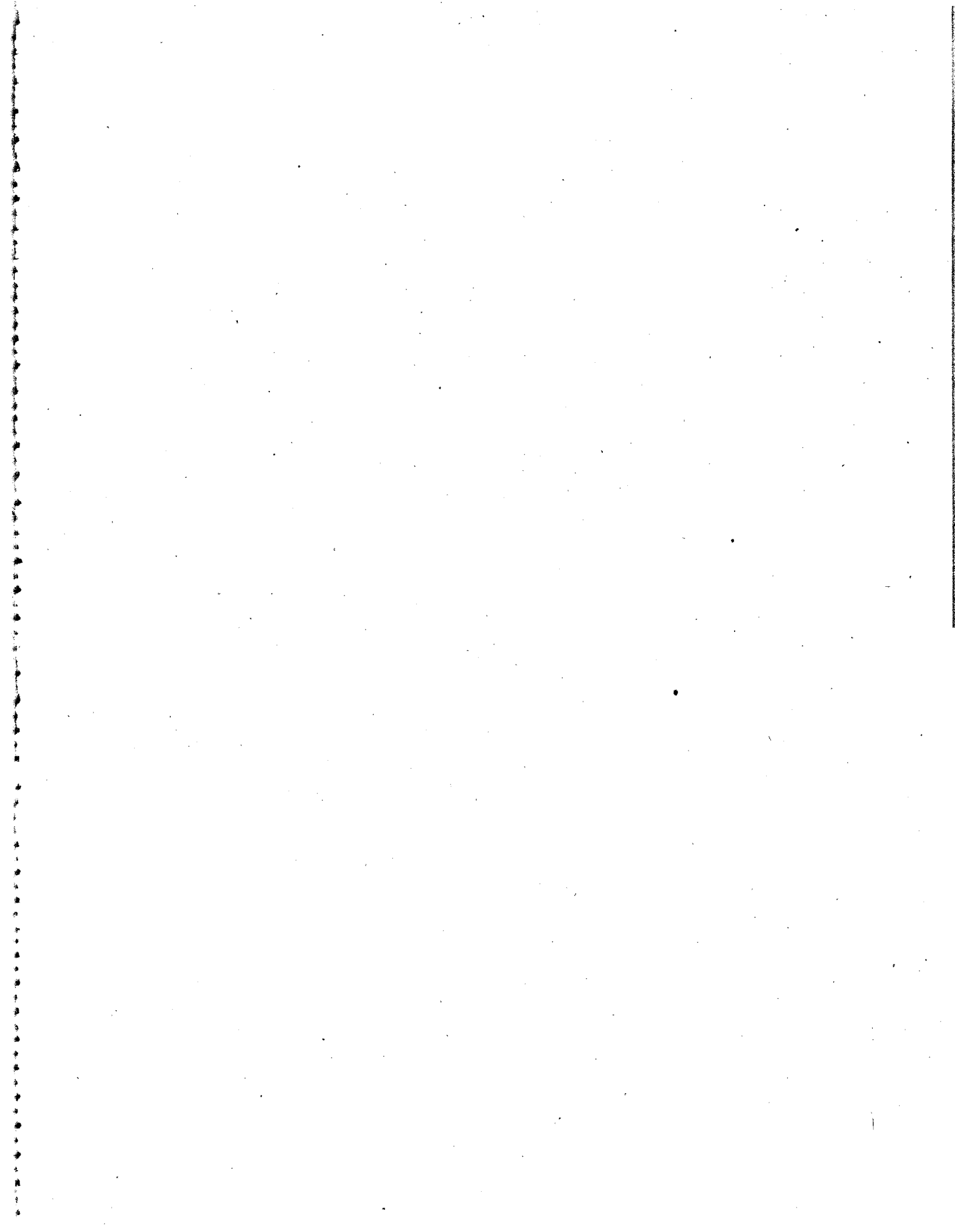
**499(6499) Current Topics in Optometry and Vision Science (1)**

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.



# Other Programs





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Undergraduate Engineering Program**

**Administration**

**William P. Darby**, Dean  
Ph.D., Carnegie Mellon University  
**Bernard J. Feldman**, Associate Dean  
Ph.D., Harvard University

**Faculty**

**Philip V. Bayly**, Professor and Advisor  
Ph.D., Duke University  
**Christopher I. Byrnes**, Professor  
Ph.D., University of Massachusetts  
**Richard A. Gardner**, Professor  
Ph.D., Purdue University  
**Phillip L. Gould**, Professor and Adviser  
Ph.D., Northwestern University  
**Raimo J. Hakkinen**, Professor  
Ph.D., California Institute of Technology  
**Thomas G. Harmon**, Professor  
Ph.D., Massachusetts Institute of Technology  
**Kenneth Jerina**, Professor  
D.Sc., Washington University  
**L. Norman Katz**, Professor  
Ph.D., Massachusetts Institute of Technology  
**David A. Peters**, Professor  
Ph.D., Stanford University  
**William F. Pickard**, Professor  
Ph.D., Harvard University  
**Daniel L. Rode**, Professor  
Ph.D., Case Western Reserve University  
**Shankar M. L. Sastry**, Professor  
Ph.D., University of Toronto  
**Barbara A. Shrauner**, Professor  
Ph.D., Harvard University (Radcliffe)  
**Barry E. Spielman**, Professor  
Ph.D., Syracuse University  
**Srinivasan Sridharan**, Professor  
Ph.D., University of Southampton  
**Kevin Z. Truman**, Professor and Adviser  
Ph.D., University of Missouri - Rolla  
**James C. Ballard**, Associate Professor  
M.A., Washington University  
**Roger D. Chamberlain**, Associate Professor  
D.Sc., Washington University  
**Brian A. Wrenn**, Assistant Professor  
Ph.D., University of Illinois  
**Ricardo L. Actis**, Adjunct Professor  
D.Sc., Washington University  
**Harold J. Brandon**, Affiliate Professor  
D.Sc., Washington University  
**Alan C. Wheeler**, Affiliate Professor  
Ph.D., Stanford University

**Mario P. Gomez**, Adjunct Professor  
Ph.D., Stanford University  
**William J. Murphy**, Adjunct Professor  
D.Sc., Washington University  
**Matthew G. Dreffke**, Adjunct Associate Professor  
M.S., Washington University  
**John D. Corrigan**, Adjunct Professor and Adviser  
Ph.D., University of Missouri-Rolla

**General Information**

The Joint Undergraduate Engineering Program of UM-St. Louis and Washington University was approved in 1993 by the University of Missouri and the Coordinating Board for Higher Education. The program is designed to offer course work beyond the pre-engineering courses at UM-St. Louis and the area community colleges. Pre-engineering and general education courses are offered at UM-St. Louis, and upper-level engineering courses are offered in the evenings and on Saturdays on the Washington University campus: this schedule permits students to co-op during the day at local engineering firms. Students will be admitted to the upper-division program only after they have completed an acceptable pre-engineering program. They can earn a bachelor of science in civil engineering (B.S.C.E.), a bachelor of science in electrical engineering (B.S.E.E.), or a bachelor of science in mechanical engineering (B.S.M.E.).

The B.S.C.E., the B.S.E.E., and the B.S.M.E. are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410)347-7700.

**Program Goal**

The goal of the UMSTL/WU Joint program is consistent with the mission of UM-St. Louis, which is to provide a high-quality education to enhance the occupational and professional careers of citizens in the entire region, including the minorities and economically disadvantaged population and to provide a well-trained, sophisticated work force for the St. Louis region. The partnership is an appropriate way for Washington University to share its campus, resources, and personnel with the citizens of Missouri.

**Degree Program Educational Objectives**

**B.S. in Civil Engineering**

The mission of the Civil Engineering Program is to provide the students with a high quality civil engineering education. So these students will have the ability to practice civil engineering in the areas of structural, transportation, environmental engineering and construction. Also to make the students aware of the

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critical issues pertaining to the civil engineering profession and its impact on society. Graduates of the program will have:

- an ability to apply knowledge of basic scientific, mathematical and engineering principles to solve Civil Engineering Problems in its four sub-disciplines,
- an ability to design and conduct experiments as well as to analyze data,
- an ability to conceive and complete a comprehensive design project in one of the sub-disciplines using design standards in the context of realistic constraints,
- a sound understanding of the issues pertaining to professional practice and societal implications thereof.
- the ability to contribute as team members and leaders in the workplace, as well as in the community,
- an ability to communicate effectively through oral, written, visual, and graphic media,
- an ability to function in multi-disciplinary engineering teams in the design of a major project,
- an understanding of the need for life-long learning, professional, and ethical responsibility,
- an awareness of regional and global opportunities and challenges, contemporary issues and professionalism through exposure to practicing civil engineer and,
- an ability to relate academic learning to practical experience so that they enhance each other.

**B.S. in Electrical Engineering**

The mission of the Electrical Engineering program is to instill knowledge and understanding of the fundamental principles necessary to become proficient in electrical circuits, computer systems, digital and linear electronics, electromagnetic engineering, signal analysis and electrical laboratory methods. Graduates will have:

- an ability to design and analyze advanced and complex systems in at least one of the following areas:  
 Solid-state devices and circuits  
 Control components and systems  
 Communications  
 Computer software and hardware  
 Electrical power and energy.  
 This ability will include the integration of thoroughly mastered mathematics and science in solving engineering problems,
- a proficiency with experimental instrumentation and techniques spanning areas of electrical energy systems and digital systems. This proficiency will include the ability to design and conduct

experiments, as well as ability to analyze and interpret data,

- a proficiency in engineering design of a system, component, or process to meet desired needs,
- the ability to communicate, both orally and in writing, with special emphasis on technical writing,
- an ability to interact effectively with other people by providing experience in working with other students in teams as both a team leader and a team member,
- an understanding and appreciation of one's professional and ethical responsibility and historical and contemporary global and societal issues and
- a recognition of the need for and an ability to engage in life-long learning.

**B.S. in Mechanical Engineering**

Mechanical engineers are concerned with the technologies of manufacturing, energy conversion, machine design, instrumentation and control of physical processes and the environment. The mission of this undergraduate program is to prepare students for professional practice with a solid, scientifically-grounded foundation in all four major stems of mechanical engineering: mechanisms and mechanical design, dynamics and control, fluid mechanics, and thermal science and materials science. The following objectives or goals are key focal points in the mechanical engineering program. Graduates will:

- apply fundamental scientific and engineering concepts involving dynamics and systems, material science, mechanics and solids and the thermal-fluid sciences in order to identify, formulate and solve a variety of mechanical engineering problems,
- design, modify, conduct, and analyze experiments in the areas of thermal-fluid sciences, solid mechanics, and dynamical systems,
- directly perform system, process and component selection in order to satisfy specific engineering-related needs through the application of mechanical design philosophy in engineering practice,
- communicate in oral and written presentations using graphic and/or visual media appropriate for an engineering business environment,
- operate productively in individual or multidisciplinary, team-oriented projects,
- be exposed to modern developments, products and tools as they relate to engineering practice,
- be exposed to practicing engineers and their jobs and be taught the importance of high ethical and professional standards,
- obtain the broad-based education necessary to understand the impact of engineering solutions in their global and societal contexts,
- recognize the need for, and obtain tools necessary to engage in, life-long learning,



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- be afforded opportunities to participate in cooperative education, internships, research experiences or international exchange programs in order to gain experience beyond the classroom.

**Admission**

Admission to candidacy for these degrees is granted jointly by the University of Missouri-St. Louis and Washington University.

Normally admission is granted to persons who have completed the pre-engineering program with a minimum grade point average of 2.75 over all mathematics, chemistry, physics, and introductory engineering courses (statics and dynamics). Students with less than a 2.75 grade point average, but at least a C in all their science and math courses, may be admitted on a probationary basis. These students must pass a mathematics workshop with a grade of B or better, and then pass JEMT 217(3170) (Engineering Mathematics) and JEE 180(2800) (Introduction to Electrical Networks) with a C- or better, in order to continue in the program.

**Degree Requirements****Bachelor of Science in Civil Engineering****Bachelor of Science in Electrical Engineering****Bachelor of Science in Mechanical Engineering**

A program of 137 semester hours is required for the Bachelor of Science in Civil Engineering, a program of 127 semester hours is required for the Bachelor of Science in Electrical Engineering, and a program of 139 semester hours is required for the Bachelor of Science in Mechanical Engineering, as shown below

All majors must complete the University General Education requirements, the Pre-Engineering Requirements and the Core Engineering Requirements. Except with special permission of the program faculty, to be eligible to take the other upper-level engineering courses (those with course numbers starting with the letter "J"):

All students must first complete JEMT 217(3170), Engineering Mathematics, with a minimum grade of C-.

Mechanical and Electrical Engineering majors must also complete JEE 180(2800), Introduction to Electrical Networks with a minimum grade of C-.

Civil engineering majors must complete either JEE 180(2800), Introduction to Electrical Networks, or JCHE 343(4430), Environmental Engineering Chemistry, with a minimum grade of C-.

A minimum grade of C- is necessary to meet the prerequisite requirement for any course.

**Pre-Engineering Requirements**

**Mathematics 80(1800)**, Analytic Geometry/Calculus I  
**Mathematics 175(1900)**, Analytic Geometry/Calculus II  
**Mathematics 180(2000)**, Analytic Geometry/Calculus III  
**Mathematics 202(2020)**, Differential Equations  
**Chemistry 11(1111)**, Introductory Chemistry I  
**Chemistry 12(1121)**, Introductory Chemistry II  
**Physics 111(2111)**, Physics: Mechanics and Heat  
**Physics 112(2112)**, Physics: Electricity, Magnetism and Optics  
**Engineering 144(2310)**, Statics  
**Engineering 145(2320)**, Dynamics  
**English 10(1100)**, Composition

**Humanities and Social Sciences Electives**

The student's choice of humanities and social sciences electives must meet both the UM-St. Louis General Education Requirements and the Humanities and Social Sciences Requirements of the Joint Undergraduate Engineering Program. Check with your adviser for details. In particular:

- 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.

**Engineering Core Requirements**

**JCS 36(1360)**, Introduction to Computing  
**JEMT 217(3170)**, Engineering Mathematics  
**JEC 210(3100)**, Engineering Communications  
**JME 220(3200)**, Thermodynamics  
**JME 331/JEE 331(4310)**, Control Systems I\*  
**JEE 180(2800)**, Introduction to Electrical Networks\* OR  
**JCHE 343(4430)**, Environmental Engineering Chemistry  
**JEE 150(2500)**, Electrical Laboratory I\*

\*Required for electrical and mechanical engineering majors only.

**Civil Engineering Major Requirements**

**JCE 45(1451)**, Engineering Graphics  
**JCE 116(2160)**, Surveying  
**JCE 241(3410)**, Structural Analysis  
**JCE 242(3420)**, Structural Design

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JCE 252(3520), Environmental Engineering Science  
 JCE 276(3760), Open Channel Hydraulics  
 JCE 319(4190), Soil Mechanics  
 JCE 320(4200), Soil Exploration and Testing  
 JCE 374(4740), Economic Decisions in Engineering  
 JCE 375(4750), Introduction to Urban Planning  
 JCE 376(4760), Site Planning and Engineering OR  
 JCE 382(4820), Design of Water Quality Control  
 Facilities  
 JCE 384(4840), Probabilistic Methods in Civil  
 Engineering Design  
 JCE 399(4990), Senior Civil Engineering Seminar  
 JCE 372(4720), Legal Aspects of Construction OR  
 JEP 361(4610), Introduction to Environmental Law and  
 Policy  
 JME 141(2410), Mechanics of Deformable Bodies  
 JME 236 (3251), Materials Science  
 JCE 236(3360), Civil Engineering Materials Lab  
 JME 270(3700), Fluid Mechanics  
 JME 280(3721), Fluid Mechanics Laboratory  
 Civil Engineering Electives (200-399)

**Electrical Engineering Major Requirements**

JEMT 226(3261), Probability and Statistics for  
 Engineering  
 JEE 160(2609), Digital Computers I  
 JEE 190(2900), Introduction to Digital and Linear  
 Electronics  
 JEE 214(3149), Engineering Electromagnetic I:  
 Fundamentals  
 JEE 227(3270), Power, Energy, and Polyphase Circuits  
 JEE 279(3790), Signal Analysis for Electronic Systems  
 and Circuits  
 JEE 316(4160), Electrical Energy Laboratory  
 JEE 355(4550), Digital Systems Laboratory  
 JEE 380(4800), Senior Design  
 Electrical Engineering Electives (200-399)

**Mechanical Engineering Major Requirements**

JEMT 226(3261), Probability and Statistics for  
 Engineering  
 JME 041A(1414), Introduction to Engineering Design:  
 Project  
 JME 041B(1415), Introduction to Engineering Design:  
 CAD  
 JME 141(2410), Mechanics of Deformable Bodies  
 JME 221(3210), Energetics for Mechanical Engineers  
 JME 224(3221), Mechanical Design and Machine  
 Elements  
 JME 270(3700), Fluid Mechanics  
 JME 280(3721), Fluid Mechanics Laboratory  
 JME 271(3710), Principles of Heat Transfer  
 JME 281(3722), Heat Transfer Laboratory  
 JME 317(4170), Dynamic Response of Physical Systems  
 JME 318(4180), Dynamic Response Laboratory  
 JME 390(4040), Mechanical Engineering Design Project  
 JME 395(4041), Current Topics in Mechanical  
 Engineering Design  
 Mechanical Engineering Electives (200-399)

**Graduation Requirements**

In addition to the requirements of the University of  
 Missouri-St. Louis that apply to all candidates for  
 undergraduate degrees, the student must earn a minimum  
 campus grade point average of 2.0 and a minimum grade  
 point average of 2.0 for all engineering courses attempted  
 at the University of Missouri-St. Louis.

**Minor in Environmental Engineering Science**

A program of 18 semester hours is required to earn the  
 minor in environmental engineering science. The minor is  
 designed to provide formal recognition to recipients of  
 bachelor's degrees in civil, electrical, or mechanical  
 engineering that they have acquired the education  
 necessary for entry-level careers as environmental  
 professionals. They will also have a solid foundation to  
 undertake graduate-level education in environmental  
 engineering science.

Enrollment in all courses in the minor in environmental  
 engineering science is limited to students who have been  
 admitted to candidacy for the bachelor of science in civil  
 engineering, the bachelor of science in electrical  
 engineering, or the bachelor of science in mechanical  
 engineering in the UM-St. Louis/ Washington University  
 Joint Undergraduate Engineering Program. The minor may  
 be awarded only to students who earn the bachelor of  
 science in civil engineering, the bachelor of science in  
 electrical engineering, or the bachelor of science in  
 mechanical engineering in the UM-St. Louis/ Washington  
 University Joint Undergraduate Engineering Program.

