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Instructional Areas

Many departments offer courses in several subject areas. The following list is provided for easy student reference.

- accounting
- adult education
- American studies
- anthropology
- archaeology
- art
- astrophysics
- biochemistry
- biology
- black studies
- business administration
- chemistry
- Chinese
- classical studies
- communication
- communication theory and rhetoric
- comparative politics
- computer science
- counselor education
- criminology and criminal justice
- early childhood education
- East Asian studies
- economics
- educational administration
- educational foundations
- educational psychology
- educational research and evaluation methods
- educational technology
- elementary education
- engineering
- English
- European studies
- French
- geophysics
- German
- gerontology
- Greek
- Hebrew
- history
- home economics
- interdisciplinary studies
- international relations
- Italian
- Japanese
- Latin American studies
- Latin
- library science
- management information systems
- mass communication
- mathematics
- modern foreign languages
- music
- nursing
- philosophy
- photographic studies
- physical education
- physics
- political science
- Portuguese
- pre-architecture
- pre-engineering
- prejournalism
- prelaw
- premedicine
- pre-optometry
- prepharmacy
- probability and statistics
- psychology
- public administration
- public affairs journalism
- public law
- radio and television
- religions
- Reserve Officers Training Corps
- Russian
- secondary education
- Spanish
- special education
- social work
- sociology
- theatre
- urban politics
- urban studies
- women's studies
- writing
Preface

This *Bulletin* includes a description of undergraduate and graduate programs at the University of Missouri-St. Louis. All statements in this publication concerning regulations, fees, curricula, or other matters are subject to change without notice. They are not to be regarded as offers to contract.

On June 22, 1988, the North Central Association voted full accreditation to the University of Missouri-St. Louis for a ten-year period at the baccalaureate, masters, and doctoral levels.

The policies of the University of Missouri-St. Louis 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 in any program or activity of the University.

Demographic data is obtained by the University in order to determine the effect of efforts related to the provision of equal educational opportunity. Completion of this information is optional.

For the benefit of prospective students, academic departments generally maintain current employment information including average starting salary, forecast of job opportunities, number of students being graduated, and number employed. Students may contact their major department for the latest information available.

While students should study current employment data, these points should also be considered: 1) Employment conditions are subject to sudden change, and may change considerably over a four-year period; 2) A student who excels is most likely to find employment; 3) A degree from a quality institution generally provides a competitive edge in the job market; 4) A degree offers more than a job opportunity.

Information regarding the provision of auxiliary aids and services to qualified disabled students can be found on page 45 of this *University of Missouri-St. Louis Bulletin*. Students considering such assistance should contact the Administrator for Special Student Programs, at 553-5211, for further details.

Address inquiries regarding admission to all divisions of the University of Missouri-St. Louis to the Director of Admissions, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4493.

For information concerning the University of Missouri-Columbia, the University of Missouri-Rolla, or the University of Missouri-Kansas City, write directly to the Director of Admissions at the campus concerned.

Course Descriptions and Guide to Course Lists

Course numbers and titles are listed in this volume as part of the requirements for the various degree programs. For more detailed information on a particular course, including prerequisites, credit hours, or content, the student must consult the companion volume to this book, the *University of Missouri-St. Louis Bulletin: Description of Courses*.

Course Numbering

Each course bears a distinguishing number which identifies it within the department or academic unit and indicates, broadly, its rank. The numbering system is as follows:

- **0 to 99**, nondegree credit
- **1 to 99**, primarily for freshmen and sophomores
- **100 to 199**, primarily for upperclassmen, no graduate credit
- **200 to 299**, for undergraduates and appropriate professional and graduate students, except those whose graduate majors are in the department in which the course is given
- **300 to 399**, for undergraduate, appropriate professional, and graduate students without restriction as to students' graduate majors
- **400 to 499**, primarily for graduate and appropriate professional students in special programs; upperclass students are admitted to courses in this series only with the approval of the graduate dean
- **500 to 599**, for professional optometry students. Other students are admitted to courses in this series only with the approval of the Optometry Dean. In addition, these numbers are used for courses offered in the cooperative MSN program between UM-St. Louis and UM-Kansas City.

General Education Requirement Courses

Courses which fulfill the University's general education requirements, as outlined in the Academic Policy section of this *Bulletin*, are listed at the beginning of each departmental course section in the *Description of Courses*, a companion booklet to this catalogue.

Each list of course numbers also is identified by one of the following breadth of study areas:

- [H] Humanities requirement
- [SM] Natural sciences and mathematics requirement
- [SS] Social sciences requirement

Eye Protection Law

It is now a law in the state of Missouri that every student, teacher, and visitor must wear approved eye protection devices when participating in or observing certain university courses. Definitively included in this act, which is posted along with University policy in selected buildings on this campus, are courses requiring chemical, physical, combined chemical-physical laboratories and shops, as well as certain vocational, technical, and industrial arts courses. Consult your instructors for exact requirements. Approved safety glasses and goggles must meet ANSI Standard Z87.1-1968 and are available from the UM-St. Louis Bookstore.
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<td>Faculty/Staff</td>
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<td>Visitors</td>
<td>ABCFLMNPRSWX</td>
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<td>Handicapped</td>
<td>AFLMNPSWX</td>
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<td>Service Vehicles</td>
<td>ALMP</td>
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<tr>
<td>Cycles</td>
<td>CPU</td>
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<tr>
<td>Car Pool/Cont. Ed.</td>
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Key:
- Emergency Telephone
- Handicapped Parking
- Handicapped Walkways
- Shuttle Route
University Programs and Offices

Academic Affairs, Vice Chancellor for, 401 Woods, 553-5371

Administrative Services, Vice Chancellor for, 243 General Services Bldg., 553-6100

Admissions and Records, 101 Woods, 553-6451

Alumni Relations, 421 Woods, 553-5776

Alumni Center, 790 South Bridge St., 553-5722

Anthropology Department, 607 Tower, 553-6020

Art Department, 506 Lucas, 553-5975

Arts and Sciences, College of, 305 Lucas, 553-6001, Academic Advising, 303 Lucas, 553-5300

Athletics Office, 225 Mark Twain, 553-6641

Behavioral Studies Department, 409 Marillac, 553-5782

Biology Department, 223 Research Bldg., 553-6200

Bookstore, 50 University Center, 553-5763

Bridge Program, 102 South Campus Classroom Bldg., 553-5190

Business Administration, School of, 487 SSB Bldg., 553-5881

Cable TV Studio, 116 Lucas, 553-6180

Cafeteria, "Underground," University Center

Cafeteria, South Campus Complex, Marillac, Level 1

Career Placement Services, 308 Woods, 553-5111

Cashier's Office, 204 Woods, 553-5151

Center for Academic Development (CAD), 7 Tower, 553-5194

Center for Business and Industrial Studies, 481 SSB Bldg., 553-5857

Center for Cornelia and Contact Lens Research, 441 Marillac, 553-6299

Center for Economic Education, 320 Tower, 553-5248

Center for International Studies, 366 SSB Bldg., 553-5763

Center for Metropolitan Studies, 362 SSB Bldg., 553-5273

Center for Molecular Electronics, 315-1 Benton, 553-5940

Center for School Relations and Services, 201 Education Administration Bldg., 553-5106

Center for Science and Technology, 315 Benton, 553-5249

Chancellor's Office, 401 Woods, 553-5252

Chemistry Department, 315 Benton, 553-5311

Child Development Center, 130 South Campus Classroom Bldg., 553-6688

Communication Department, 590 Lucas, 553-5486

Computing Office of, 103 SSB Bldg., 553-6643

Continuing Education Extension, Office of, 201 J.C. Penney, Credit Courses, 553-5665, Noncredit Courses, 553-5961

Counseling, 427 SSB Bldg., 553-5711

Criminology and Criminal Justice Department, 508 Lucas, 553-5301

Development Office, 421 Woods, 553-5664

Disabled, Minority, and International Students, 301 Woods, 553-5211

Dispute Resolution Program, 362 SSB Bldg., 553-8040

Economics Department, 408 SSB Bldg., 553-5361

Education, School of, 201 Education Administration Bldg., 553-5106

Graduate Studies, 155 Marillac, 553-5376; Graduate Studies in Education, 168 Marillac, 553-5380