JCHE 343(4430), Environmental Engineering Chemistry  
 JCE 252(3520), Environmental Engineering Science (EE,  
 ME majors) OR  
 JCE 375(4750), Introduction to Urban Planning (CE  
 majors)  
 JCE 308(4080), Environmental Engineering Laboratory -  
 Water/Soil OR  
 JCE 309(4090), Environmental Engineering Laboratory -  
 Air  
 JCE 382(4820), Design of Water Quality Control  
 Facilities  
 JEP 337(4370), Environmental Risk Assessment  
 JEP 361(4610), Introduction to Environmental Law and  
 Policy

**Engineering Design and Engineering Science  
 Requirements**

The number of semester hours assigned to each  
 engineering course in the Joint Undergraduate Engineering  
 Program is further divided into hours of engineering  
 design, engineering science, and basic science content.  
 Engineering topics is the sum of engineering science hours  
 and engineering design hours. The following table shows

the design hours and engineering science hours for courses in the engineering programs.

Each engineering student must complete a curriculum that contains at least 48 hours of engineering topics semester hours, including all courses: pre-engineering requirements, engineering core requirements, major requirements, and electives. Civil, electrical, and mechanical engineering majors should consult with their advisers to select electives at the 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.

#### **Fees**

Students register on the UM-St. Louis campus and pay UM-St. Louis fees plus an engineering fee for both pre-engineering and engineering courses. Limits on enrollments are determined by the availability of resources.

#### **Career Outlook**

Engineering is one of the few careers in which the bachelor's degree is a professional degree. Students earning a bachelor of science degree in one of the engineering disciplines are well qualified for entry-level engineering positions in a variety of businesses, industries, consulting firms, and government agencies. As society becomes increasingly dependent on technology, the outlook for all engineering disciplines becomes increasingly bright. Engineering careers typically rank at, or very near, the top of virtually any published rating of promising jobs for the 21<sup>st</sup> Century. Besides tackling challenging technical problems, roughly two-thirds of all engineers will have some level of management responsibility within ten years of receiving their bachelor's degrees. Many practicing engineers will eventually continue their education by pursuing graduate degrees on a part-time basis. Typical areas of graduate study include all advanced technical and scientific fields and management.

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Course Number	Semester Hours	Engineering Design	Engineering Science	Course Number	Semester Hours	Engineering Design	Engineering Science
Engr 10 (1010)	1.0	0.0	0.0	JEE 316 (4160)	3.0	1.5	1.5
Engr 144 (2310)	3.0	0.0	3.0	JEE 321 (4210)	3.0	1.2	1.8
Engr 145 (2320)	3.0	0.0	3.0	JEE 327 (4270)	3.0	1.0	2.0
JCE 45 (1451)	3.0	1.0	2.0	JEE 331 (4310)	3.0	1.0	2.0
JCE 116 (2160)	3.0	0.0	3.0	JEE 332 (4320)	3.0	1.0	2.0
JCE 236 (3360)	1.0	0.0	1.0	JEE 345 (4450)	3.0	1.0	2.0
JCE 241 (3410)	3.0	0.5	2.5	JEE 355 (4550)	3.0	2.2	0.8
JCE 242 (3420)	3.0	2.5	0.5	JEE 358 (4580)	3.0	1.5	1.5
JCE 252 (3520)	3.0	1.0	2.0	JEE 360 (4600)	3.0	1.3	1.7
JCE 274 (3740)	3.0	0.0	3.0	JEE 364 (4640)	3.0	1.0	2.0
JCE 276 (3760)	3.0	0.5	2.5	JEE 368 (4681)	3.0	1.0	2.0
JCE 300 (4000)	1.0-6.0	Varies	Varies	JEE 380 (4800)	3.0	3.0	0.0
JCE 308 (4080)	3.0	0.0	2.0	JEMT 217 (3170)	4.0	0.0	0.0
JCE 309 (4090)	3.0	0.0	0.0	JEMT 226 (3261)	3.0	0.0	0.0
JCE 310 (4100)	3.0	3.0	0.0	JEP 281 (3810)	3.0	1.5	1.5
JCE 319 (4190)	3.0	1.0	2.0	JEP 337 (4370)	3.0	0.8	2.2
JCE 320 (4200)	1.0	0.0	1.0	JEP 361 (4610)	3.0	0.0	0.0
JCE 339 (4390)	3.0	1.0	2.0	JEE 364 (4640)	3.0	1.0	2.0
JCE 360 (4600)	3.0	3.0	0.0	JME041A (1414)	2.0	1.5	0.5
JCE 364 (4640)	3.0	1.5	1.5	JME041B (1415)	2.0	0.0	2.0
JCE 369 (4690)	3.0	3.0	0.0	JME 141 (2410)	3.0	0.5	2.5
JCE 372 (4720)	3.0	0.0	0.0	JME 220 (3200)	3.0	0.0	3.0
JCE 373 (4730)	3.0	1.0	2.0	JME 221 (3210)	3.0	0.0	3.0
JCE 374 (4740)	3.0	0.8	2.2	JME 224 (3221)	4.0	4.0	0.0
JCE 375 (4750)	3.0	1.5	1.5	JME 225 (3250)	4.0	0.0	4.0
JCE 376 (4760)	3.0	3.0	0.0	JME 236 (3251)	3.0	0.0	3.0
JCE 377 (4770)	3.0	0.0	0.0	JME 262 (3611)	3.0	0.0	3.0
JCE 378 (1780)	3.0	1.0	2.0	JME 270 (3700)	3.0	0.0	3.0
JCE 382 (4820)	3.0	3.0	0.0	JME 271 (3710)	3.0	0.0	3.0
JCE 384 (4840)	3.0	1.5	1.5	JME 280 (3721)	1.0	0.0	1.0
JCE 386 (4860)	3.0	3.0	0.0	JME 281 (3722)	1.0	0.0	1.0
JCE 394 (4940)	3.0	0.0	3.0	JME 300 (4000)	1.0-6.0	Varies	Varies
JCE 399 (4990)	1.0	0.0	0.0	JME 316 (4160)	3.0	0.5	2.5
JCHE 343 (4430)	3.0	0.0	2.0	JME 317 (4170)	4.0	1.0	3.0
JCS 36 (1360)	4.0	2.0	2.0	JME 319 (4190)	3.0	0.0	0.0
JEC 210 (3100)	3.0	0.0	0.0	JME 324 (4240)	3.0	0.5	2.5
JEE 150 (2500)	3.0	1.0	2.0	JME 325 (4250)	3.0	2.0	1.0
JEE 160 (2609)	3.0	1.5	1.5	JME 329 (4290)	3.0	1.0	2.0
JEE 180 (2800)	3.0	0.8	2.2	JME 331 (4310)	3.0	1.0	2.0
JEE 190 (2900)	3.0	0.8	2.2	JME 350 (4500)	3.0	1.0	2.0
JEE 214 (3149)	3.0	1.0	2.0	JME 353 (4530)	3.0	3.0	0.0
JEE227 (3270)	3.0	1.3	1.7	JME 372 (4720)	3.0	0.0	3.0
JEE 262 (3629)	3.0	1.0	2.0	JME 374 (4740)	3.0	1.5	1.5
JEE279 (3790)	3.0	1.0	2.0	JME 376 (4760)	3.0	0.5	2.5
JEE 280 (3800)	3.0	1.0	2.0	JME 378 (4780)	3.0	1.5	1.5
JEE 290 (3900)	3.0	1.0	2.0	JME 381 (4810)	3.0	0.5	2.5
JEE 292 (3920)	3.0	1.0	2.0	JME 382 (4820)	3.0	0.5	2.5
JEE 310 (4100)	3.0	1.0	2.0	JME 390 (4040)	4.0	4.0	0.0
JEE 314 (4140)	3.0	1.0	2.0	JME 395 (4041)	1.0	1.0	0.0

**For Further Information**

For information about enrolling in this program, please contact the UM-St. Louis/Washington University Joint Undergraduate Engineering Program at (314) 516-6800, or the Washington University School of Engineering and Applied Science at (314) 935-6100.

## Course Descriptions

Prerequisites may be waived by consent of the joint program faculty.

### Engineering

#### 10(1010) Introduction to Engineering (1)

Course consists of a series of lectures on engineering, fields of study within engineering, the engineering profession, types of work activities, and professional registration. Introduction to team building and the teamwork approach to projects and problem-solving common in an engineering curriculum and in the engineering profession. Guest lecturers will participate.

#### 144(2310) Statics (3)

Prerequisites: Math 175(1900) and Physics 111(2111). Statics of particles and rigid bodies. Equivalent systems of forces. Distributed forces: centroids. Applications to trusses, frames, machines, beams, and cables. Friction. Moments of inertia. Principle of virtual work and applications.

#### 145(2320) Dynamics (3)

Prerequisite: Engineering 144(2310). Review of vector algebra and calculus. Kinematics of a particle. Newton's laws and the kinetics of a particle. Work and energy. Impulse and momentum. Kinematics of rigid bodies. General theorems for systems of particles. Kinetics of rigid bodies. The inertia tensor.

All courses listed below require admission to candidacy for a degree in the UM-St. Louis/ Washington University Joint Undergraduate Engineering Program. Prerequisites may be waived by consent of the Joint Program faculty. Audits are not permitted.

### Chemical Engineering

#### JCHE 343(4430) Environmental Engineering Chemistry (3)

Prerequisite: Chemistry 12(1121). Introduction to the engineering aspects of air, water, soil, and geosphere chemistry. Toxicology and hazardous wastes. Pollution sources, dynamics, and ultimate fates. Sampling, control strategies, and regulations.

### Civil Engineering

#### JCE 045(1451) Engineering Graphics (3)

Prerequisite: Junior standing. Techniques in graphic communication and problem solving and design utilizing freehand sketches and computer graphics. Principles of orthographic projection, pictorial drawing, sectional views, dimensioning and tolerancing. Computer drawing and

modeling: layout techniques, editing commands, drawing management, and plotting. Design project: individual or small group assignments, the design process, preliminary sketches, analysis, project modeling, detail and assembly drawings. This course is required for civil engineering majors.

#### JCE 116(2160) 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 236(3360) Civil Engineering Materials Lab (1)

Testing procedures, testing machines, use of laboratory equipment, analysis of data, and presentation of results. Laboratory tests on static tension, compression, bending, and torsion of metal specimens. Tests on wood. Determination of compressive and tensile strengths of concrete. Design of concrete mixes and verification of strength. Experiments in advanced topics in mechanics of materials.

#### JCE 241(3410) Structural Analysis (3)

Prerequisite: JME 141(2410). A review of the calculation of reactions, shear, and bending moment. Definition, construction and use of influence lines. Deflections for statically determinate structures using the virtual work method. Analysis of statically indeterminate trusses using the method of consistent deformations. Analysis of continuous beams and planar frames using the consistent deformation, slope-deflection and moment distribution methods. The influence of span on strength, stability, and economy of structures. An introduction to structural analysis software.

#### JCE 242(3420) Structural Design (3)

Prerequisites: JME 225(3250) and JCE 241(3410). 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.

*Other Programs*  
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**JCE 252(3520) Environmental Engineering Science (3)**  
 Prerequisite: JME 270(3700) (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(3740) Hydraulics and Hydrology (3)**  
 Prerequisite: JME 270(3700) (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 276(3760) Open Channel Hydraulics (3)**  
 Prerequisite: JME 270(3700). The principles of open channel flow will be discussed and illustrated with practical examples. Methods for channel design, storm sewer, culvert and bridge analysis will be presented using the concepts of gradually-varied, steady flow. A design project using computerized analysis and design is used to implement concepts in a large practical application.

**JCE 300(4000) Independent Study (1-6)**  
 Prerequisites: Junior standing and consent of faculty adviser. Independent investigation of a civil engineering topic of special interest to a student performed under the direction of a faculty member.

**JCE 308(4080) Environmental Engineering Laboratory - Water/Soil (3)**  
 Prerequisite: JCHE 343(4430). 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(4090) Environmental Engineering Laboratory - Air (3)**  
 Prerequisite: JCHE 343(4430). 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(4100) Design of Timber Structures (3)**  
 Prerequisites: JCE 241(3410) and JCE 242(3420). 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 316(4160) Introduction to Elasticity (3)**  
 Prerequisites: JCE 141. Introduction to elasticity: indicial notation, stress and strain, material laws. Plane stress and plane strain problems and illustrations. Torsion of prismatic bars. Energy principles: virtual work, potential energy and complementary energy theorems, reciprocal theorems. Introduction to plates and shells.

**JCE 319(4190) Soil Mechanics (3)**  
 Prerequisites: JME 141(2410) and JME 270(3700). Basic geology as it relates to index and classification properties of soil. Exploration, sampling, and testing techniques. Soil compaction and stabilization. Capillary, shrinkage, swelling, and frost action in soils. Effective stress, permeability, seepage, and flow nets. Consolidation and consolidation settlements. Stresses in soil. Time rate of consolidation. Mohr's circle, stress path, and failure theories. Shearing strength of sand and clays.

**JCE 320(4200) Soil Exploration and Testing (1)**  
 Prerequisite: JCE 319(4190) (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 325(4250) Professional Engineering Services (3)**  
 Prerequisites: Senior standing. An introduction to the use and integration of professional services for Project Design and Delivery Systems in construction projects will be presented. The relationship between owner and the professional service personnel, architects, engineers, contractors and construction managers will be explored in detail. The role, techniques, procedures, management principles, and professional responsibilities will be presented and discussed. Real projects will be presented to illustrate the various project delivery systems used in design and construction. These points will be illustrated through a semester long team project.

**JCE 337(4370) Matrix Structural Analysis (3)**  
 Prerequisites: JCE 241(3410). This course will cover analysis of framed structures, planar and 3-D, using beam-column elements and shear walls and floors. Flexibility and stiffness analyses are performed by generating the matrices and carrying through the analyses step by step with a matrix manipulator program. A commercially available program is used to check at least one problem.

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**JCE 339(4390) Computational Structural Mechanics (3)**

This course is an introduction to analysis and design of structures using finite elements. The topics covered include: elementary theory of elasticity, plate theories and buckling of plate structures, finite element formulation of 2-D elasticity and plate problems. Hands on use of commercial finite element software is emphasized throughout. A major design project is included.

**JCE 358(4580) Structural Stability (3)**

Prerequisites: Senior standing. This course will cover the following topics: classification of instability phenomena; imperfection sensitivity; illustration with mechanical models; systems with finite degrees of freedom; postbuckling analysis using perturbation techniques; stability and nonlinear behavior of arches, plates, and cylindrical shells; nonconservation problems; and numerical methods.

**JCE 360(4600) Highway and Traffic Engineering (3)**

Prerequisites: JCE 116(2160) and senior standing. Study of basic highway design and traffic circulation principles. Study of design elements of alignment, profile, cross-section, intersection types, interchange types, and controlled-access highways. Investigation of functional highway classification. Traffic volume, delay and accident studies. Analysis of highway capacity of uninterrupted flow, interrupted flow. Freeway, ramp, and weaving sections.

**JCE 362(4620) Transportation Planning (3)**

Prerequisites: Senior standing. This course will cover the following topics: fundamentals of multimodal transportation planning; urban study components, including study design and organization, origin-destination analysis, traditional traffic model processes of trip generation, distribution and assignment; urban transportation entity analysis (shopping centers, terminals, etc.); state and regional study components, including state and national needs and capital improvement programs, regional funding capabilities and related national transportation policy and legislative acts.

**JCE 364(4640) Foundations (3)**

Prerequisites: JCE 242(3420), JCE 319(4190) and JCE 320(4200). 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 365(4650) Airport Planning and Construction (3)**

Prerequisites: Senior standing. Fundamentals of airport planning location, construction, and legislative and fiscal implementation. Location principles with respect to the region and the site. Analysis of air travel demand models.

Air control systems and navigation principles affecting airport design. Design of the site for runway, taxiway, and terminal location. Pavement and construction principles with respect to design. Current federal policy and fiscal programming for airport planning. Principles of integration with ground transport systems.

**JCE 366(4660) Advanced Design of Concrete Structures (3)**

Prerequisites: JME 225(3250), JCE 241(3410), JCE 242(3420). Flexural behavior and design, strength and deformation of rectangular and nonrectangular sections, shear strength, beam-columns, long columns, slab systems, design of frames, and footings will be covered.

**JCE 369(4690) Construction Management Project (3)**

Prerequisites: JCE 373(4730) and JEP 281(3810). 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(4720) Legal Aspects of Construction (3)**

Prerequisite: Junior standing or permission of instructor. A survey of the legal problems of the construction manager. Including but not limited to, liability in the areas of contracts, agency, torts, assurance, bad judgment and oversight.

**JCE 373(4730) Construction Operations and Management (3)**

Prerequisite: Junior standing. The construction industry, its development, components, and organization. Contracting methods. Applications and limitations. Selection of equipment using production analysis and economics. Field engineering, including form design, shoring, embankment design. Purchasing and change orders. Safety and claims.

**JCE 374(4740) Economic Decisions in Engineering (3)**

Prerequisite: Junior standing. Principles of economics involved in engineering decisions. Decisions between alternatives based on the efficient allocation of resources. Topics include the time element in economics, analytical techniques for economy studies, and taxes.



**JCE 375(4750) 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(4760) 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 377(4770) Decision Analysis and Construction Applications (3)**

Introduction and application of systems engineering and statistics toward solving construction and civil engineering problems. Included are the following topics: network and linear programming models, construction and evaluation of decision trees to clarify choice of actions under uncertainty, probability distributions, sample statistics, linear regression models, sampling plans for quality assurance. Personal computer usage emphasized for problem solving.

**JCE 378(4780) Knowledge-Based Expert Systems in Civil Engineering (3)**

Prerequisite: JCS 36(1360) 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 380(4800) Computer Applications in Construction Management (3)**

Prerequisite: JCE 373(4730). A comprehensive study of computer applications in construction management. Topics include: configuration of hardware/software requirements for the management of a typical project; application programs used in project data base management and project schedule/cost control systems; data management techniques and development of custom reports for use in project management and control.

**JCE 382(4820) Design of Water Quality Control Facilities (3)**

Prerequisite: JCE 252(3520). 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(4840) Probabilistic Methods in Civil Engineering Design (3)**

Prerequisite: JCE 242(3420) (may be taken concurrently). Probability concepts. Analytical models of random phenomena. Functions of random variables. Estimating parameters from data. Empirical determination of distribution models. Regression and correlation analyses. Monte Carlo simulation. Detailed examples of the application of probabilistic methods to structural, transportation, hydrologic, and environmental system design.

**JCE 386(4860) Design of Masonry Structures (3)**

Prerequisite: JCE 242(3420). History of masonry construction; masonry materials and components; loadings for masonry structures; fundamentals of working stress design; fundamentals of strength design; design of gravity load resisting elements; design of lateral load resisting elements; details, connections and joints; design of low-rise buildings; design of high-rise buildings; design for water penetration resistance; quality control/inspection.

**JCE 394(4940) Public Transportation Technology (3)**

Prerequisites: JCE 362(4620). An in-depth study and analysis of conventional and emerging public transportation state-of-the-art systems. Brief review of conventional transportation systems, study of bus-rapid systems, demand responsive bus systems, personal rapid transit, dual-mode, guide-way and automated freeway systems, and high-speed rail TACV systems. Review of current Department of Transportation Administration-Urban Mass Transportation Administration New Systems Research and Demonstration Programs. Students will be responsible for a major project endeavor at conclusion of course.