Educational Studies Department, 269 Marillac, 553-5944

Eldercare Center, 835 St. Florissant, 524-0155

Elementary and Early Childhood Education, 309 Marillac, 553-5791

English Department, 494 Lucas, 553-5581

Evening College, 324 Lucas, 553-5316

Facilities Management, 234 General Services Bldg., 553-6300

Financial Aid, 209 Woods, 553-5526

Gallery 210, 218 Lucas, 553-5976

Gerontology, 406 SSB Bldg., 553-5249

Graduate School, 341 Woods, 553-5360

Graphics, 252 General Services, 553-5167

Health Center, 127 Woods, 553-5671

History Department, 484 Lucas, 553-5681

Horizons, 427 SSB Bldg., 553-5730

Human Resources, 211 General Services Bldg., 553-5804

Information Desk, University Center, 553-5148

Instructional Technology Center, 304 SSB Bldg., 553-6171

KWMU 90.7 FM Radio, 105 Lucas, 553-5988

Libraries: Thomas Jefferson, 553-5300; Ward E. Barnes Education Library, South Campus Complex, 553-5371; Health Sciences Library, South Campus Complex, 553-5310

Mathematics and Computer Science Department, 500 Clark, 553-5741

Mathematics and Statistics Education Center, 403 Marillac, 553-5620

Midwest Community Education Development Center, 202 General Services Bldg., 553-5746

Modern Foreign Languages and Literatures Department, 554 Clark, 553-5620

Music Department, 211 Music Bldg., 553-5990

Nursing, School of, 119 South Campus Classroom Bldg., 553-6057

Office of Equal Opportunity/Affirmative Action, 34 Woods, 553-5316

Optometry, School of, 331 Marillac, 553-6606, Academic Advising, 330 Marillac, 553-6623

Optometry, Clinic, 162 Marillac, 553-5131

Parents as Teachers National Center, 312 Marillac, 553-5738

Payroll, 211 General Services, 553-5237

Philosophy Department, 559 Lucas, 553-5486

Physical Education Department, 257 Mark Twain, 553-5266

Physics and Astronomy Department, 517 Benton, 553-5931

Pierre Laclede Honors College, 389-0096

Police, 222 General Services, 553-5156

Political Science Department, 110 Tower, 553-5241

Pre-Employment Training Program, 313 Marillac, 553-5746

Printing Services, 261 General Services Bldg., 553-5233

Psychology Department, 325 St. Louis, 553-5391

Public Policy Administration, 406 Tower, 553-5145


Purchasing, 201 General Services Bldg., 553-5366

Records and Transcripts, 121 Woods, 553-5676

Registrar's Office, 144 Woods, 553-5480

Registration, 232 Woods, 553-5645

Research, Office of, 338 Woods, 553-5397

ROTC, 44 Blue Metal Office Bldg., 553-5176

Safety & Risk Management, 215 General Services Bldg., 553-6393

Social Work Department, 669 Lucas, 553-6386

Sociology Department, 707 Tower, 553-6384

Spirit, 440 Woods, 553-5663

Sports Information, 225 Mark Twain, 553-5660

Student Affairs, Vice Chancellor for, 301 Woods, 553-5211

Student Employment Program, 346 Woods, 553-5317

Tutorial Services, 507 Tower, 553-5194

UM-St. Louis/LMU-Rolla Cooperative Engineering Center, 34 Blue Metal Office Bldg., 553-5431

University Center, 267 University Center, 553-5291

University Communications, 440 Woods, 553-5827

University Relations, 426 Woods, 553-5796

University Relations, Vice Chancellor for, 426 Woods, 553-5917

Urban Information Center, 131 SSB Bldg., 553-6000

Veteran Affairs Office of, 348 Woods, 553-5370

Video Instructional Program, 115 Lucas, 553-5370

Women's Center, 211 Clark, 553-5390

Women's Studies, 548 Lucas, 553-5881
Administration

University of Missouri

Board of Curators
Terms Expire January 1, 1993
Sam B. Cook, Jefferson City
Fred S. Kummer, St. Louis
James C. Sterling, Bolivar

Terms Expire January 1, 1995
G. Andy Runge, Mexico
Webb R. Gilmore, President, Kansas City
John P. Lichtenegger, Vice President, Jackson

Terms Expire January 1, 1997
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James L. McHugh, Webster Groves
Cynthia B. Thompson, St. Louis

Student Representative
Paul A. Matteucci, St. Louis
(Term Expires January 1, 1992)