**JCE 399(4990) Senior Civil Engineering Seminar**

Prerequisite: Senior standing. Students will research assigned topics of importance to graduates entering the Civil Engineering profession and prepare oral presentations and a written report. Student presentations will be augmented by lectures from practicing professionals. Topics include professional registration, early career development, graduate study, effective presentations, construction quality, and case histories of civil engineering projects.

**Computer Science****JCS 36(1360) Introduction to Computing (4)**

Workshop course (lectures and supervised laboratory sessions) covering the fundamental organization and operating principles of digital computers and the systematic design and development of well-structured programs. After an intensive exposure to algorithmic principles and programming techniques and practices using the JAVA language, students learn about a computer's internal structure through the use of a simple Von Neumann machine simulator.

**Electrical Engineering****JEE 150(2500) Electrical Laboratory I (3)**

Prerequisite: JEE 180(2800). Lectures and laboratory exercises related to sophomore topics in introductory networks and basic electronics.

**JEE 160(2609) Digital Computers I: Organization and Logical Design (3)**

Prerequisite: JCS 36(1360). Digital computers and digital information-processing system; Boolean algebra, principles and methodology of logical design; machine language programming; register transfer logic; microprocessor hardware, software, and interfacing; fundamentals of digital circuits and systems; computer organization and control; memory systems; arithmetic unit design. Occasional laboratory exercises.

**JEE 180(2800) Introduction to Electrical Networks (3)**

Prerequisites: Physics 112(2112) and Math 202(2020) (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(2900) Introduction to Digital and Linear Electronics (3)**

Prerequisite: JEE 180(2800). Introduction to contemporary electronic devices and their circuit applications. Terminal characteristics of active semiconductor devices. Incremental and D-C models of junction diodes, bipolar transistor (BJTs), and metal-oxide semiconductor field effect transistors (MOSFETs) are developed and used to

design single- and multi-stage amplifiers. Models of the BJT and MOSFET in cutoff and saturation regions are used to design digital circuits.

**JEE 214(3149) Engineering Electromagnetics I: Fundamentals (3)**

Prerequisite: JEMT 217(3170). 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(3270) Power, Energy, and Polyphase Circuits (3)**

Prerequisite: JEE 180(2800). 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(3629) Digital Computers II: Architecture (3)**

Prerequisite: JEE 160(2609). Study of interaction and design philosophy of hardware and software for digital computer systems: Machine organization, data structures, I/O considerations. Comparison of minicomputer architectures.

**JEE 279(3790) Signal Analysis for Electronic Systems and Circuits (3)**

Prerequisites: JEE 180(2800) and JEMT 217(3170). Elementary concepts of continuous-time and discrete-time signals and systems. Linear time-invariant (LTI) systems, impulse response, convolution, Fourier series, Fourier transforms, and frequency-domain analysis of LTI systems. Laplace transforms, Z-transforms, and rational function descriptions of LTI systems. Principles of sampling and modulation. Students participate weekly in recitation sections to develop oral communications skills using class materials.

**JEE 280(3800) Network Analysis (3)**

Prerequisite: JEE 279(3790). 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.

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**JEE 290(3900) Principles of Electronic Devices (3)**

Prerequisite: Physics 112(2112). 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(3920) Electronic Devices and Circuits (3)**

Prerequisite: JEE 190(2900). Introduction to semiconductor electronic devices: transistors and diodes. Device electrical DC and high-frequency characteristics. Bipolar transistors, field-effect transistors, and MOS transistors for analog electronics applications. Transistor fabrication as discrete devices and as integrated-circuit chips. Large-signal analysis of transistor amplifiers: voltage gain, distortion, input resistance and output resistance. Analysis of multitransistor amplifiers: Darlington, Cascode, and coupled-pair configurations. Half-circuit concepts, differential-mode gain, common-mode gain, and differential-to-single-ended conversion. Transistor current sources, active loads, and power-amplifier stages. Applications to operational amplifiers and feedback circuits.

**JEE 310(4100) Engineering Electromagnetics II: Applications (3)**

Prerequisite: JEE 214(3149). 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 314(4140) Solid State Power Circuits & Applications (3)**

Prerequisites: JEE 190(2900), JEE 279(3790). Study of the strategies and applications of power control using solid-state semiconductor devices. Survey of generic power electronic converters. Applications to power supplies, motor drives, and consumer electronics, Introduction to power diodes, thyristors, and MOSFETs.

**JEE 316(4160) Electrical Energy Laboratory (3)**

Prerequisite: JEE 150(2500). Experimental studies of principles important in modern electrical energy systems. Topics: power measurement, transformers, batteries, static frequency converters, thermoelectric cooling, solar cells, electrical lighting, induction, commutator, and brushless motors, synchronous machines.

**JEE 321(4210) Communications Theory and Systems (3)**

Prerequisites: JEE 279(3790) and JEMT 226(3261). Introduction to the concepts of transmission of information via communication channels. Amplitude and angle modulation for the transmission of continuous-time signals. Analog-to-digital conversion and pulse code modulation. Transmission of digital data. Introduction to random signals and noise and their effects on communication. Optimum detection systems in the presence of noise. Elementary information theory. Overview of various communication technologies such as radio, television, telephone networks, data communication, satellites, optical fiber, and cellular radio.

**JEE 327(4270) Special Topics in Real-Time Processing (3)**

Prerequisite: Senior Standing. Microcontrollers and digital signal processors are often utilized in applications such as communications systems, automotive control systems, biomedical instrumentation, consumer appliances, and industrial control systems. The purpose of this course is to examine a variety of issues regarding the real-time application of embedded microprocessor systems. Topics will include digital processing, the operation of sensors and transducers, signal representation, system design and software development. Classes will include lecture and laboratory sessions. Depending on student interest, exemplary applications from the following list will be studied: automotive control, biomedical instrumentation, communication systems, speech processing, data compression, and audio and acoustic processing.

**JEE 331(4310) Control Systems I (3)**

Prerequisites: JEMT 217(3170), JEE 180(2800) [same as JME 331(4310)] Introduction to automatic control concepts. Block diagram representation of single and multiloop systems. Multi-input and multi-output systems. Control system components. Transient and steady-state performance; stability analysis; Routh, Nyquist, Bode, and root locus diagrams. Compensation using lead, lag and lead-lag networks. Synthesis by Bode plots and root-locus diagrams. Introduction to state-variable techniques, state-transition matrix, state-variable feedback.

**JEE 332(4320) Control Systems II (3)**

Prerequisite: JME 331(4310). The control of physical systems with a digital computer, microprocessor, or special-purpose digital hardware is becoming very common. Course continues JME 331(4310) 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(4450) Digital Signal Processing (3)**

Prerequisite: JEE 279(3790). Introduction to analysis and synthesis of discrete-time linear time-invariant (LTI) systems. Discrete-time convolution, discrete-time Fourier transform, Z-transform, rational function descriptions of discrete-time LTI systems. Sampling, analog-to-digital conversion and digital processing of analog signals. Techniques for the design of finite impulse response (FIR) and infinite impulse response (IIR) digital filters. Hardware implementation of digital filters and finite-register effects. The discrete Fourier transform and the fast Fourier transform (FFT) algorithm.

**JEE 355(4550) Digital Systems Laboratory (3)**

Prerequisites: JEE 160(2609) and JEE 190(2900). 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(4580) Computer-Aided Design of Electronic Systems (3)**

Prerequisites: JEE 190(2900) and 279(3790). 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(4600) Digital Computers: Switching Theory (3)**

Prerequisite: JEE 160(2609). 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 363(4630) Digital Integrated Circuit Design and Architecture (3)**

Prerequisite: JEE 190(2900) and JEE 262(3629). Brief review of device characteristics important to digital circuit operation, followed by detailed evaluation of steady-state and transient behavior of logic circuits. Implications of and design techniques for very large-scale integrated circuits including architecture, timing, and interconnection. Students must complete detailed design and layout of a digital circuit. Major emphasis on MOS digital circuits with some comparisons to other technologies.

**JEE 364(4640) Digital Systems Engineering (3)**

Prerequisite: JEE 190(2900). Design and characterization of digital circuits, reliable and predictable interconnection of digital devices, and information transfer over busses and other connections. Topics include: Review of MOSFET operation; CMOS logic gate electrical characteristics; System and single-point noise margin and noise budgets; Figures of merit for noise-margin and pose-delay product, and tradeoff between noise margin and propagation delay; Transmission-line driving including reflection, termination, non-zero transition time; lumped and distributed capacitance loads, non-linear terminations, and applicable conditions for lumped approximations; Coupled transmission lines, forward and backward crosstalk, short line approximations, ground bounce, and simultaneous switching noise; Timing, clocking, and clock distribution for digital circuits; Prediction of metastability error rates and design for acceptable probability of failure. Examples and design exercises using systems and interconnections selected from current Computer Engineering practice such as RAMBUS, PCI bus, GTL, LVDS, and others.

**JEE 368(4681) Applied Optics (3)**

Prerequisite: JEE 214(3149). 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(4800) Senior Design Project (3)**

Prerequisite: Senior standing. Working in teams, students address design tasks assigned by faculty. Each student participates in one or more design projects in a semester. Projects are chosen to emphasize the design process, with the designer choosing one of several paths to a possible result. Collaboration with industry and all divisions of the university is encouraged.

## **Engineering and Policy**

### **JEP 281(3810) Topics in Engineering Management (3)**

Prerequisite: Junior standing. Techniques relating to managing engineering professionals and engineering activities are introduced and discussed. The engineer's transition into project and project team management. Role of engineering and technology in major corporations. Engineering managerial functions, including production and use of financial information in planning, scheduling, and assessing engineering projects. Motivation of individual and group behavior among technical professionals. Macroeconomic factors influencing technical decision-making and engineering project management. Additional topics will vary from year to year, but will typically include government relations, regulation, compensation, ethics, production, operations, the quality function, and technological innovation.

### **JEP 337(4370) Environmental Risk Assessment (3)**

Prerequisite: JCE 374 or JEMT 226(3261). Definition of risk and uncertainty. Risk assessment concepts and their practical application. Principles of human health and ecological toxicology. Bioassays. Exposure characterization, modeling, and measurement. Qualitative and quantitative evaluation of human and animal studies. Dose-response models and parameter estimation. Low-dose extrapolation. Structure activity relationships. Estimating individual risk and aggregate risk. Risk assessment methods in regulatory decision making and standard setting. Application of risk assessment in hazardous waste site evaluation and remediation.

### **JEP 361(4610) 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(3100) Engineering Communications (3)**

Prerequisites: English 10(1100) and junior standing. Persistent concerns of grammar and style. Analysis and discussion of clear sentence and paragraph structure and of organization in complete technical documents. Guidelines for effective layout and graphics. Examples and exercises stressing audience analysis, graphic aids, editing, and readability. Videotaped work in oral presentation of technical projects. Writing assignments include descriptions of mechanisms, process instructions, basic proposals, letters and memos, and a long formal report.

## **Engineering Mathematics**

### **JEMT 217(3170) Engineering Mathematics (4)**

Prerequisite: Math 202(2020). The Laplace transform and applications; series solutions of differential equations, Bessel's equation, Legendre's equation, special functions; matrices, eigenvalues, and eigenfunctions; vector analysis and applications; boundary value problems and spectral representation; Fourier series and Fourier integrals; solution of partial differential equations of mathematical physics.

### **JEMT 226(3261) Probability and Statistics for Engineering (3)**

Prerequisite: Math 180(2000). Study of probability and statistics together with engineering applications. Probability and statistics: random variables, distribution functions, density functions, expectations, means, variances, combinatorial probability, geometric probability, normal random variables, joint distribution, independence, correlation, conditional probability, Bayes theorem, the law of large numbers, the central limit theorem. Applications: reliability, quality control, acceptance sampling, linear regression, design and analysis of experiments, estimation, hypothesis testing. Examples are taken from engineering applications. This course is required for electrical and mechanical engineering majors.

**Mechanical Engineering****JME 41A(1414) Introduction to Engineering Design: Project (2)**

An introduction to engineering design in the context of mechanical engineering. Students first complete a series of experiments that introduce physical phenomena related to mechanical engineering. Understanding is achieved by designing and building simple devices and machines. The course proceeds to a design contest in which the students design and build from a kit of parts a more significant machine that competes in a contest held at the end of the course. The course is open to all and is appropriate for anyone interested in mechanical devices, design, and the design process

**JME 41B(1415) Introduction to Engineering Design: CAD (2)**

An introduction to engineering design in the context of mechanical engineering. Students learn the fundamentals of spatial reasoning and graphical representation. Freehand sketching, including pictorial and orthographic views, are applied to the design process. Computer modeling techniques provide accuracy, analysis, and visualization tools necessary for the design of devices and machines. Topics in detailing design for production, including fasteners, dimensioning, tolerancing, and creation of part and assembly drawings are also included.

**JME 141(2410) Mechanics of Deformable Bodies (3)**

Prerequisites: Math 175(1900) and Engineering 144(2310). 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 220(3200) Thermodynamics (3)**

Prerequisites: Math 175(1900), Chemistry 11(1111) and Physics 111(2111). Classical thermodynamics, thermodynamic properties, work and heat, first and second laws. Entropy, irreversibility, availability. Application to engineering systems.

**JME 221(3210) Energetics for Mechanical Engineers (3)**

Prerequisite: JME 220(3200). 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 224(3221) Mechanical Design and Machine Elements (4)**

Prerequisites: JME 041B, JME 141(2410), JEMT 217(3170). Provides a thorough overview of the steps in the engineering design process and introduces analytical/quantitative techniques applicable to each step. Topics include recognition of need, specification formulation, concept generation, concept selection, embodiment and detail design. Includes an introduction to several classes of machine elements such as bearings, gears, belts, brakes, and springs. Underlying analytical model of the machine elements are presented along with guidelines about designing and choosing such elements for practical applications. A case study from industry will emphasize how the steps of the design process were done as well as the rationale for choosing particular machine elements

**JME 225(3250) Materials Science (4)**

Prerequisite: Chemistry 11(1111). 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 236(3251) Materials Science (3)**

Prerequisite: Chemistry 11(1111). Same as JME 225(3250) but without the laboratory. Introduces the chemistry and physics of engineering materials. Emphasis on atomic and molecular interpretation of physical and chemical properties, the relationships between physical and chemical properties, and performance of an engineering material.

**JME 262(3611) Materials Engineering (3)**

Prerequisite: JME 225(3250). This course deals with the application of fundamental materials science principles in various engineering disciplines. Topics covered include design of new materials having unique property combinations, selection of materials for use in specific service environments, prediction of materials performance under service conditions, and development of processes to produce materials with improved properties. The structural as well as functional use of metals, polymers, ceramics, and composites will be discussed.

**JME 270(3700) Fluid Mechanics (3)**

Prerequisites: JEMT 217(3170) and Engineering 145(2320). 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.

*Other Programs*  
*UM-St. Louis/Washington University Joint*  
*Undergraduate Engineering Program*

**JME 271(3710) Principles of Heat Transfer (3)**

Prerequisites: JME 220(3200), JME 270(3700) and JEMT 217(3170). 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  $\epsilon$ -NTU analysis. Boiling and condensation heat transfer. Radiation between blackbody and real surfaces. Radiation network analysis.

**JME 280(3721) Fluid Mechanics Laboratory (1)**

Prerequisite: JME 270(3700). Physical laboratory exercises focusing on fluid properties and flow phenomena covered in JME 270(3700). Calibration and use of a variety of equipment; acquisition, processing, and analysis of data by manual as well as automated methods.

**JME 281(3722) Heat Transfer Laboratory (1)**

Prerequisites: JME 280(3721) and JME 271(3710). Physical laboratory exercises, including some numerical simulations and computational exercises, focusing on heat-transfer phenomena covered in JME 271(3710). 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 300(4000) Independent Study (1-6)**

Prerequisites: Junior standing and consent of the faculty adviser. Independent investigation of a mechanical engineering topic of special interest to a student performed under the direction of a faculty member.

**JME 316(4160) Advanced Strength and Introductory Elasticity (3)**

Prerequisite: JME 141(2410). Introduction to elasticity; indicial notation, stress and strain, material laws. Plane stress and strain problems and illustrations. Torsion of prismatic bars. Energy principles: virtual work, potential energy and complementary energy theorems, reciprocal theorems.

**JME 317(4170) Dynamic Response of Physical Systems (2)**

Prerequisites: Engineering 145(2320) and JEMT 217(3170); JME 317(4170) and JME 318(4180) 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(4180) Dynamic Response Laboratory (2)**

Prerequisite: JME 317(4170) and JME 318(4180) must be taken during the same semester. Laboratory problems focusing on materials covered in JME 317(4170).

**JME 319(4190) Experimental Methods in Fluid Mechanics (3)**

Prerequisites: JME 270(3700), JME 280(3721) and consent of instructor. Experimental approach to problem solving and validation of theoretical/computational methods. Uncertainties in measurement. Review of fundamental equations of fluid dynamics, properties of gases and liquids, similarity laws. Boundary layers, transition turbulence, flow separation. Viscoelastic and multi-phase flows. Wind tunnels, water channels, simulation of phenomena in processing equipment. Pressure sensors, including optically-reactive surface paint. Measurement of velocity with pitot- and venturi-tubes, hot-wire anemometry, ultrasonic probes, laser-Doppler (LDV) and particle-image (PIV) instruments. Compressibility corrections. Measurement of skin friction by direct force sensors, Preston- and Stanton-tubes, diffusion analogies, liquid crystals. Flow visualization with laser light sheet; Schlieren, shadowgraph and interferometric methods. Future trends; flow control, impact of microelectronic sensors and actuators. Laboratory demonstrations using available instrumentation.

**JME 324(4240) 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(4250) 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 329(4290) Flexible Manufacturing Automation (3)**

Prerequisite: Senior standing. Survey of the application of robots in the automation of manufacturing industries. Use of robots to increase productivity, to improve quality or to improve safety. Special studies of applications of robots in painting, welding, inspection and assembly.



**JME 331(4310) Control Systems I (3)**

Prerequisite: JEMT 217(3170), JEE 180(2800) (same as JEE 331). Introduction to automatic control concepts. Block diagram representation of single- and multi-loop systems. Multi-input and multi-output systems. Control system components. Transient and steady-state performance; stability analysis; Routh, Nyquist, Bode, and root locus diagrams. Compensation using lead, lag, and lead-lag networks. Synthesis by Bode plots and root-locus diagrams. Introduction to state-variable techniques, state transition matrix, state-variable feedback.

**JME 344(4440) Solar Energy (3)**

Prerequisites: JME 220(3200), JME 270(3700), and JME 271. This course will cover the following topics: extraterrestrial solar radiation; solar radiation on the earth's surface; weather bureau data; review of selected topics in heat transfer; methods of solar energy collection including flat panel and concentrating collectors; solar energy storage; transient and long-term solar system performance.