Central Administration
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James C. Olson, President Emeritus
C. Brice Ratchford, President Emeritus
Richard L. Wallace, Vice President for Academic Affairs
James T. McGill, Vice President for Administrative Affairs

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John T. Park, Interim, University of Missouri-Rolla
Haskell M. Monroe, Jr., University of Missouri-Columbia
George A. Russell, University of Missouri-Kansas City

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Norman R. Seay, M.A., Executive Director, Office of Equal Opportunity
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Douglas Wartzok, Ph.D., Associate Vice Chancellor and Dean of the Graduate School
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Lois H. Pierce, Ph.D., Acting Associate Vice Chancellor
Lance T. LeLoup, Ph.D., Director, James T. Bush, Sr., Center and Center for Metropolitan Studies

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Martin Sage, Ph.D., Associate Dean
Deborah A. Larson, Ph.D., Associate Dean
Sarapage McCorkle, Ed.D., Associate Dean for Continuing Education-Extension
Janice L. Vails, M.A., Assistant Dean
Costa G. Haddad, B.A., Assistant to the Dean

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Maxine Stokes, M.Ed., Assistant Dean
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Allan R. Crean, M.A., Director, Microcomputing Program
David Garin, Ph.D., Interim Director, Center for Science and Technology
Marilyn S. Maquire, R.N., M.S.N., Director, Elder Care Center
Angeline Antonopoulos, M.B.A., Manager, Marketing and Information
Sarapage McCorkle, Ed.D., Director, Center for Economic Education
Everette E. Nance, Ed.D., Director, Midwest Community Education Development Center
James D. Fay, M.F.A., Interim Director, Instructional Technology Center
Administration

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Rickey L. George, Ph.D., Associate Dean for Instruction
Everette E. Nance, Ed.D., Associate Dean for Research and Administration
Angelo H. Puricelli, Ph.D., Associate Dean for Continuing Education-Extension

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Harry J. Gaffney, Ph.D., Assistant Dean
Nancy A. Shields, Ph.D., Assistant Dean

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D. Kohfeld, Ph.D., Director, Public Policy Administration Program
Robert J. Calsyn, Ph.D., Director, Gerontology

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School of Optometry
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Gerald A. Franzel, O.D., Associate Dean for Continuing Education-Extension and Community Relations

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Ralph P. Garzia, O.D., Chief, Pediatric/ Binocular Vision Services
Alexander D. Harris, M.A., O.D., Chief, External Rotations
Daniel D. Seibert, O.D., Director, Optometric Center; Chief, Low Vision Services
Stephen W. Lehmkuhle, Ph.D., Chair, Research Development Committee

Pierre Laclede Honors College
John T. Onuska, Jr., Ph.D., Director

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Bonnie L. Sims, M.A., Assistant Vice Chancellor; Director, Human Resources
Gloria L. Leonard, M.Ed., Director, Procurement/Risk Management Communications
John L. Pickens, M.A., Director, UM-St. Louis Police and Transportation, Parking
Gloria L. Schultz, M.Ed., Director, Business and Management Services and Bookstore Manager
Ernest A. Cornford, B.A., Director, Finance

Budgeting, Planning and Institutional Research
Donald Phares, Ph.D., Vice Chancellor
Karyn A. Kulage-Nance, Ed.D., Institutional Research Associate
Bill W. Miller, M.A., Associate Director of Budget and Planning
Robert J. Proffer, M.A., Director of Budget Services
Lawrence W. Westermeyer, M.S., Director, Computing and Telecommunications

Student Affairs
L. "Sandy" MacLean, Ed.D., Vice Chancellor
Karl J. Beeler, Ph.D., Assistant to the Vice Chancellor
Mimi J. LaMarca, M.A., Director, Admissions, and Registrar
Charles G. Smith, M.A., Director, Athletics
Deborah A. Kettler, B.S., Director, Career Placement Services
Sharon M. Biegen, Ph.D., Director, Counseling Services
Robert G. Schmalfeld, M.A., Director, University Center/ Student Activities

University Relations
Billie Sue Schulze, B.A., Vice Chancellor
Robert Samples, M.S., Interim Director, University Communications
Kathleen T. Osborn, M.Ed., Director, Alumni and Constituent Relations and Annual Fund
Mark P. O'Reilly, B.A., Director, Graphics and Printing