**JME 350(4500) Computer-Integrated Manufacturing (3)**

Prerequisite: Senior standing. Analysis and design of computer-integrated systems for discrete parts and assemblies manufacturing. Process planning, control, manufacturing decision support systems, microcomputers and networks. Programming of spatially oriented tasks, code generation, system integration. CIMLab assignments.

**JME 353(4530) Facilities Design (3)**

Prerequisite: Senior standing. The goal of the course is to provide the student with the information and analytical tools necessary to take a product design into production and for the design of an efficient manufacturing facility that will make the production feasible. Quantitative methods in the design of manufacturing facilities. Space allocation, assembly line design, material-handling systems, utilities and environmental design for manufacturing facilities. Facility-location selection. Plant-layout development. Building, organization, communications and support system design. Material-handling equipment, flow and packaging. Automated storage and retrieval systems design. Computer aided design of manufacturing facilities. Environmental requirements and design. Utilities design. In a major project, students will be required to analyze the design of a product and plan the manufacturing facility for its production.

**JME 372(4720) Fluid Mechanics II (3)**

Prerequisites: JME 220(3200) and JME 270(3700). 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 374(4740) Analysis and Design of Turbomachinery (3)**

Prerequisite: Senior standing. The principles of thermodynamics and fluid dynamics applied to the analysis, design and development of turbomachinery for compressible and incompressible flows. Momentum transfer in turbomachines. Design of axial and radial compressors and turbines, diffusers, heat exchangers, combustors, and pumps. Operating characteristics of components and performance of power plants.

**JME 376(4760) The Engineering Properties of Materials (3)**

Prerequisite: Junior standing. A detailed look at themechanical, chemical, and surface properties of materials. Topics include elastic properties; plastic deformation; viscoelastic behavior; chemical resistance; corrosion resistance; and the electromagnetic properties of metal, plastic, ceramic, and composite systems.

**JME 378(4780) Analysis and Design of Piston Engines (3)**

Prerequisite: Senior standing. The principles of thermodynamics and fluid dynamics applied to the analysis, design and development of piston engines. Examination of design features and operating characteristics of diesel, spark-ignition, stratified-charge, and mixed-cycle engines. Study of the effects of combustion, fuel properties, turbocharging and other power-boosting schemes on the power, efficiency and emission characteristics of the engines.

**JME 380(4800) Building environmental Systems Parameters (3)**

Sustainable design of building lighting and HVAC systems considering performance, life-cycle cost and downstream environmental impact. Criteria, codes and standards for comfort, air quality, noise/vibration and illumination. Life cycle and other investment methods to integrate energy consumption/conservation, utility rates, initial cost, system/component longevity, maintenance cost and building productivity. Direct and secondary contributions to acid rain, global warming and ozone depletion.

**JME 381(4810) 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.

*Other Programs*  
*UM-St. Louis/Washington University Joint*  
*Undergraduate Engineering Program*

**JME 382(4820) Air-Conditioning Systems and Equipment II (3)**

Prerequisite: Senior standing. Fluid flow, pumps, and piping design. Room air distribution. Fans and building air distribution. Mass transfer and measurement of humidity. Direct control of heat and mass transfer. Heat exchangers. Refrigeration systems. Absorption refrigeration.

**JME 390(4040) Mechanical Engineering Design Project (5)**

Prerequisite: JME 141(2410), JEMT 217, JME 220(3200), JME 224 and JME 270(3700) Corequisites: JME 225(3250), JME 271(3710) and JME317(4170). Working individually, students initially perform a feasibility study for a mechanical design project. Projects consisted of an open-ended, original design or a creative redesign of a mechanical component or system requiring the application of those engineering science principles inherent to mechanical engineering. Feasibility is considered subject to economic, safety, legal, environmental, ethical, aesthetic, and other constraints in a competitive manufacturing environment. Feasible projects are then selected by teams of three to five students who perform the detailed design and optimization of the design concept developed in the feasibility study. The designs are carried out to detailed shop drawings and where possible a mockup or prototype is built. Periodic oral presentations and written reports give students practice in engineering and business communication. Guidance and consultation for the design projects are provided by the course and department faculty.

**JME 395(4041) Current Topics in Mechanical Engineering Design (1)**

Prerequisites: Senior Standing. Case studies of engineering failures, class discussion and short written papers are used to illustrate and stress the importance of engineering teamwork, ethics, and professional standards within the mechanical engineering discipline. Working in teams, students develop and present a case study on a topic of their choice. Guest lecturers introduce contemporary topics such as product liability, environmental regulations, green design, appropriate technologies, and concurrent engineering.



**UM-Rolla Engineering Education Center**

The UM-Rolla Engineering Education Center, housed on the University of Missouri-St. Louis campus, is an engineering graduate program administered by UM-Rolla for nontraditional students in the St. Louis area. The program is conducted in the evening, making it suitable for students who are employed full time. Graduate work leading to the Master of Science degree is available in aerospace, civil, computer, electrical manufacturing and mechanical engineering, engineering management engineering mechanics, and information science and technology.

The center provides information to St. Louis area residents about UMR programs in Rolla. Advisers can assist area pre-engineering students with transfer to the Rolla campus and with entry into the Cooperative Training Program that exists between UMR and numerous U.S. industries. This co-op program allows engineering students to gain valuable industrial experience during their school years and to be partially or totally self-supporting.

The center also assists St. Louis area companies by offering noncredit short courses, in-house training courses and engineering consultation services in the technical areas of competence of UMR faculty. The center may be contacted at (314) 516-5431 or refer to the web site containing comprehensive information about these programs: [www.umn.edu/~umreec](http://www.umn.edu/~umreec).

*Other Programs  
Programs at Other Universities  
Study Abroad*

### **Programs at other Universities**

#### **Reciprocal Programs**

Unless otherwise stated, students interested in one of the following programs should contact the admissions office at the school where the program is offered.

#### **Nebraska**

The University of Nebraska in Lincoln offers programs for a limited number of Missouri residents in architecture, community and regional planning, construction management, and actuarial science where students may pursue bachelor's degrees.

#### **Illinois**

A cooperative agreement exists between Southern Illinois University-Edwardsville and UM-St. Louis which permits students of one institution to take courses at the other institution as a regular part of their academic program. For further information consult the registrar's office or the dean's office.

#### **Kansas**

The following programs are offered to Missouri residents at various Kansas universities:

**Humanities** University of Kansas, Lawrence, with an M.A. in Oriental languages and literature, and a B.A. and M.A. in Slavic languages and literature (not Russian). A Ph.D. in Slavic languages and literature is also offered.

**Grain milling and technology** Kansas State University, Manhattan, with a B.S., M.S., or Ph.D. in bakery science and management, feed science and management, or milling science and management.

**Horticulture** Kansas State University, Manhattan, with a B.S. in horticulture therapy.

#### **Joint Programs in Law and Dentistry**

The University of Missouri-St. Louis and the University of Missouri-Kansas City provide joint programs in law and dentistry for academically able students who are committed to public service. These special programs are designed to serve students seeking a career in public-service law or students who wish to practice dentistry in medically underserved communities.

UM-Kansas City will hold a reserved seat in its School of Law or in the School of Dentistry for qualified UM-St. Louis entering freshmen and make it available to them after they complete the required undergraduate studies at UM-St. Louis.

### **Study Abroad Programs**

The University of Missouri-St. Louis is committed to broadening students' understanding of different cultures and preparing them for the global community in which we live. One of the most successful ways of achieving this "global mindset" is to study at an overseas location for a year, semester or summer. Spending time abroad as a student is an enriching experience both academically and personally, providing students with the opportunity to study within a different culture.

The Center for International Studies provides UM-St. Louis students with opportunities to study at over 75 different universities in more than 30 countries around the globe. Through individual advising at the center's Study Abroad Office, students can find the program best suited to their personal, academic, and career goals. Internship possibilities are also available for qualified students.

#### **Fees and Financial Aid**

The cost of the program depends on the services provided and the country and city of study. For most programs, participants continue to pay UM-St. Louis fees plus airfare, room and board, and spending money. Few programs require an additional fee. Students are usually housed in dormitories or are assisted in finding apartments. In most cases, students are able to apply financial aid to a study abroad program. Study abroad scholarships are available for qualified applicants through the Center for International Studies.

#### **Application**

Generally, applications are due at the end of January for fall, mid-February for summer, and the end of September for winter semester. Some programs require application two semesters prior to participation. Students should plan to spend at least one or two months researching a program before applying.

Participant selection is based on academic achievement, faculty recommendations, approval of the proposed course of study via the department/divisional advisory process, and familiarity with or willingness to learn the foreign language of instruction. Most programs are designed for undergraduate students in their junior or senior years of study; however, a limited number of programs for freshmen, sophomores, and graduate students are available.

For further information contact the Study Abroad Office, Center for International Studies, 304 SSB, 516-6497

**Study Abroad Programs and Exchange Partners**

**Austria**

Karl-Franzens-University Graz

**Belgium**

University of Antwerp

**Canada**

Carleton University

Dalhousie University

Ecole Polytechnique

McGill University

McMaster University

Saint Mary's University

Technical University of Nova Scotia

Université de Montreal

Université de Sherbrooke

Université du Quebec à Montréal

Université Laval

University of Calgary

University of Manitoba

University of New Brunswick

University of Ottawa

University of Waterloo

University of Western Ontario

York University

**China**

Nanjing University

**Czech Republic**

Masaryk University

**Denmark**

Aarhus University

**England**

University of East Anglia

University of Lancaster

Missouri London Program

Business Internship in London Program

Journalism Internship in London Program

**Finland**

University of Helsinki

University of Oulu

Seindjoki Polytechnic

**France**

Université Jean Moulin, Lyon(3)

Ecole Supérieure de Commerce de Saint Etienne

University of Sciences and Technologies de Lille

Université Louis Pasteur, Strasbourg (1)

Université of Marc Bloch, Strasbourg (2)

Université Robert Schuman, Strasbourg (3)

Université Catholique de l'Ouest, Angers

Ecole Supérieure des Sciences Commerciales d'Angers

**Germany**

University of Stuttgart

Ruhr University Bochum

University of Leipzig

Fachhochschule Jena

Hochschule Bremen

University of Bonn

**Ghana**

University of Ghana

**Greece**

Aristotle University of Thessaloniki

**Hungary**

Kossuth Lajos University

**Iceland**

University of Iceland

**Ireland**

National University of Ireland, Cork

National University of Ireland, Galway

**Italy**

University of Bologna

University of Parma

**Japan**

Obirin University

Semester in Nakajo Program

Toyo University

**Lithuania**

Vilnius University

**Malta**

University of Malta

**Mexico**

Centro de Enseñanza Técnica y Superior

Centro de Investigación y Docencia Económicas (CIDE)

El Colegio de Jalisco

Universidad de Guadalajara

ITESM-Guaymas Campus

Universidad Autónoma de Baja California

Universidad Nacional Autónoma de México

Universidad of San Luis Potosi

Instituto del Estudios Superiores de Tamaulipas

Instituto Tecnológico Autónomo de México (ITAM)

Instituto Tec. y de Est. Sup. de Monterrey (ITESM)

Universidad Autónoma de Guadalajara

Universidad Autónoma de Queretaro

Universidad de las Américas Puebla

Universidad Iberoamericana

Universidad La Salle

University of Guanajuato

Universidad Autónoma de Nuevo Leon

**The Netherlands**

Hogeschool Holland Business School

Hogeschool voor de Kunsten

University of Utrecht

**Northern Ireland**

University of Ulster, Magee College

**Norway**

University of Bergen

*Other Programs  
Programs at Other Universities  
Study Abroad*

**Portugal**

University of Coimbra

**Scotland**

Heriot-Watt University

**Slovenia**

University of Ljubljana

**South Africa**

University of the Western Cape

**Spain**

Universidad Autónoma de Madrid  
Universidad Complutense de Madrid  
Universidad Santiago de Compostela

**Sweden**

Lund University

**Switzerland**

University of Basel

**Taiwan**

Yuan-Ze University  
National Taiwan Normal University

## ROTC

### ROTC

Students interested in Reserve Officer Training Corps programs may enroll in either the Army ROTC program at UM-St. Louis or the Air Force ROTC program sponsored at UM-St. Louis through Saint Louis University. These programs provide undergraduate and graduate students with the opportunity to combine academic study with a military officer training program.

For further information concerning the Army ROTC program, contact the Military Science Department at Washington University, telephone 935-5537 or check out our Web site at <http://userfs.cec.wustl.edu/~rotc>. For information on the Air Force ROTC program, contact the Aerospace Science Department at Saint Louis University, telephone 977-8227

#### Army ROTC

The purpose of the Military Science Department is to develop young men and women into junior commissioned officers for positions of responsibility in the Army Reserve, Army National Guard, or Active Army.

#### Benefits

Army ROTC offers UM-St. Louis students:

- 1) A challenging, important, well-paid job at graduation in one of the many professional fields that the modern Army has to offer. Army officers serve in such fields as intelligence, military police, communications, engineering, transportation management, finance, combat arms, hospital administration, nursing, and research and development. Starting salary with allowances of an active duty second lieutenant is approximately \$27,000. Within four years he/she should be promoted to captain with a salary and allowances of nearly \$48,000. Reserve officers attend one weekend per month and an annual two-week training camp.
- 2) College financing. All advance course and Army ROTC scholarship students receive \$200/month stipend. Only scholarship students receive \$450 for books and supplies. Also, advance course students may join the Reserves as an office trainee and receive pay while in college.
- 3) Full-time enrolled students may compete for the Army ROTC scholarship. The scholarship pays for tuition, fees, and books.
- 4) Option of two careers. Upon graduation and commissioning as officers in the U.S. Army, students may fulfill their obligation by serving on active duty or reserve duty. Reserve officers spend one weekend a month being a soldier. Officers who serve on active duty receive 30 days paid vacation every year, free medical and dental

care, travel, and the opportunity to pursue advanced degrees with educational assistance from the Army on a fully funded or partially funded basis.

#### The Program

College students who complete the ROTC program earn commissions as second lieutenants in the U.S. Army. The ROTC program may be completed in several different ways as outlined below.

1) **Four-Year Program.** The military science program is traditionally offered as a four-year program. It is best to start as a freshman, but special arrangements can be made for those who start as sophomores. The first two years of military science are voluntary without service obligation, and are designed to give students a perspective on their leadership ability and what the Army can offer them. The student who decides to continue in ROTC and pursue a commission signs an agreement with the Department of the Army to accept a commission upon completion of the last two years of military science. In return the Army agrees to provide a subsistence allowance (up to \$4,000) and to provide all necessary uniforms and military science books.

2) **Two-Year Program.** The two-year program is designed to provide greater flexibility in meeting the needs of students desiring commissions in the U.S. Army. UM-St. Louis students who did not participate in the four-year program and junior college transfer students are eligible for enrollment. Basic prerequisites for entering the two-year program are:

A) The students must be in good academic standing (minimum 2.0 GPA) and pass an Army medical examination.

B) The student must have two academic years of study remaining (undergraduate, graduate, or combination). The student will attend a six-week summer camp to catch up with the students in the four-year program. Attendance at the basic camp does not obligate the student in any way and is only intended to give the student a look at Army life and opportunities. The student will be paid approximately \$750 for attendance at basic camp.

#### Veterans

Veterans of any of the armed forces may qualify for advanced placement and should contact the Military Science Department for details.

#### Scholarships

The Army ROTC currently has scholarships in effect, which pay toward tuition, fees, and books, and provide \$200/month for the academic year.

These scholarships cover either four, three, or two years. UM-St. Louis freshmen and sophomores should apply in January for the two- and three-year scholarships. Scholarship students may incur a four-year active duty

obligation; however, they may request reserve duty to serve with the Army National Guard or Reserve.

**Qualifications**

All students who desire to enter the Army Reserve Officer Training Corps must be U.S. citizens, in good physical condition, and have high moral character. Students must be at least 17 years old to enroll and not over 30 when they receive their commission. Additional qualifications to be admitted into the advanced course include an academic average of C or better and passing an Army medical examination.

**Academics**

UM-St. Louis Army Reserve Officers Training Corps academics consist of two parts:

- 1) Earning a degree in the student's chosen academic subject.
- 2) Completing 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 College of Business Administration and the College of Education. The curriculum consists of classroom instruction and a leadership laboratory in which students receive leadership experience.

**Leadership Laboratory**

Leadership laboratory is required of all students enrolled in military science courses. Classes are two hours every Thursday afternoon from 4 p.m. to 6 p.m., unless otherwise designated. In addition, students attend one field training exercise each semester. Leadership laboratory develops individual military skills and leadership ability through participation in drill and ceremonies, survival training, mountaineering, field-training exercises, and exposure to progressively greater responsibilities within the Cadet Corps organization.

**Graduate Study**

The Army realizes the importance of a graduate degree for its personnel. There are several programs available to assist ROTC graduates in obtaining an advanced degree. The Army sends selected second lieutenants immediately to graduate school (with full pay and allowances) to pursue advanced degrees in engineering and the physical sciences. Other officers may postpone active duty for two years to continue graduate study. Students who are accepted into medical school may take up to four years to complete their studies. There are numerous opportunities for an officer to complete a master's degree in service and receive financial assistance from the Army.

**Special Training**

Selected volunteers may attend one of several special schools during the summer: the Airborne Course at Fort Benning, GA; Air Assault School at Fort Campbell, KY; or the Northern Warfare School in Alaska. Successful course completion earns the coveted badge (such as the jump wings or air assault wings) associated with each school. Special cadet troop leadership training is available on a limited basis. Students participating in the program live and work with an active Army unit during part of one summer.

**Cadet Activities**

Army ROTC students may participate in many extracurricular activities during the year. Social activities include the Army Military Ball, a fall canoe trip down the Meramec River, picnics, and informal parties. Army ROTC students also support various campus and community service activities. Interested students also participate in the Raider Club, Drill Team, Color Guard, and Ranger Challenge Team.

## Course Descriptions

### Military Science

#### 101 Introduction to ROTC (2)

Make your first new peer group at college one committed to performing well and enjoying the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations and basic marksmanship. Learn fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments.

#### 102 Introduction to Leadership (3)

Learn/apply principles of effective leading. Reinforce self-confidence through participation in physically and mentally challenging exercises with upper division ROTC students. Develop communication skills to improve individual performance and group interaction. Relate organizational ethical values to the effectiveness of a leader.

#### 201 Self/Team Development (3)

Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation and basic military tactics. Learn fundamentals of ROTC's Leadership Development Program.

#### 202 Individual/Team Military Tactics (3)

Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security and methods of pre-execution checks. Practical exercises with upper division ROTC students. Learn techniques for training others as an aspect of continued leadership development.

#### 301 Leading Small Organizations I (3)

Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Uses small unit defensive tactics and opportunities to plan and conduct training for lower division students both to develop such skills and as vehicles for practicing leading.