Emeriti
Arnold B. Grobman, Chancellor Emeritus
William L. Franzen, Dean Emeritus
Virgil N. Sapp, Dean Emeritus
Joy E. Whitener, Dean Emeritus
Academic Calendar

1991 Winter Semester

January
7, 8 Monday, Tuesday, Day, Evening College and Graduate School Registration
9 Wednesday, Classwork Begins: 8 am
21 Monday, Classes Not in Session (Dr. Martin Luther King's Birthday)

March
2 Saturday, Spring Recess Begins: 3 pm
11 Monday, Classwork Resumes: 8 am

April
30 Tuesday, Classes End: 11 pm

May
1, 2 Wednesday, Thursday, Intensive Study Days (No Classes Held; No Exams Scheduled)
3 Friday, Final Examinations Begin
10 Friday, Second Semester Ends: Close of Day
12 Sunday, Annual Commencement

1991 Four-Week Intersession

May
13 Monday, Registration
14 Tuesday, Classwork Begins: 8 am

June
7 Friday, Intersession Ends: Close of Day

1991 Eight-Week Summer Session

June
6 Thursday, Day, Evening College and Graduate School Registration
10 Monday, Classwork Begins: 8 am

July
4 Thursday, Independence Day Holiday
31 Wednesday, Final Examinations

August
1 Thursday, Final Examinations
1 Thursday, Session Ends: Close of Day
4 Sunday, Summer Commencement

1991 Fall Semester

August
21, 22 Wednesday, Thursday, Day, Evening College and Graduate School Registration
26 Monday, Classwork Begins: 8 am
31 Saturday, Labor Day Holiday Begins: 3 pm

September
3 Tuesday, Classwork Resumes: 8 am

November
27 Wednesday, Thanksgiving Holiday Begins: 11 pm

December
2 Monday, Classwork Resumes: 8 am
10 Tuesday, Classes End: 11 pm
11, 12 Wednesday, Thursday, Intensive Study Days (No Classes Held; No Exams Scheduled)
13 Friday, Final Examinations Begin
23 Monday, First Semester Ends: Close of Day

1992

January
5 Sunday, Mid-Year Commencement

1992 Winter Semester

January
8, 9 Wednesday, Thursday, Day, Evening College and Graduate School Registration
13 Monday, Classwork Begins: 8 am
20 Monday, Classes Not in Session (Dr. Martin Luther King's Birthday)

February
29 Saturday, Spring Recess Begins: 3 pm

March
9 Monday, Classwork Resumes: 8 am

May
4 Monday, Classes End: 11 pm
5, 6 Tuesday, Wednesday, Intensive Study Days (No Classes Held; No Exams Scheduled)
7 Thursday, Final Examinations Begin
14 Thursday, Second Semester Ends: Close of Day
17 Sunday, Annual Commencement
1992 Four-Week Intersession

May
- 18 Monday, Registration
- 19 Tuesday, Classwork Begins: 8 am
- 25 Monday, Memorial Day Holiday

June
- 12 Friday, Intersession Ends: Close of Day

1992 Eight-Week Summer Session

June
- 11 Thursday, Day, Evening College and Graduate School Registration
- 15 Monday, Classwork Begins: 8 am

July
- 3 Friday, Independence Day Holiday

August
- 5, 6 Wednesday, Thursday, Final Examinations
- 6 Thursday, Session Ends: Close of Day
- 9 Sunday, Summer Commencement
Introduction to UM-St. Louis

The University of Missouri-St. Louis is one of four campuses that constitute the University of Missouri, the ninth largest university in the United States. Founded in 1839 upon the ideals of Thomas Jefferson, the University of Missouri-Columbia became a land-grant institution following passage of the the Morrill Act by Congress in 1862.

The University remained a single-campus institution until 1870 when the Rolla campus was opened. Two campuses were added in 1963. The private University of Kansas City became UM's Kansas City campus, and an entirely new campus was started in St. Louis.

In the 1960s a movement began across the country toward the creation of public universities located within metropolitan centers. That movement marked the most significant change in higher education in the twentieth century, and the University of Missouri-St. Louis is a product of that educational development.

UM is governed by a nine-member Board of Curators appointed by the governor and confirmed by the state Senate. The Curators name the president of the University. Each campus is supervised by a chancellor.