#### 302 Leading Small Organizations II (3)

Continues methodology of MS 301. Analyze tasks; prepare written or oral guidance for team members to accomplish tasks. Delegate tasks and supervise. Plan for and adapt to the unexpected in organizations under stress. Examine and apply lessons from leadership case studies. Examine importance of ethical decision making in setting a positive climate that enhances team performance.

#### 401 Leadership Challenges and Goal Setting (3)

Plan, conduct and evaluate activities of the ROTC cadet organization. Articulate goals, put plans into action to attain them. Assess organizational cohesion and develop strategies to improve it. Develop confidence in skills to lead people to manage resources. Learn/apply various Army policies and programs in this effort.

#### 402 Transition to Lieutenant (3)

Continues the methodology from MS 401. Identify and resolve ethical dilemmas. Refine counseling and motivating techniques. Examine aspects of tradition and law as related to leading as an officer in the Army. Prepare for a future as a successful Army lieutenant. These courses are taught at Saint Louis University, Washington University, or University of Missouri-St. Louis. Students should check the *Schedule of Courses* each semester for locations.

## **Air Force ROTC**

The objective of the Air Force Reserve Officer Training Corps is to qualify students for appointment as active duty second lieutenants in the United States Air Force. However, any student may enroll in the freshman/sophomore-level aerospace studies courses, and students may also enroll in the junior/senior-level courses with permission of the professor of aerospace studies.

UM-St. Louis offers the two- and four-year AFROTC programs through an agreement with Saint Louis University.

The four-year program is tailored for students with three or more years of undergraduate studies remaining. Students with junior standing or above may apply for entry into the two-year program. Entry into the two-year program is competitive and is based on standardized test scores, academic major, grade-point average, physical examination, personal interview with the professor of aerospace studies, and successful completion of a summer field training session at an Air Force base. Applicants must be full-time students and must remain in good academic standing.

### **Reserve Officer Training Corps**

The AFROTC Program is divided into the general military course (GMC), the freshman/sophomore level curriculum; and the professional officer course (POC), the junior/senior level curriculum. The GMC covers two main themes; the Air Force today and the Air Force way. The courses of the POC emphasize the professional development of the future Air Force officer. The curriculum covers Air Force leadership and management and preparation for active duty. Field trips to Air Force bases supplement classroom instruction and familiarize the cadet with Air Force operations and organization.

To be commissioned, AFROTC students/cadets must:

- 1) Pass a medical exam at a military medical facility.
- 2) Obtain a favorable evaluation on an Armed Forces personal history security investigation.
- 3) Flying applicants must complete commissioning requirements before age 26-1/2, and nonflying applicants must complete commissioning requirements by age 30. However, the age limit for nonflying applicants may be extended to age 35 for outstanding individuals.
- 4) Be of good character (as determined by a favorable record with law enforcement authorities).
- 5) Successfully complete all AFROTC course requirements.
- 6) Complete at least a baccalaureate degree.

Air Force ROTC textbooks are loaned to all AFROTC students without charge. Students in the POC will receive a monthly subsistence allowance of \$150 per month for a maximum of 20 months, an Air Force uniform, in excess

of \$700 for the summer field training course, and a travel allowance to and from the training location.

In addition to the AFROTC courses offered for academic credit, the Aerospace Studies Department sponsors the Arnold Air Society and Angel Flight. Arnold Air Society is a national honorary service organization, and membership is open to anyone interested in bringing to the local community a better understanding of the Air Force mission and its leaders.

AFROTC field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Students in the four-year program participate in four weeks of field training. Major areas of study include junior officer training, aircrew/aircraft orientation, career orientation, survival training, base functions and Air Force environment, and physical training. Students applying for entry into the two-year program must successfully complete six weeks of field training prior to enrollment in the professional officer course. The major areas of study included in the six-week field training program are essentially the same as those conducted at four-week field training, plus the academic curriculum of the general military course including leadership laboratory. POC cadets are eligible for a \$1,000 per semester federal AFROTC scholarship.

Leadership Laboratory is taken once per week throughout the student's enrollment in AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership laboratory involves a study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. It also includes field trips to Air Force installations throughout the United States.

Other training volunteers may attend various special cadet training programs such as light aircraft training, parachute jump training, and advance cadet training. Students participating in the latter work with an Air Force unit during part of the summer.

The Air Force offers four-, three-, and two-year scholarships to qualified students. These scholarships pay tuition, certain fees, and textbook cost. Scholarship recipients receive \$150 per month subsistence allowance. For further information on the Air Force ROTC program at UM-St. Louis, call (314) 977-8227, or at Southern Illinois University at Edwardsville (SIUE), call (618) 692-3180.

### **Aerospace Studies**

The Aerospace studies program is divided into two parts: the general military course, the freshman/sophomore level curriculum, and the professional officer course, the



junior/senior level curriculum. The GMC covers two main themes: the Air Force today and the Air Force way. The courses of the POC emphasize the professional development of the future Air Force officer. The curriculum covers Air Force leadership and management and preparation for active duty. Field trips to Air Force bases supplement classroom instructions and familiarize the cadet with Air Force operations and organizations.

Leadership laboratory is taken two hours per week throughout the student's enrollment in the AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. The first two years of the leadership laboratory includes a study of Air Force customs and courtesies, drill and ceremonies, issuing military commands, instructing, directing and evaluating the preceding skills, studying the environment of an Air Force officer and learning about areas of opportunity available to commissioned officers. The last two years of lab consist of activities classified as advanced leadership experiences. They involve planning and controlling military activities of the cadet corps, preparation and presentation of briefings and other oral and written communications, and providing interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets.

AFROTC cadets must also successfully complete supplemental courses to enhance their utility and performance as commissioned officers. These include university courses in English composition and mathematical reasoning. Specific courses are designated by the professor of aerospace studies.

Cadets in the four-year program participate in four weeks of field training. Cadets in the two- or three- year programs (exception for prior AF service) must attend the six-week FT session, which is identical to the four-week program plus 90 hours of GMC curriculum. Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Major areas of study include Air Force orientation, officer training, aircrew/aircraft orientation, survival training, base functions, and physical training.

Students applying for entry into the two- or three- year program must successfully complete six weeks of field training prior to enrollment in the professional officer course. The major areas of study included in the six-week field training program are essentially the same as those conducted at four-week field training, plus the academic curriculum of the general military course including leadership laboratory. No direct academic credit is awarded for field training.

Federal scholarships are available for AFROTC cadets--any academic major may apply. Applications are to be

submitted by detachment personnel to Headquarters Reserve Officers Training Corps, Maxwell Air Force Base, AL.

Participation in AFROTC is not required to take aerospace courses.

**Lower Division (General Military)**

Aerospace studies courses (AS-101 through AS-202) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average, but credit hours for these courses will not be included in the total hours for graduation.

**Course Descriptions****AS-101/102 The Air Force Today (2)**

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

**AS-201/202 The Air Force Way (2)**

Survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

**Upper Division(Professional Officer) Courses**

Aerospace Studies courses AS-301 through AS-402 are advanced courses designed to improve communication and management skills required of Air Force officers. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

**AS-301/302 Air Force Leadership and Management (3)**

The study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical 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.

## Video Instructional Program

The video instructional program offers an alternative for the student who is far from campus, whose physical disability, work schedule, or other responsibilities make it difficult for him/her to attend traditional classes. Video lessons for various courses are available for viewing on cable television stations as well as in UM-St. Louis libraries.

### St. Louis Area Cable Stations

Continental Cable, and United Video in St. Louis County; AT&T Cable in the city will air courses over the Higher Education Channel (HEC). (Charter, Continental, United Video & AT&T Cable).

### Course Listings

The following courses from the UM-St. Louis curriculum are offered:

### Anthropology

#### 019(1019) Archaeology [SS]

This telecourse uses dramatic onsite filming to enable students to explore how archaeologists reconstruct ancient societies and explain how they evolved. Students will understand how archaeology and anthropology interact, with emphasis on how people have behaved in the past.

#### 025(1025) World Cultures [CD, SS, V]

This telecourse is an ethnographic survey of the major culture areas of the world. It is an introductory cultural anthropology course that studies the structure and process of culture.

#### 124(2124) Cultures of Africa [CD]

This telecourse offers a basic ethnographic survey of African cultures, with attention to social groupings, tribalism, religion, language, social change, the ecological relationship between humans and nature.

#### 350(4350) Special Studies

This telecourse offers a glimpse into the science of anthropology through a variety of approaches, theories, controversies, and solutions encountered in the field. Students will gain insight into the practices of foreign cultures and the beliefs of their own culture in addition to the importance of diversity of human behavior.

### Biology

#### 001(1012) General Biology (For Non-Science Majors) [MS]

This telecourse provides a firm foundation in the fundamental principles of biology.

#### 120(1202) Environmental Biology (3) [MS, V, MI]

This telecourse provides a survey of the current outlook for the global environment, describing threats that different natural systems face and the ties that bind human society to the environment. It also provides an examination of the biological basis of current environmental problems, with emphasis upon resources, energy, pollution and conservation.

### Communication

#### 070(1070) Introduction to Cinema

This telecourse examines the history, rhetoric, and aesthetics of film. The content is designed to bring Hollywood filmmaking into clear focus as an art form, as an economic force, and as a system of representation and communication. Film theory and criticism will be studied, as well as major genres, authors, and artists. Introduction to Cinema explores how Hollywood films work technically, artistically, and culturally. The course also probes the deeper meaning of American movies--the hidden messages of genres, the social and psychological effects of Hollywood film style, and the mutual influence of society and popular culture on filmmaking.

#### 232(2232) Effective Communication in the Organization: Tool for Leadership (3)

Prerequisites: Junior standing or consent of instructor. Telecourse designed to equip students with communication skills applicable to the organizational context. The course will present effective strategies for the articulation of ideas, with particular emphasis on the development of leadership skills.

### Education

#### 308 Foundations of Adult Basic Education (3)

This telecourse discusses the various characteristics of the adult learner, including needs, interests, physiological factors, interpersonal relations, and communications. The video demonstrations present teaching practices in adult basic education. This course focuses on the need of corporate and industry trainers as well as ABE and GED teachers.

You will work with topics in teaching basic reading: word recognition, comprehension, writing for the student=s needs, basic and intermediate mathematical skills, selection and use of materials, learning contracts, learning styles, and other methods to individualize instruction, as well as student recruitment and retention and corporate classroom management. This is an important class offered at a time when there are more adult students than teachers.

### History

#### 031(1031) Topics in European Civilization: Emergence of Western Europe to 1715 [SS]

*Other Programs*  
*Video Instructional Program*

This telecourse offers lectures and discussions on the development of Western European society and tradition from approximately 800 to 1715.

**032(1032) Topics in European Civilization:1715 to the Present [SS]**

This telecourse offers lectures and discussions on the development of Western European society and tradition from 1715 to the present.

History 31(1031) or History 32(1032) may be taken separately.

**150(2300) The People's Century, Part I**

This telecourse provides unique insight into the turbulent events of the last 100 years by combining rare archival film footage with the testimony of ordinary people who lived through the century's sweeping changes and who recount their firsthand experiences.

**350 The People's Century, Part I, Special Studies**

This telecourse provides unique insight into the turbulent events of the last 100 years by combining rare archival film footage with the testimony of ordinary people who lived through the century's sweeping changes and who recount their experiences first hand as well as special readings, reports and/or research.

**Psychology**

**003(1003) General Psychology [SS]**

This telecourse is an introductory college level course that covers the fundamental principles and major concepts of psychology. The content is designed to provide a broad introductory survey of the general principles of human behavior.

**245(2245) Abnormal Psychology**

Prerequisite: Psych 03(1003), General Psychology. This telecourse introduces the major theoretical models for explaining and treating disorders - psychodynamic, behavioral, cognitive and biological. Ten of the 13 programs feature specific disorders, including anxiety disorders, personality disorders, the schizophrenias, sexual disorders, substance abuse, and the disorders of childhood. The first program concerns assessment, while the last two provide information on treatment and prevention. This approach serves the introductory abnormal psychology student, while allowing individual faculty latitude to underscore the approach to which they subscribe.

**268(1268) Human Growth and Behavior [SS]**

Prerequisites: Psych 3(1003). This telecourse uses special readings, reports, and/or field research as well as video and audio courses to explore the stages of life as an introduction to developmental psychology.

**280(4280) The Psychology of Death and Dying**

(Same as Gerontology 280(4280). Prerequisite: Psych 3(1003). This telecourse will address the psychological aspects of death and dying for both adults and children. The psychological reactions of terminally ill patients and their families will also be examined, and therapeutic interventions will be discussed.

**Social Work**

**280(4200) Human Behavior in the Social Environment (3)**

Prerequisite: Biology 1(1012) and Sociology 160(2160) or Psych 160(2160) or permission of instructor. This telecourse will focus on the normative stages in the life span, specifically how human development is affected by the physical environment and social status characteristics. Empirical information and theoretical views on human development will be included. Human development will be viewed as a complex interaction of individual developmental stages with family, social

**312(4601) Women's Social Issues**

Prerequisites: Social Work 280(4200) or consent of the instructor. This telecourse is designed to help students identify gender stereotypes and barriers and how they impact on women's lives. This course will help students become more sensitive to the social and welfare concerns of women. The course also explores how gender intersects with other social systems, such as age, class, disability, ethnicity, race, religion, and sexual orientation. Emphasis will be placed on integrating a knowledge base of women's needs with professional social work practice.

**Sociology**

**010(1010) Introduction to Sociology [V, SS]**

This telecourse is an introductory college level course designed to give students an in-depth look at sociological approaches to human behavior, including types of social organizations, patterns of social interaction, and social influences on individual conduct.

**Philosophy**

**90(1090) Philosophy and Other Disciplines [H, V]**

Prerequisites: Video course offering. General introduction to philosophy examines its connections to works of art and related areas. Course does not satisfy any requirements for philosophy major or minor

**91(1091) Significant Figures in Philosophy [H, V]**

Video course introduces philosophy through a survey of the ideas of some of the important figures in the history of the discipline. Course cannot be used to satisfy any requirements for philosophy major or minor.

# Appendix





## Appendix

### 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 regulations or of campus regulations including, but not limited to, those governing residence in university-provided housing, or the use of university facilities, or the time, place and manner of public expression.

8. Manufacture, use, possession, sale or distribution of alcoholic beverages or any controlled substance without proper prescription or required license or as expressly permitted by law or university regulations.

9. Disruptive or disorderly conduct or lewd, indecent, or obscene conduct or expression.

10. Failure to comply with directions of university officials acting in the performance of their duties.

11. Illegal or unauthorized possession of firearms, explosives, other weapons, or dangerous chemicals.

12. Actual or attempted theft or other abuse of computer time, including but not limited to:

a. Unauthorized entry into a file to use, read, or change the contents, or for any other purpose.

b. Unauthorized transfer of a file.

c. Unauthorized use of another individual's identification and password.

d. Use of computing facilities to interfere with the work of another student, faculty member or university official.

e. Use of computing facilities to interfere with normal operation of the university computing system.

f. Knowingly causing a computer virus to become installed in a computer system or file.

#### Student Disciplinary Matters

**Rules of Procedures in Student Disciplinary Matters Adopted November 8, 1968, Amended March 20, 1981; December 8, 1989; and May 18, 1994**

#### 200.020 RULES OF PROCEDURES IN STUDENT CONDUCT MATTERS

**A. PREAMBLE.** The following rules of procedure in student conduct matters are hereby adopted in order to insure insofar as possible and practicable (a) that the requirements of procedural due process in student conduct proceedings will be fulfilled by the university, (b) that the immediate effectiveness of Article V of the Bylaws of the Board of Curators relating to student conduct and sanctions may be secured for all students in the University of Missouri, and (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, A Primary Administrative Officer@ is charged with the responsibility for the administration of these student conduct procedures and refers to the person or persons on each campus designated.

2. **Student Panel.** A panel of students appointed by the Chancellor, from which shall be selected by the Chair, upon the request of a student charged before the Student Conduct Committee, not more than three (3) students to serve with the Student Conduct Committee.

3. **Student.** A person having once been admitted to the university who has not completed a course of study and who intends to or does continue a course of study in or through one of the campuses of the university. For the purpose of these rules, student status continues whether or not the university's academic programs are in session.

4. **Student Conduct Committee.** As used in these procedures, A Student Conduct Committee, @ hereinafter referred to as the Committee, is that body on each campus which is authorized to conduct hearings and to make dispositions under these procedures or a Hearing Panel of such body as herein defined.

#### C. SANCTIONS.

1. The following sanctions may be imposed upon any student found to have violated the Student Conduct Code; more than one (1) of the sanctions may be imposed for any single violation:

a. **Warning.** A notice in writing to the student that the student is violating or has violated institutional regulations.

b. **Probation.** A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe sanctions if the student is found to be violating any institutional regulation(s) during the probationary period.

c. **Loss of Privileges.** Denial of specified privileges for a designated period of time.

d. **Restitution.** Compensation for loss, damage or injury to the university or university property. This may take the form of appropriate service and/or monetary or material replacement.

e. **Discretionary Sanctions.** Work assignments, service to the university or other related discretionary assignments.

f. **Residence Hall Suspension.** Separation of the student from the residence halls for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.

g. **Residence Hall Expulsion.** Permanent separation of the student from the residence halls.

h. **University Dismissal.** An involuntary separation of the student from the institution for misconduct apart from academic requirements. It does not imply or state a minimum separation time.

i. **University Suspension.** Separation of the student from the university for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.

j. **University Expulsion.** Permanent separation of the student from the university.

2. **Temporary Suspension.** The Chancellor or designee may at any time temporarily suspend or deny readmission to a student from the university pending formal procedures when the Chancellor or designee finds and believes from available information that the presence of a student on campus would seriously disrupt the university or constitute a danger to the

health, safety or welfare of members of the university community. The appropriate procedure to determine the future status of the student will be initiated within seven (7) calendar days.

**D. RECORDS RETENTION.** Student conduct records shall be maintained for five (5) years after university action is completed.

#### E. POLICY AND PROCEDURES.

1. **Primary Administrative Officers.** The Chief Student Affairs Administrator on each campus or designee is the primary officer except in cases of academic dishonesty, where the Chief Academic Administrator responsible for administering the Student Conduct Code or designee is the primary administrative officer.

2. **Preliminary Procedures.** The Primary Administrative Officer shall investigate any reported student misconduct before initiating formal conduct procedures and give the student the opportunity to present a personal version of the incident or occurrence. The Primary Administrative Officer may discuss with any student such alleged misconduct and the student shall attend such consultation as requested by the Primary Administrative Officer. The Primary Administrative Officer, in making an investigation and disposition, may utilize student courts and boards and/or divisional deans to make recommendations.

3. **Informal Dispositions.** The Primary Administrative Officer shall have the authority to impose appropriate sanctions and shall fix a reasonable time within which the student shall accept or reject a proposed informal disposition. A failure of the student either to accept or reject within the time fixed shall be deemed to be an acceptance and, in such event, the proposed disposition shall become final upon expiration of such time. If the student rejects informal disposition it must be in writing and shall be forwarded to the Committee. The Primary Administrative Officer may refer cases to the Committee without first offering informal disposition.

#### 4. Formal Procedure and Disposition.

a. **Student Conduct Committee:**

1) The Committee shall be appointed by the Chancellor and shall have the authority to impose appropriate sanctions upon any student or students appearing before it.

2) The Committee, when appropriate or convenient, may be divided by the Chair of the Committee into Hearing Panels, each panel to be composed of at least five (5) Committee members, which may include a maximum of two (2) students, present at the hearing, including a designated chair. A Hearing Panel has the authority of the whole Committee in those cases assigned to it. The Chair of the Committee or of a Hearing Panel shall count as one (1) member of the Committee or Hearing Panel and have the same rights as other members.

3) Each Chancellor shall appoint a panel of students, to be known as the Student Panel. Upon written request of a student charged before the Committee, made at least seventy-two (72) hours prior to the hearing, the Chair of the Committee or Hearing Panel shall appoint from the Student

Panel not more than three (3) students to sit with the Committee or two (2) students to sit with the Hearing Panel (as stated in 4.a.(2)) for that particular case. When students from the Student Panel serve at the request of a student charged, they shall have the same rights as other members of the Committee or Hearing Panel.



**b. General Statement of Procedures.** A student charged with a breach of the Student Conduct Code is entitled to a written notice and a formal hearing unless the matter is disposed of under the rules for informal disposition. Student conduct proceedings are not to be construed as judicial trials and need not wait for legal action before proceeding; but care shall be taken to comply as fully as possible with the spirit and intent of the procedural safeguards set forth herein. The Office of the General Counsel shall be legal adviser to the Committee and the Primary Administrative Officer.

**c. Notice.** The Primary Administrative Officer shall initiate student conduct proceedings by arranging with the Chair to call a meeting of the Committee and by giving written notice by certified mail or personal delivery to the student charged with misconduct. The notice shall set forth the date, time and place of the alleged violation and the date, time and place of the hearing before the Committee. Notice by certified mail may be addressed to the last address currently on record with the university. Failure by the student to have a current correct local address on record with the university shall not be construed to invalidate such notice. The notice shall be given at least seven (7) consecutive days prior to the hearing, unless a shorter time be fixed by the Chair for good cause. Any request for continuance shall be made in writing to the Chair, who shall have the authority to continue the hearing if the request is timely and made for good cause. The Chair shall notify the Primary Administrative Officer and the student of the new date for the hearing. If the student fails to appear at the scheduled time, the Committee may hear and determine the matter.

**5. Right to Petition for Review** (other than university expulsion, university dismissal or university suspension).

**a.** In all cases where the sanction imposed by the Committee is other than university expulsion, university dismissal, or university suspension, the Primary Administrative Officer or the Student may petition the Chancellor or designee in writing for a review of the decision within five (5) calendar days after written notification. A copy of the Petition for Review must also be served upon the nonappealing party within such time. The Petition for Review shall state the grounds or reasons for review, and the nonappealing party may answer the petition within five (5) calendar days.

**b.** The Chancellor or designee may grant or refuse the right of review. In all cases where the Petition for Review is refused, the action of the Committee shall be final. If the Chancellor or designee reviews the decision, the action of the Chancellor shall be final unless it is to remand the matter for further proceedings.<sup>6</sup> 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 adviser any special or extraordinary procedures to be employed during the hearing and permit the student to make suggestions regarding or objections to any procedures for the Conduct Committee to consider.

### a. Opening Statements

1) The Primary Administrative Officer shall make opening remarks outlining the general nature of the case and testify to any facts the investigation has revealed.

2) The student may make a statement to the Committee about the charge at this time or at the conclusion of the university's presentation.

### b. University Evidence.

1) University witnesses are to be called and identified or written reports of evidence introduced as appropriate.

2) The Committee may question witnesses at any time.

3) The student or, with permission of the committee, the adviser or counselor may question witnesses or examine evidence at the conclusion of the university's presentation.

### c. Student Evidence.

1) The student shall have the opportunity to make a statement to the Committee about the charge.

2) The student may present evidence through witnesses or in the form of written memoranda.

3) The Committee may question the student or witnesses at any time. The Primary Administrative Officer may question the student or witnesses.

d. Rebuttal Evidence. The Committee may permit the university or the student to offer a rebuttal of the other's presentation.

e. Rights of Student Conduct Committee. The Committee shall have the right to:

- 1) Hear together cases involving more than one (1) student which arise out of the same transaction or occurrence, but in that event shall make separate findings and determinations for each student;
- 2) Permit a stipulation of facts by the Primary Administrative Officer and the student involved;
- 3) Permit the incorporation in the record by a reference of any documentation, produced and desired in the record by the university or the student charged;
- 4) Question witnesses or challenge other evidence introduced by either the university or the student at any time;
- 5) Hear from the Primary Administrative Officer about dispositions made in similar cases and any dispositions offered to the student appearing before the Committee;
- 6) Call additional witnesses or require additional investigation;
- 7) Dismiss any action at any time or permit informal disposition as otherwise provided;
- 8) Permit or require at any time amendment of the Notice of Hearing to include new or additional matters which may come to the attention of the Committee before final determination of the case; provided, however, that in such event the Committee shall grant to the student or Primary Administrative Officer such time as the Committee may determine reasonable under the circumstances to answer or explain such additional matters;
- 9) Dismiss any person from the hearing who interferes with or obstructs the hearing or fails to abide by the rulings of the Chair of the Committee;
- 10) Suspend summarily students from the university who, during the hearing, obstruct or interfere with the course of the hearing or fail to abide by the ruling of the Chair of the Committee on any procedural question or request of the Chair for order.

2. Rights of Students Upon Hearing. A student appearing before a Committee shall have the right to:

- a. Be present at the hearing;
- b. Have an adviser or counselor and to consult with such adviser or counselor during the hearing;
- c. Have students from the Student Panel sit with the Committee or Hearing Panel;
- d. Hear or examine evidence presented to the Committee;
- e. Question witnesses present and testifying;
- f. Present evidence by witnesses or affidavit;
- g. Make any statement to the Committee in mitigation or explanation of the conduct in question;
- h. Be informed in writing of the findings of the Committee and any sanctions it imposes; and
- I. Request review or appeal to the Chancellor as herein provided.

3. Determination by the Student Conduct Committee. The Committee shall then make its findings and determinations in executive session out of the presence of the Primary Administrative Officer and the student charged. Separate findings are to be made:

- a. As to the conduct of the student, and
- b. On the sanctions, if any, to be imposed. No sanctions shall be imposed on the student unless a majority of the Committee present is reasonably convinced by the evidence that the student has committed the violation charged.

4. Official Report of Findings and Determinations. The Committee shall promptly consider the case on the merits and make its findings and determination and transmit them to the Primary Administrative Officer and the student charged forthwith.

5. Other Procedural Questions. Procedural questions which arise during the hearing not covered by these general rules shall be determined by the Chair, whose ruling shall be final unless the Chair shall present the question to the Committee at the request of a member of the Committee, in which event the ruling of the committee by majority vote shall be final.

6. General Rules of Decorum. The following general rules of decorum shall be adhered to:

- a. All requests to address the Committee shall be addressed to the Chair.
- b. The Chair will rule on all requests and points of order and may consult with Committee's legal adviser prior to any ruling. The Chair's ruling shall be final and all participants shall abide thereby, unless the Chair shall present the question to the Committee at the request of a member of the Committee, in which event the ruling of the Committee by majority vote shall be final.
- c. Rules of common courtesy and decency shall be observed at all times.
- d. An adviser or counselor may be permitted to address the Committee at the discretion of the Committee. An adviser or counselor may request clarification of a procedural matter or object on the basis of procedure at any time by addressing the Chair after recognition.

7. Record of Hearing. A taped or stenographic record of the hearing shall be maintained. The notice, exhibits, hearing record and the findings and determination of the Committee shall become the "Record of the Case" and shall be filed in the Office of the Primary Administrative Officer and for the purpose of review or appeal be accessible at reasonable times and places to both the university and the student.

8. Sexual Assault. In cases of alleged sexual assault:

- a. The accuser and the accused are entitled to the same opportunities to have others present during a campus disciplinary proceeding;
- b. The accuser and the accused shall be informed of the outcome of any campus disciplinary proceeding brought alleging a sexual assault.

### Financial Aid Appeals

The University of Missouri-St. Louis has an established financial aid appeals procedure. An aid applicant can raise questions or appeal the offer, or lack of an offer, of financial aid if not satisfied. The general provisions for appeals procedures are as follows:

- 1) An aid applicant who is not satisfied with the fact that no aid was offered, or was not pleased with the type and/or amount of aid that was offered, may make a written appeal to the Student Financial Aid Appeals Committee reconsideration of the aid request and/or ask for a personal hearing.
- 2) If on review of all the facts of the case, including any new information which the applicant may provide, the Committee can
  - a) approve an exception to university policy;
  - b) deny the request;
  - c) approve a modified version of the request.
- 3) If the Appeals Committee cannot provide a satisfactory solution, he/she may refer the written appeal with all pertinent information to the Director of Financial Aid. Where academic progress is an issue, the student may ask an academic adviser or counselor to write or speak in the student's behalf. If a satisfactory solution is worked out, the case is closed.

4) If step three did not solve the problem, it is referred to the campus Faculty-Senate Committee on Student Aid. In ordinary practice it is rare for a case to be appealed beyond this step.

5) If, however, the applicant is still not satisfied after review by committee, the case is to be referred to the Chancellor.

6) The next appeal is the President.

The final university appeal would be for the President to refer a case to the Board of Curators.

### Grade Appeal

On each campus of the University of Missouri it is the Chancellor who is ultimately responsible to the President and the Board of Curators for all campus programs, policies, and activities. On the University of Missouri-St. Louis campus the Chancellor has delegated responsibility for overseeing the grade appeal process to the Vice Chancellor for Academic Affairs. The Vice Chancellor is therefore responsible for assuring that grade appeals are handled in a fair and timely manner. More specifically, that officer is responsible for seeing that the procedures outlined below are appropriately followed.

#### *Informal Procedures*

At any time after the awarding of a grade, for a course or an assignment in a course, a student may discuss the grade with her or his instructor and request that the instructor review the grade. If the instructor does review the grade he or she is, of course, free to change the grade or not as is appropriate.

#### *Formal Procedures*

The following procedures apply if the above informal procedure does not resolve a dispute concerning a grade to the student's satisfaction and if the process is initiated within thirty working days of the start of the first regular semester (fall or winter) following the semester for which the grade was given, or thirty days after the assignment of the grade (whichever is later).

1. If the student has not already done so, he or she discusses the contended grade fully with the course instructor. The student should prepare for this meeting by taking all relevant written work (test, reports, etc.) with him/her. If the issue is not resolved, and the student wishes to pursue the appeal, she or he should consult the administrative officer of the department or discipline housing the course in question. (This officer will normally be someone below the level of the Dean.) The administrative officer will discuss the appeal with the course instructor, and will inform the student of the result of this discussion. (That result may be the instructor's agreement to change the grade, her or his refusal to change the grade, or her or his agreement to discuss the case further with the student.) The administrative officer may require that the student put the appeal in written form before the administrative officer discusses it with the instructor.

2. If the matter remains unresolved, the student may, within 10 working days of being notified of the result of the discussion between the administrative officer and the instructor, or within 10 working days of her or his last discussion with the instructor, submit a detailed written statement of the complaint to the administrative officer. The administrative officer will refer it to a faculty committee composed of at least three faculty members in the department or unit offering the course or if such are not

available, in closely allied fields. This committee will investigate the matter, meeting, as it may deem necessary, with the student, the instructor, and possibly others. Following its inquiries and deliberations, but prior to making its final recommendations, the faculty committee will submit a copy of its findings to the course instructor. If the course instructor elects to comment on the findings to the committee, this must be done in writing within 7 working days. After further consideration, but within 30 working days after receiving the student's statement, the faculty committee will submit its findings with its recommendations and reasons for those recommendations directly to the course instructor, with a copy to the administrative officer.

3. If the faculty committee recommends that the grade be changed, the administrative officer will ask the instructor to implement the recommendation. If the instructor declines, the administrative officer will change the grade, notifying the instructor and the student of this action. Only the administrative officer, upon the written recommendation of the faculty committee, will effect a change in grade over the objection of the instructor who assigned the original grade.<sup>1</sup>

4. If the faculty committee recommends that the grade not be changed, the administrative officer will notify the student of this action. The student may then appeal to the dean of the school or college within which the course in question is housed, who will determine whether the above procedures have been properly observed. If the Dean determines that the procedures have not been appropriately followed, *and that their not being followed may have substantively affected the outcome*, the case will be returned to the faculty unit for review by the same, or, if the Dean so determines, by a different committee.

5. If the Dean denies the procedural appeal the student may ask the Vice Chancellor for Academic Affairs, acting as the Chancellor's designee, to conduct a procedural review. The Vice Chancellor is not obligated to conduct such a review and will normally do so only where there is compelling evidence of procedural irregularities. If the Vice Chancellor finds the procedures have not been appropriately followed, *and that their not being followed may have substantively affected the outcome*, the case will be returned to a lower level for rereview. As the Vice Chancellor is acting as the designee of the Chancellor, there is no appeal beyond this level.

### Student Organization Policy

#### Policy on Student Organizations

The University recognizes that the acquisition of knowledge is not confined to the formality of the classroom and that much can be gained through the activities of student organizations. To assure maximum freedom for students and to assure that organizational activities are orderly, responsible, and appropriate to the mission of the university, certain principles and procedures are established through which organizations gain university recognition.

<sup>1</sup> Under current campus policy, transcript notation of >DL= automatically becomes an F after one regular semester. These changes, which the Registrar is mandated to make, are not considered grade changes and are consistent with this Grade Appeal Policy. Students may appeal these changes provided the appeal is initiated within 30 working days of the notification of the change.

### I Procedures for Recognition

A. To obtain recognition or to register, an organization shall submit to the Vice Chancellor for Student Affairs, through the Office of Student Life, a recognition or registration form which shall include:

- 1) The name of the organization.
- 2) A statement of the general purpose of the organization and the means for accomplishing it. The statement should demonstrate that the organization's purpose is to broaden the scope of general learning, extend knowledge of specialized areas, or to serve the professional, cultural, social or recreational interests of the university community, consistent with the educational goals of the university. The statement must not conflict with policies governing recognized organizations as listed below.
- 3) The names of at least three officers and ten responsible representatives, including student numbers, addresses and telephone numbers; these persons must be students registered at the university of Missouri-St. Louis.
- 4) A statement of any affiliation with any other organization not registered with the university, and a copy of the organization's constitution.
- 5) Organizations seeking recognition must include a copy of their constitution and/or by-laws, the name of a UM-St. Louis faculty or staff member (.75 FTE) who agrees to serve as an advisor, and the name of a student member of the organization who will serve as the organization's representative on the Student Government Association.
- 6) Upon submission of the recognition or registration form, the organization shall be granted temporary privileges until the request for recognition is acted upon by the Senate Student Affairs Committee or the request to register is approved by the Director of Student Life.

B. To maintain recognition or registration, an organization must update their recognition form or re-register with the Office of Student Activities no later than two weeks following the beginning of the fall semester.

### II Privileges of Recognized Organizations

- 1) Use of campus facilities and services for organizational activities as provided in the university regulations.
- 2) Use of the university name in connection with publicity, but only for identification purposes, and in no way to imply support of the university for any position of the organization.
- 3) Participation in university-sponsored events.
- 4) Application for supplemental financial assistance.
- 5) Participation as a voting member of Student Government Association. Organizations who register may not apply for supplemental assistance and may not be voting members of Student Government Association.

### III Policies Governing Recognized or Registered Organizations

- 1) Organizations shall comply with the Rules and Regulations of the University of Missouri and the St. Louis campus.
- 2) Organizations' membership policy shall not discriminate for reasons of color, creed, national origin or gender. Any organization may petition to the Vice Chancellor for Student Affairs for exemption from the requirement as it applies to gender. Academic and professional organizations which have

discriminatory membership policy based on gender shall not be recognized.

- 3) Organizations' membership shall not be subject to approval by anyone other than the local campus membership.
- 4) Organizations are expected to maintain fiscal responsibility.
- 5) Recognized and registered organizations are required to seek the advice of faculty and other members of the community.
- 6) Recognized organizations are required to participate in the Student Governance process.

### IV Procedure for Review of Grievances

A. Any member of the university community may bring charges against a recognized organization for breach of the above policies or procedures.

B. Such charges, except those pertaining to discrimination, are brought initially to the Vice Chancellor for Student Affairs, who may:

- 1) Dismiss the charges, in which case an appeal may be made to the Senate Student Affairs Committee.
- 2) Settle the charges in a way acceptable to both parties or,
- 3) Refer the charges to the Senate Student Affairs Committee.

C. Penalties may range from withdrawals of one or more privileges to withdrawal of recognition or registration. Assessment of penalties shall also provide for the conditions leading to reinstatement of such privileges for recognition.

D. Either party to the charges may appeal the decision of the Senate Student Affairs Committee to the Chancellor.

### Policy on Hazing

Hazing, defined by the Fraternity Executive Association and accepted by the University of Missouri-St. Louis, is any intentional action taken or situation created, whether on or off university premises, that produces mental or physical discomfort, embarrassment, harassment, or ridicule. This includes but is not limited to: paddling in any form, creation of excessive fatigue, physical or psychological shocks, wearing apparel publicly which is conspicuous and not normally in good taste, engaging in public stunts and buffoonery, morally degrading or humiliating games and activities, involuntary labor, or any activity not consistent with the University of Missouri Board of Curators Standard of Student Conduct. The University of Missouri-St. Louis does not condone or tolerate hazing of any type by an organization, or by an individual against another individual.

The Office of Student Activities will investigate any incident in which a charge of hazing has been made. University recognition may be temporarily withdrawn pending hearings and due process procedures.

Should it be determined that a student organization or any of its members is guilty of hazing as previously defined, sanctions may include but are not limited to:

- A. Automatic and indefinite suspension of campus recognition or registration with an accompanying loss of all campus privileges (i.e. use of facilities, student services, etc.);
- B. Disciplinary action against those members involved in the incident(s) including suspension or expulsion from the university.

Implementation: Each organizational president (or equivalent officer) is required to read and sign the university's Policy on Hazing at the first regular meeting at which he or she presides. This policy, signed by the incoming president (or equivalent officer), must accompany any notification of a change in officers submitted to the Office of Student Activities. Failure to do so will result in the automatic imposition of inactive status on the organization with an accompanying loss of all university privileges until such time as the signed policy is submitted.

#### **Equal Opportunity Policies of the University of Missouri-St. Louis**

The University of Missouri-St. Louis is an affirmative action/equal opportunity employer committed to excellence through diversity. Therefore, the university enthusiastically complies with and vigorously enforces each Federal and State Executive Order, law and regulation, University of Missouri Rules and Regulations and University of Missouri-St. Louis directive that prohibits discrimination against employees, students, and others based upon age, ancestry, color disability, national origin, race, religion, sex, or veteran status.

The above compliance is established upon, but not limited to, the following employment and education related equal opportunity laws: Civil Rights Act of 1964, Title VII, as amended Executive Order 11246, Equal Employment Opportunity Equal Pay Act of 1963, as amended Age Discrimination in Employment of 1967, as amended Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended Executive Order 11141, Age Discrimination Rehabilitation Act of 1973, Section 503, as amended Rehabilitation Act of 1973, Section 504, as amended Civil Rights Act of 1964, Title VI, as amended Education Amendments of 1972, Title IX Americans with Disabilities Act of 1990

The Board of Curators of the University of Missouri has adopted the appropriate equal opportunity policies and procedures in compliance with the above laws and procedures. The Chancellor is responsible for the implementation of equal opportunity at UM-St. Louis. Assisting the Chancellor and each Vice Chancellor is the Office of Equal Opportunity (OEO). All equal opportunity functions for the campus are centralized in the OEO.

The following equal opportunity policies have been established by the University of Missouri Board of Curators to govern the academic and administrative functions of the University:

- 320.10 **EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**
- 330.60 **SEXUAL HARASSMENT**
- 240.40 **POLICY RELATED TO STUDENTS WITH DISABILITIES**
- 330.80 **MAINTAINING A POSITIVE WORK AND LEARNING ENVIRONMENT**
- 320.10 **Equal Employment Opportunity Program**

- Equal opportunity is and shall be provided for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of their race, color, religion, sex, national origin, age, disability, or status as a Vietnam era veteran.
- Equal opportunity is and shall be also provided for all students and applicants for admission in compliance with existing legislation.

#### **University of Missouri Equal Opportunity Statement**

The University of Missouri-St. Louis is committed to equal employment and educational opportunities without regard to conditions of race, color, sex, religion, national origin, age, physical ability, veteran status, or individuals with HIV, AIDS, or ARC.

Each administrative unit of the university employing personnel, admitting students, or entering into contracts is charged with implementation of the university's commitments, and maintenance of records to demonstrate good faith efforts, in admission and training, recruiting and hiring, compensating and promoting, layoff and dismissal, granting of tenure, contracting and purchasing, and access to facilities and programs.

As an employer and as an institution accountable to taxpayers and the general public, the university must have administrative and management practices that are designed for the best use of talent for operational effectiveness and efficiency.

#### **(1) Recruitment and employment of personnel**

- a. Recruitment of professors and academic personnel in research and continuing education/extension is primarily the responsibility of deans, directors, chairpersons, and department heads.
- b. Recruitment of administrative, service, and support staff, except for top-ranking administrative personnel, is primarily the responsibility of the personnel office of each campus, and the director of Human Resources for the University of Missouri-St. Louis administration. Selection is the responsibility of the administrative head of the employing unit.
- c. Administrative efforts are made to recruit and employ minorities, women, the handicapped, and members of protected age groups.
- d. The university maintains relationships with governmental agencies, community groups, and other organizations which may be of assistance in furthering recruitment and employment of minority groups, handicapped persons, and women into departments and units which have imbalances. Personnel sources are advised of the university's commitment to equal opportunity and affirmative action.
- e. Imbalances exist when available talent among specified minorities, women, handicapped, or protected age group members is proportionately underrepresented in a particular personnel category in the university.

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 Equal Opportunity maintains records to demonstrate efforts and results of efforts to achieve equity and to act affirmatively and reasonably to correct imbalances.

#### **(2) Salaries, wages, and benefits**

- a. University compensation and benefit programs are administered without regard to conditions of race, color, sex, religion, national origin, age, physical ability, or veteran status.

b. The salary range for academic positions is determined in advance of recruitment on the basis of prevailing national levels and departmental scales for the educational attainment, experience, and specialty desired.

**(3) Facilities, activities, and working conditions**

- a. University facilities are maintained on an equitable and nondiscriminatory basis.
- b. Physical facilities have been adapted within the limits of the financial resources available to insure access to the university by the physically handicapped.
- c. Opportunities for involvement in university activities are provided on an equitable or nondiscriminatory basis.

**(4) Promotion and training**

- a. Promotions, contract renewals, the granting of tenure, and reductions in force of academic personnel are handled in accordance with established university procedures and qualification criteria for all persons and free of discrimination.
- b. University policy requires that promotions, demotions, layoffs, recalls from layoffs, transfers, and temporary hires for service and support personnel are determined without regard to conditions of race, color, sex, religion, national origin, age, physical ability, or veteran status.
- c. Participation in training and educational programs sponsored by the university, including apprenticeships, is open to all employees within eligible job classifications.
- d. The university offers developmental programs for professional and personal growth to enhance promotion potential.

**(5) Student admission and retention**

- a. The university gives students equal access to its academic programs without regard to conditions of race, color, sex, religion, national origin, age, or physical ability. Furthermore, the university seeks to recruit, enroll, retain, and graduate minority group members and women in those fields in which they are underrepresented.
- b. The University of Missouri has a unique responsibility for graduate and professional public higher education in the state of Missouri. Therefore, academic departments offering doctoral and/or advanced professional programs in disciplines and professions in which there is a deficiency of minorities and women have adopted methods to encourage enrollment, retention, and graduation of minority group members and women.
- c. Affirmative action is taken to offer graduate teaching and research assistantships to minorities and women.
- d. Business, government, industry, and labor are solicited to assist and provide support to minorities and women through financial aid and by providing work experiences as they pursue academic objectives.
- e. Personnel representatives of prospective employers using university services and facilities to interview and recruit students must be equal opportunity employers, and must give all qualified students equal opportunity for interviews, without regard to conditions of race, color, sex, religion, national origin, age, disability, or veteran status.

**(6) Appeal and grievance procedures**

- a. Grievance procedures are available for the processing of complaints and grievances of alleged discrimination based on conditions of race, color, sex, religion, national origin, age, physical ability, or veteran status.
- b. A student grievant has access to the student grievance procedures through the Office of Student Affairs, the school or college, the campus, and central administration.

c. The Office of Equal Opportunity currently provides advice and information to grievants on the grievance procedures.

**(7) Records and reports**

- a. The administrative head of each university unit must be prepared to demonstrate that equal opportunity is practiced and that affirmative action is taken in recruiting and employment of full-time and part-time personnel, admission and retention of students, provision of facilities and programs, and purchasing and contracting.
- b. Each responsible administrative unit of the university must be prepared to show that procedures followed and selections made are in compliance with policies on equal employment and affirmative action. Admissions applications are retained for one year and employment applications are retained for one year.

University business involving contracts and bids for various services are retained in compliance with University of Missouri record management policies.

- c. Those responsible for recruiting, admitting, and retaining students "undergraduate, graduate and professional" maintain files and records documenting efforts to provide equal opportunity and act affirmatively to attract and retain minority group members, women, and older and handicapped persons. A report is made annually to the appropriate administrative committee.
- d. Campus administrative officers have records demonstrating efforts to provide equal opportunity and show affirmative action in the interests of minority group members, women, and handicapped and older persons in the availability and use of university facilities, including recreational facilities.
- e. Those responsible for personnel recruitment and employment personnel, including graduate teaching and research assistants, have records that reflect their adherence to equal opportunity and affirmative action practices.
- f. Academic or administrative units receiving complaints or grievances based on allegations of discrimination report those cases to the Office of Equal Opportunity.

**(8) Reviewing and monitoring**

- a. A university Committee on Equal Employment Opportunity and Affirmative Action (EEO/AA) is appointed annually by the Chancellor.
- b. EEO/AA committee membership includes a reasonable cross-section of personnel, including a representation of women, minorities, and the handicapped.
- c. The EEO/AA committee advises the Director of Equal Opportunity on matters relating to affirmative action and university equal employment policy.
- d. Administrative officers (chancellor, vice chancellors, deans, directors, department chairpersons, and all other supervisory personnel) are responsible for implementation of equal opportunity and affirmative action policies and practices within their areas of jurisdiction, and the effectiveness of implementation will be an element in the evaluation of the performance of each officer.

**(9) Dissemination**

- a. Equal opportunity and affirmative action policies and programs are disseminated throughout the university and discussed at appropriate school, college, departmental, management, and supervisory meetings. The subjects covered include attraction, admission, and retention of students; recruitment, employment, training, promotion, and transfer of employees.



- b. University employees, faculty, staff, and students are kept informed of equal opportunity programs and affirmative action goals through campus publications and communications, the Personnel Policy Manual, the Faculty Handbook, divisional and departmental meetings, staff orientation programs, and posters.
- c. Copies of the Equal Employment and Affirmative Action policies are available to a cross section of community organizations, news media, area colleges, secondary schools and recruiting sources.
- d. Copies of the Affirmative Action Policy will be made available on request to employees, applicable governmental agencies, and contractors or subcontractors.
- e. University invitations to bid, purchase orders, and specifications to architects and engineers contain the university's equal opportunity policy.
- f. University correspondence, employment notices and advertising, academic information, and other public notices contain the university's equal opportunity phrase.

### 330.60 Sexual Harassment

This University of Missouri policy aims for an increased awareness regarding sexual harassment by making available information, education and guidance on the subject for the university community.

**A. Policy Statement**--It is the policy of the University of Missouri, in accord with providing a positive discrimination-free environment, that sexual harassment in the work place or the educational environment is unacceptable conduct. Sexual harassment is subject to discipline, up to and including separation from the institution.

**B. Definition**--Sexual harassment is defined for this policy as either:

- (I) unwelcome sexual advances or requests for sexual activity by a university employee in a position of power or authority to a university employee or a member of the student body, or
- (ii) other unwelcome verbal or physical conduct of a sexual nature by a university employee or a member of the student body to a university employee or a member of the student body, when:
  1. Submission to or rejection of such conduct is used explicitly or implicitly as a condition for academic or employment 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.

### 240.040 Policy Related to Students with Disabilities Executive Order No. 21, 11-1-84; Amended 2-25-97.

#### EQUALITY OF ACCESS

The University of Missouri (UM) strives to assure that no qualified person with a disability<sup>1</sup> shall, solely by reason of the disability, be denied access to, participation in, or the benefits of any program or activity operated by UM.

Each such qualified person shall receive reasonable accommodations to provide equally effective access to educational opportunities, programs, and activities in the most integrated setting appropriate unless provision of such reasonable accommodation would constitute an undue hardship on the university or would substantially alter essential elements of the academic program or course of study or would otherwise compromise academic standards. This policy shall apply to all programs, services, and activities of the university, including but not limited to recruitment, admissions, registration, financial aid, academic programs, advising, counseling, student health, housing and employment.

#### B. FEDERAL AND STATE LAWS

This policy is intended to be consistent with Section 504 of the Rehabilitation Act of 1973, which states that no recipient of federal financial assistance may discriminate against qualified individuals with disabilities solely by reason of disability. This policy is also intended to be consistent with the Americans with Disabilities Act of 1990 and the Missouri Human Rights Act.

#### C. FACILITIES

Each program or activity, when viewed in its entirety, shall be accessible to otherwise qualified and eligible students with disabilities. Facilities, or parts of facilities, constructed or renovated for UM use will be designed and built so that they are accessible to and usable by persons with disabilities, in accordance with the ADA Accessibility Guidelines or other accessibility standards properly adopted by the campus. Accessible on-campus housing and food service will be provided

at the same cost and with the same program options to qualified students with disabilities as are afforded to non-disabled students. When any UM classes, programs or activities are held in private facilities, thorough efforts shall be made to obtain facilities which are accessible.

#### D. COORDINATION OF PROGRAMS AND SERVICES FOR STUDENTS WITH DISABILITIES

1. Campus disability support service (DSS) offices or other designated campus units are responsible for coordination of programs, services, and classroom accommodations for qualified applicants for admission and qualified enrolled students with disabilities. Such coordination relates solely to disability issues. Determinations as to whether a student is otherwise qualified often will be based on the academic requirements developed by the faculty. Specific services available to qualified students with disabilities will be provided by the university in conformity with the requirements of federal and state law.

2. Determinations as to whether requested services and requested accommodations are required will be made initially by the Coordinator of DSS. Accommodation of the disability will be determined by the coordinator and faculty member, and if either disagrees with the prescribed accommodation, such disagreement shall be described in writing promptly and submitted to the Chancellor or his/her designee for resolution in a prompt manner.

3. Initial determinations and any disagreements submitted to the Chancellor or his or her designee will take into consideration all relevant factors including, but not limited to, the following:

- current documentation of the specific disability and of the need for the requested services or accommodations;
- the essential elements of the academic program or course of study being pursued;
- the fact that the law does not require a university to substantially alter essential elements of its academic program or course of study or to otherwise compromise its academic standards.

4. All students seeking disability-related services and/or accommodations must disclose the presence of a specific disability to DSS. Before receiving requested services and/or accommodations, the student will be required to provide the DSS office with current medical or other diagnostic documentation of a disability from a qualified physician or other qualified diagnostician, as well as current documentation of the need for accommodations. In cases where existing documentation is incomplete or outdated, students may be required to provide additional documentation at the student's expense.

5. It is the student's responsibility to self-identify, to provide current and adequate documentation of his/her disability, and to request classroom accommodations, through the DSS office. The appropriate documentation must be provided in a timely manner to ensure full resolution of accommodations prior to the student's entrance into the program or course of study. Documentation review and accommodations planning by DSS, including consultation with faculty and/or other campus entities that may be affected in providing accommodations, will be done on an individualized case-by-case basis.

6. Reasonable classroom accommodations will be provided to otherwise qualified and eligible students with disabilities who have self-identified and who have provided satisfactory documentation in support of their timely request for such

accommodations, in compliance with federal and state mandates. These accommodations shall not affect the substance of the educational programs or compromise educational standards.

7. In addition to providing accommodations needed to ensure nondiscrimination in access to educational opportunities by otherwise qualified students with disabilities, the university is responsible for ensuring that no qualified disabled student is denied the benefits of or excluded from participation in a university program because of the absence of auxiliary aids, services, and/or other reasonable accommodations. Auxiliary aids, services, and/or other accommodations include but are not limited to interpreters (sign or oral), readers, scribes, adaptive equipment, and other appropriate services or equipment necessary for course or program accessibility.

8. While funding for accommodations to ensure equally effective access is provided by the university, funding for auxiliary aids, accommodations, and/or services in some instances may be shared with state vocational rehabilitation agencies. The law does not require and the university does not provide prescription devices or other devices/services of a personal nature (e.g. personal attendants) for students with disabilities.

#### E. ESTABLISHMENT OF CAMPUS POLICIES

Chancellors are directed to establish campus policies and/or procedures consistent with this order. These should cover, at a minimum, treatment of disability-related information and appropriate regard for confidentiality, responsibilities of students in applying for services through DSS, time lines to assure that students make accommodation requests in a timely manner, guidelines to assure that disability documentation is reasonably current, a description of the process of individualized assessment of each student's disability documentation and accommodation request(s), the role of faculty in determining the essential elements of the academic program or course of study and the academic standards involved in the accommodations planning and review process within the context of academic program requirements, and processing of complaints and grievances including a procedure for appeal when faculty and/or academic administrators or administrators in other involved campus entities do not agree with the DSS on the requirements of this policy.

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1. From the U.S. Justice Department's ADA Title II Technical Assistance Manual, Section II-2.8000: Qualified individual with a disability. In order to be an individual protected by Title II, the individual must be a "qualified" individual with a disability. To be qualified, the individual with a disability must meet the essential eligibility requirements for receipt of services or participation in a public entity's programs, activities, or services with or without: 1) Reasonable modifications to a public entity's rules, policies, or practices; 2) Removal of architectural, communication, or transportation barriers; or 3) Provision of auxiliary aids and services. The "essential eligibility requirements" for participation in many activities of public entities may be minimal. For example, most public entities provide information about their programs, activities, and services upon request. In such situations, the only "eligibility requirement" for receipt of such information would be the request for it. However, under other circumstances, the "essential eligibility requirements" imposed by a public entity may be quite stringent.



**ILLUSTRATION:** The medical school at a public university may require those admitted to its program to have successfully completed specified undergraduate science courses.

## **PROVISIONS FOR SERVICES TO STUDENTS WITH DISABILITIES AND REASONABLE ACCOMMODATIONS**

### **POLICY AND PROCEDURES**

#### **POLICY**

The University of Missouri is committed to equal educational opportunities for qualified students without regard to disabling condition. The University, therefore, will take necessary action to ensure that no otherwise qualified student with a disability is denied access to any particular course or educational program. Such action includes an assessment of the student's abilities and an evaluation of the particular course or program.

#### **IMPLEMENTATION PROCEDURES**

It is the student's responsibility to self-identify, to provide current and adequate documentation of his/her disability and to request classroom accommodation, through the disability services office. A request for services will initiate an assessment of needs, including a documentation review and accommodations planning by DSS, involving consultation with faculty and/or other campus entities that may be affected in providing accommodations, and will be done on an individualized case-by-case basis. Initial determinations as to whether requested services and/or accommodations are required will be made by the coordinator of disability services based on results of the assessment of needs. If either the faculty member of the disability coordinator disagrees with the prescribed accommodation, such disagreement shall be described in writing promptly and submitted to the Chancellor or his or her designee for resolution in a prompt manner.

The University will make reasonable modifications to its academic requirements, if necessary, to comply with legal requirements ensuring that such academic requirements do not discriminate or have the effect of discriminating on the basis of a student's known and adequately documented disability; unless the requested modification would require alteration of essential elements of the program or essential elements of directly related licensing requirements or would result in undue financial or administrative burdens. The divisional dean's office, in cooperation with the disabilities service coordinator and the department through which the requirement is fulfilled, will determine the appropriate modification of substitution. Any qualified student with a disability who believes that accommodations and/or auxiliary aid(s) will be necessary for participation in any course, course activity, or degree program must indicate a need for services to the designated disability services office at least six weeks prior to the beginning of the semester or degree program.

The disability services coordinator will oversee an assessment of the student's request for services and/or accommodations. If an unfavorable determination is made, the student may appeal the decision through the UM Discrimination Grievance Procedure for Students.

#### **AIDS Policy Statement**

Current knowledge indicates college and university students or employees with AIDS, ARC, or a positive antibody blood test do

not pose a health risk to either students or employees in a usual academic or residential setting. The policy of University of Missouri is to permit students and employees with AIDS to continue to engage in as many of their normal pursuits as their condition allows. Managers should be sensitive to the medical problem and ensure that such employees are treated consistent with the treatment of other employees. Students will be allowed to continue their enrollment and activities (including continued residency in student housing) as long as they continue to meet academic standards and medical evidence indicates their conditions are not a threat to themselves or others. Every effort will be made to maintain confidentiality at all times.

The university also has a legitimate interest in the welfare of all students, employees, and visitors to the campus. Every reasonable precaution will be taken to minimize the risk that an employee's or student's condition will present a health and/or safety hazard to others.

The university will not discriminate against individuals with HIV infection, AIDS or ARC, but this protection does not include individuals with secondary infections or diseases that would constitute a direct threat to the health or safety of others or who may because of the disease or infection be unable to perform duties of their employment. In such cases, the appropriate university personnel or student policy will determine what changes, if any, will be made in the student's or employee's academic or work program.

In the event of public inquiry concerning AIDS on campus, the Chancellor or the Chancellor's designee will provide appropriate information on behalf of the university. Existing policies regarding confidentiality of employee and student records will be followed.

Consistent with its concern for students and employees with AIDS, the university offers a range of resources through the AIDS Task Force on each campus and through other campus services.

- a. Student, employee, and management education and information;
- b. Referral to agencies and organizations that offer supportive services for life-threatening illnesses;
- c. Consultation to assist employees in effectively managing health, leave, and other benefits.

The AIDS Task Force on each campus will continue to meet periodically to review and update policy and to make recommendations as new medical facts become available. Each Task Force will continue to encourage programs to educate all members of the campus community about the reality of AIDS.

To address specialized needs, each campus is authorized to adopt and implement special policies related to AIDS which are consistent with this policy statement.

#### **330.80 Maintaining a Positive Work and Learning Environment**

1. The University of Missouri is committed to providing a positive work and learning environment where all individuals are treated fairly and with respect, regardless of their status. Intimidation and harassment have no place in a university community. To honor the dignity and inherent worth of every individual student, employee, or applicant for employment or

admission is a goal to which every member of the university community should aspire and to which officials of the university should direct attention and resources.

2. With respect to students, it is the university's special responsibility to provide a positive climate in which students can learn. Chancellors are expected to provide educational programs and otherwise direct resources to creative and serious measures designed to improve interpersonal relationships, to help develop healthy attitudes toward different kinds of people, and to foster a climate in which students are treated as individuals rather than as members of a particular category of people.

3. With respect to employees, the strength we have as a university is directly related to maintaining a positive work environment throughout the institution. The university should provide a positive recruiting and work environment focused on the duties and skills of the work to be performed. It is the expectation of the university that all employees and potential employees will be treated on the basis of their contribution or potential contribution without regard to personal characteristics not related to competence, demonstrated ability, performance, or the advancement of the legitimate interests of the university. The General Officers are expected to provide training programs for supervisors to assist in achieving this objective.

4. With respect to violations of the policy, faculty, staff and students may utilize their respective grievance procedures approved by the Board of Curators. The approved grievance procedures are as follows: Grievance procedure in Section 370.010 for faculty; grievance procedure in Section 380.010 for staff; and grievance procedure in Section 390.010 for students, and each such procedure shall be deemed as amended to include grievances filed under this policy. This policy shall not be interpreted in such a manner as to violate the legal rights of religious organizations, or military organizations associated with the Armed Forces of the United States of America.

#### Other Procedures or Regulations

#### Discrimination Grievance Procedure for Students 390.010

December 17, 1982, and January 25, 1990

#### A. GENERAL

1. It is the policy of the University of Missouri to provide equal opportunity for all enrolled students and applicants for admission to the university on the basis of merit without discrimination on the basis of their race, color, religion, sex, national origin, age, or disability, or Vietnam era veteran status. Sexual harassment shall be considered discrimination because of sex.

2. To insure compliance with this policy, all University of Missouri prospective or enrolled students shall have available to them this student discrimination grievance procedure for resolving complaints and/or grievances regarding alleged discrimination.

3. This grievance procedure neither supersedes nor takes precedence over established university procedures of due process for any and all matters related to Academic Dishonesty, Grade Appeals, Traffic Appeals, Disciplinary Appeals, or other specific campus procedures which are authorized by the Board of Curators and deal with faculty/staff responsibilities.

4. These proceedings may be terminated at any time by the mutual agreement of the parties involved.

**NOTE:** A grievance concerning specific incidents filed under this discrimination grievance procedure shall not be processed on behalf of any student who elects to utilize another university grievance procedure. In addition, the filing of a grievance under these procedures precludes the subsequent use of other university grievance or appeals procedures for the same incident.

#### B. DEFINITIONS

1. A complaint is an informal claim of discriminatory treatment. A complaint may, but need not, constitute a grievance. Complaints shall be processed through the informal procedure herein set forth.

2. A grievance is the written allegation of discrimination which is related to:

- a. Recruitment and admission to the institution.
- b. Admission to and treatment while enrolled in an education program.
- c. Employment as a student employee on campus.
- d. Other matters of significance relating to campus living or student life, including, but not limited to:  
Assignment of roommates in resident halls; Actions of fraternities and sororities; Membership in and/or admission to clubs/organizations; Student Health Services; Financial aid awards.

3. A student is any person who has applied for admission or readmission, or who is currently enrolled, or who was a student of the university of Missouri at the time of the alleged discrimination.

4. Persons with disabilities--For the purpose of this student discrimination grievance procedure, a "person with a disability" has been substituted for "handicapped individual" (Section 504, Rehabilitation Act of 1973) and shall be defined as "any person who

- a. Has a physical or mental impairment which substantially limits one or more of such person's major life activities,
- b. Has a record of such impairment, or
- c. Is regarded as having such an impairment

For purpose of this definition, A "major life activity" means any mental or physical function or activity which, if impaired, creates a substantial barrier to employment and/or education.

Any reference in this document to written materials or to written or oral presentations within the student discrimination grievance procedure may be adjusted to accommodate persons with disabilities for whom the stated materials or required presentations would not be appropriate. Cost of such accommodation will be borne by the university, with no charge to the individual.

5. Appropriate Administrative Officer--The primary administrative officer on the staff of the Chancellor (in the area of Student Affairs/ Services, Administrative Services, Development, and Academic Affairs) having administrative responsibility for the unit in which the discrimination is alleged to have occurred.

6. Grievance Consultant--At any step the Director of Equal Opportunity or of Affirmative Action may be asked to serve as a

consultant by any of the parties involved in this grievance procedure.

### C. COMPLAINTS

1. Policies and Procedures--A student with a complaint will be provided with copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief Student Personnel Administrator or his/her designee and the Officer for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an adviser participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.

2. Joint Complaint--If more than one student is aggrieved by the same action, these students may, by mutual written agreement among themselves, file with the Chief Student Personnel Administrator a complaint and pursue their complaints jointly under this grievance procedure. If the number of students in such a case is so large as to make it impracticable for them to be heard individually in a joint proceeding, they may, by mutual agreement, elect one or more of their number to act on behalf of them all.

3. Students may informally discuss a complaint with the relevant supervising administrator. Every reasonable effort should be made to resolve the matter informally at this administrative level. If a satisfactory resolution is not reached, the student may pursue the matter through each level of administrative jurisdiction up to and including the Appropriate Administrative Officer, or file a grievance within the time specified in D.1.b.

#### 4. Complaints Involving Recruitment

- a. Undergraduate applicants must first present complaints about recruitment to the Director of Admissions. If a satisfactory resolution is not reached, the applicant may appeal the matter to the immediate supervising officer of the Director of Admissions.
- b. Applicants for graduate study may request a meeting with the academic department head and the dean of the college, or their designees, who are actually involved in the recruitment effort to discuss the matter informally. If a satisfactory resolution is not reached, the applicant may appeal to the Dean of the Graduate School and finally to the Appropriate Administrative Officer.

#### 5. Complaints Involving Admissions (Undergraduate or Professional)

- a. Undergraduate and professional student applicants shall present complaints to the Director of Admissions or to the dean of the school or college, depending upon where the application was originally filed.
- b. This university official shall compare the person's academic qualifications against the official university admissions criteria and review the denial. If the denial is sustained, the applicant may appeal this decision to the official's immediate supervisor or to the appropriate admissions committee.

6. Complaints Involving Admissions (Graduate)--Applicants to the Graduate School may ask for a meeting with the academic department head of the program to which the applicant was seeking admission.

This official shall explain the reasons for the denial of recommendation for admission. If a satisfactory resolution is not reached, the applicant may then appeal to the Dean of the

Graduate School or to the appropriate admissions committee. If the denial is upheld, the applicant may appeal the decision to the appropriate administrative officer.

7. Complaints Involving Admissions to or Treatment in an educational Program or in the Granting of Assistantships - An undergraduate or graduate student enrolled at the institution who has a discrimination complaint involving admission to or treatment in an educational program or in the granting of assistantships may request a conference with the appropriate department head and with the dean of the school or college (or the dean's designee) to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 F.

8. Complaints Involving Nonacademic Matters Related to Campus Living and Student Life--A currently enrolled student who has a university-related complaint concerning discrimination in nonacademic matters including but not limited to assignment of roommates, actions of fraternities and sororities, membership in and/or admissions to clubs/organizations, student health services and financial aid awards may request a conference with the appropriate administrative supervisor, department head and/or director to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 D.

9. Complaints Involving Student Employment on Campus . A student enrolled at the university who alleges that discrimination occurred either in applying for work or while working as a student employee at a university job may request a conference with the supervisor, department head or director of the employing unit to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 D.

#### 10. Complaints Involving Financial Aid (Undergraduate, Graduate, Professional):

- a. Undergraduate, graduate, and professional student aid applicants shall present complaints to the Director of Student Financial Aid where the application was originally filed or the award originally made.
- b. This university official shall compare the person's financial and academic qualifications against the official university financial aid criteria and review the award, amount, or denial of the aid. If the original judgment is sustained, the applicant may appeal this decision to the official's immediate supervisor or to the appropriate financial aid committee.

### D. INITIATING A GRIEVANCE

1. Policies and Procedures-- student with a grievance will be provided copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief of Student Personnel Administrator or designee and the Office for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an adviser participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.

a. Joint Grievance--If more than one student is aggrieved by the same action, these students may, by mutual written agreement among themselves, file with the Chief Student Personnel Administrator a grievance and pursue their grievances jointly

under this grievance procedure. If the number of students in such a case is so large as to make it impractical for them to be heard individually in a joint proceeding, they may, by mutual agreement, elect one or more of their number to act on behalf of all of them.

b. Regardless of their nature, all discrimination grievances are to be filed with the Chief Student Personnel Administrator. A grievance must have been filed by a student within one-hundred-eighty (180) calendar days of the date of the alleged discriminatory act.

## 2. Filing a Grievance

a. All grievances must be presented in writing and contain the following information:

1) A clear concise statement of the grievance which includes the name of the person(s) against whom the grievance is made, the date(s) of the alleged discrimination and a statement describing the specific supporting evidence;

2) A brief summary of the prior attempts to resolve the matter which includes the names of persons with whom the matter was discussed and the results of those previous discussions;

3) A specific statement of the remedial action or relief sought.

b. Within seven (7) working days, the original grievance form with an explanation will be returned to the student if, in the judgment of the Chief Student Personnel Administrator, the statements are vague or do not meet the above requirement. The student may make the necessary corrections and resubmit the grievance within seven (7) days.

3. Any grievance not filed within the time limits specified in Section 390.010 D.1.B shall be deemed waived by the grievant. The Chief Student Personnel Administrator may extend the time limits only if adequate cause for an extension of the time limits can be shown by the student.

4. For informational purposes, copies of the grievance shall be forwarded to the Appropriate Administrative Officer and the Director of Equal Employment and/or Affirmative Action.

5. Within fifteen (15) working days of receipt of a grievance that satisfies the requirement of Section 390.010 D.1.b, the Appropriate Administrative Officer with the consent of the parties involved may establish an informal hearing with the aggrieved student, the responding faculty/staff/organization, the respondent's supervisor and the Appropriate Administrative Officer's designee. The Appropriate Administrative Officer shall not involve himself/herself in this meeting. If this informal means of resolving the grievance fails, a grievance committee will be impaneled as called for in Section 390.010 E.1.

## E. FORMATION OF GRIEVANCE COMMITTEE

1. It is the Appropriate Administrative Officer's responsibility to initiate the selection of the grievance committee within fifteen (15) working days after the request for the formation of a grievance committee or after the completion of the informal hearing provided for in Section 390.010 F.5 without satisfaction to the grievant.

2. A grievance hearing panel shall be established by October 1 of each year from which a grievance committee should be constituted. The panel shall consist of ten (10) faculty, ten (10) staff and ten (10) students. Selection of the panel will be made by the Chief Student Personnel Administrator from recommendations by the appropriate faculty, staff and student

associations. Selection of membership will consider sex, race, disability, academic rank, student classification and employee classification. Membership on the hearing panel shall be for two years. A member's term shall expire on September 30 of the second year unless he/she is serving at that time on hearing committee still in the process of reviewing an unresolved grievance. In such case, the member's term shall expire as soon as the committee has submitted a written report of its findings and recommendations to the Appropriate Administrative Officer.

3. A hearing committee shall be composed of five (5) members. The grievant shall select two (2) members from the grievance hearing panel provided by the Chief Student Personnel Administrator. The responding faculty/staff/ organization shall select two (2) members from the grievance hearing panel. Both parties should have their selections made within 15 working days of the receipt of the request. The four committee members shall then select an additional member from the grievance hearing panel to serve as chair. Neither members of the immediate departmental unit nor student members of pertinent student organizations involved in the grievance shall be eligible to serve on the committee.

4. Any person selected to a grievance committee will be expected to serve on such committee and to be present at all sessions. If a member is absent from a single session, he/she will be required to review all tapes or transcribed proceedings of that session prior to the next meeting of the committee. Should a member be absent from two sessions or should a member request to be excused from service for reasons of illness, necessary absence from the campus or other hardship, then that member shall be replaced in the same manner used in the original selection (see Section 390.010 E.3). If a member is unable or ineligible to serve for whatever reason, the replacement shall review all tapes or written transcripts and all submitted evidence prior to service on the committee. Five members of the hearing committee, duly selected as in Sections 390.010 E.3 and E.4 must attend the opening and closing session of the hearing.

## F. HEARING PROCEDURES FOR FORMAL GRIEVANCES

1. It shall be the responsibility of the Appropriate Administrative Officer to coordinate the procedures contained herein, to make provisions for hearing rooms, to coordinate secretarial and recording services and to otherwise serve the grievance committee as needed.

2. At the first organizational meeting of the grievance committee, the committee shall elect a chairperson from among the members to preside over subsequent meetings.

Then the chairperson shall schedule a hearing at the earliest convenient time when all affected parties can be present.

3. A quorum consists of a minimum of four members of the committee except as provided by Section 390.010 E.4.

4. The grievance committee shall invite the grievant and the responding person to all hearings. Attendance at the hearings shall be limited to persons who have an official connection with the case as determined by the chairperson. The grievant and the responding person may choose to be accompanied by an adviser. Others whose participation in the hearing is considered essential in order to assist the committee in establishing the facts of the

case shall appear before the committee only long enough to give testimony and to answer questions of committee members.

5. It is within the duties and responsibilities of all members of a grievance committee to commit themselves to observe procedures consistent with fairness to all parties concerned. For example, it is a matter of principle that members of the grievance committee will not discuss a case with anyone outside of the hearing process and that their finding will not be influenced by anything other than the evidence presented to them in meetings in which all affected parties are present.

6. The grievance committee shall set forth the rules of procedure for the hearing within the guidelines set forth herein. The chairperson may, for good cause and with the concurrence of a majority of the entire committee, authorize deviation from the suggested format, in which case the principal parties shall be notified.

- a. The grievant shall be heard first in all phases of a grievance hearing and shall be primarily responsible for the presentation of his/her position.
- b. The adviser of the grievant or respondent may advise that person and may briefly explain his or her position but shall not be permitted to testify or to cross-examine.
- c. A reasonable time limit should be established for opening and closing statements and shall be announced prior to the hearing.
- d. Length of hearing sessions may be established in advance; every effort should be made to conduct the hearing as expeditiously as possible, with equal fairness to both parties.
- e. The interested parties shall provide the chairperson with the names of the adviser and potential witnesses at least forty-eight (48) hours prior to the hearing. It is the responsibility of the interested party, working with the chairperson, to ensure the presence of these individuals in a timely manner.
- f. After initial witnesses for both parties have been heard, such witnesses may be recalled for additional questioning if requested by either party or the grievance committee. The committee may call new witnesses whose testimony it deems relevant or helpful.
- g. In order to promote the truthful, unfettered exchange of information and ideas, all testimony pertaining to the grievance hearing shall be held in confidence.
- h. Only evidence relevant to the grievance may be introduced. Questions regarding the admissibility of evidence shall be decided by the chairperson.

7. At any point in the proceedings prior to the time at which the committee reaches its final decision, the grievant may withdraw any portion or all of the grievance with the consent of a majority of the committee members and of the respondent. In all cases of withdrawal at the consent of the committee and of the respondent, the grievant shall not have the privilege of reopening the same grievance at any time in the future. In the event that the student refuses to participate further in the committee hearing, the committee may choose to continue the case or to move to closure with an appropriate closing statement as per Section 390.010 F.9.

8. A confidential tape recording of the grievance hearing shall be made and will be accessible to the parties involved, the committee, the Appropriate Administrative Officer, the Chancellor, the President, members of the Board of Curators and authorized representatives on a need-to-know basis. Either party to the grievance may request that the committee provide a written transcript of testimony. The cost of preparation of such a transcript is to be paid by the party making such request unless Section 390.010 B.4 is applicable. After the report of the grievance committee has been prepared, the tapes and relevant materials will be sealed and filed in the Appropriate Administrative Office. Unless extraordinary circumstances apply, these materials will be destroyed at the end of five years.

9. At the conclusion of the grievance hearing, the members of the grievance committee shall meet in closed session to deliberate upon their findings. A majority vote of the entire committee shall be required on all decisions. The grievance committee shall make a written report on findings and recommendations to the Appropriate Administrative Officer of the university, with copies to the grievant(s) and the responding person(s). The written report will contain:

- a. A statement of the purpose of the hearing,
- b. Issues considered,
- c. A summary of the testimony and other evidence presented, d. Findings of fact as developed at the hearing, and
- e. Recommendations for final disposition of the case.

10. The Appropriate Administrative Officer will make his/her decision. This decision and the actions that have been taken shall be presented to both parties in writing. If the administrative officer does not accept the recommendations of the grievance committee, a written statement of the reasons for so ruling must be given to both parties and to the chairperson of the committee.

11. If requested by the grievant or the responding party, normally within seven (7) calendar days of the notification of the decision, the decision of the Appropriate

Administrative Officer may be subject to a review of the records by the Chancellor. Any review and decision by the Chancellor shall be made normally within thirty (30) calendar days. The decision of the Chancellor can be appealed to the President, who shall have thirty (30) calendar days in which to make a decision, which shall be final.

12. Grievances shall receive prompt attention. The hearing and the report of the grievance committee shall normally be completed within sixty (60) calendar days of the formation of the grievance committee, and a final decision shall be made by the Appropriate Administrative Officer normally within ten (10) calendar days thereafter. In any case in which these time schedules should prove to be inadequate, the committee shall present, in writing, an amended time schedule to all parties involved.

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