UM-St. Louis, the fourth campus of the University of Missouri, was established in 1963. The notion of a major public institution serving the St. Louis area evolved from a dream to a solid reality and today exceeds the expectations of those who created it.

Since the doors of the old Administration Building opened more than 25 years ago, UM-St. Louis has become the largest university serving St. Louisans and the third largest university in the state.

The University faculty has grown from 30 in 1963 to more than 900 members, committed to the future of the St. Louis area through teaching, research, and service.

One of the keys to this university's development as an outstanding institution has been the careful selection of faculty over the years. UM-St. Louis has attracted some of the top authorities in many fields. In general, our faculty members are younger than their counterparts at older, established institutions. More than 90 percent of the full-time faculty hold doctoral degrees, a figure that far exceeds the national average. These professionals develop new theories and new procedures, and in so doing attract hundreds of thousands of dollars each year in research funding.

Student enrollment has grown from 600 in 1963 to more than 15,000 in the 1990-91 school year. The numbers have changed, but not the spirit. Faculty and students are still most concerned with the education of new talent, which is the basis for the future social, intellectual, and economic health of Missouri's largest metropolitan area.

From its beginning on what was once a country club, with a single building converted to classrooms and offices, the University of Missouri-St. Louis has grown to a large modern campus of some 22 buildings on 177 acres, offering a full university experience.

The curriculum has grown to include 38 undergraduate programs, 23 master's programs, six professional programs, eight doctoral programs, and one professional degree program. There are programs which answer the particular needs of older students returning to school; of students pursuing pre-architecture, prelaw, premedicine, prepharmacy, pre-engineering, or prejournalism courses; of students interested in urban careers; and of those who need special help in tackling university-level work. There are also opportunities for students to combine their academic course work with internships that often lead to job offers.

Mission Statement
As one of the four campuses comprising the University of Missouri, the University of Missouri-St. Louis has served the citizens of the St. Louis metropolitan area since 1963. It shares the University's land-grant tradition and is committed to research and public service. The productive scholars on the campus' faculty contribute significantly to the theoretical and applied research in their fields. The campus' business, chemistry, political science, and metropolitan studies programs already are internationally recognized. As it develops, the campus will support other centers of excellence in departments or clusters of departments as the quality of scholarship achieves consistent international recognition.

In addition to its role to advance knowledge as part of a comprehensive research university, the University of Missouri-St. Louis has a special mission determined by its urban location and its shared land-grant tradition. It works in partnership with other key community institutions to help the St. Louis region progress and prosper.

Through its seven schools and colleges, the campus provides opportunities for all the people of the metropolitan area, including the economically disadvantaged, to receive high quality and accessible liberal arts, career, professional, and graduate education.

Through a careful melding of strengths in scholarly research, teaching, and community service, the University of Missouri-St. Louis plays a leadership role in advancing scholarship; providing quality undergraduate, graduate and professional instruction to the large and diverse numbers of students in the St. Louis area; and contributing to economic development throughout the state and region.
Introduction to UM-St. Louis

In shaping and evaluating its undergraduate curriculum, the University of Missouri-St. Louis fosters intellectual independence, sound judgment, clarity of expression in writing, aesthetic refinement, and sharpened analytical skills. The campus provides high quality undergraduate, graduate, and professional instruction to an ethnically, racially, and economically diverse student body. Special efforts are made to fulfill the University's land-grant mandate to serve the working people of the state and, because most of the campus' graduates remain in the metropolitan area, to enhance the economic development and quality of life of the metropolitan area and the state.

These research, instructional, economic development and community service missions are accomplished by on-campus and extension programs in the schools and colleges of Arts and Sciences, Business, Education, Nursing, and Optometry, as well as the Evening College and the Division of Continuing Education-Extension. In addition, the campus' humanities, fine arts, and performing arts programs enrich the cultural life of the metropolitan area.

The University of Missouri-St. Louis will work vigorously to achieve equal opportunity for all within the campus community through a strong affirmative action program.

The University: Academic Structure

The academic structure of the University consists of the College of Arts and Sciences, School of Business Administration, School of Education, Evening College, Graduate School, School of Nursing, School of Optometry, and Continuing Education-Extension.

The College of Arts and Sciences, the largest of the divisions, includes 18 academic departments that combine the best features of two different educational worlds. One world consists of general educational offerings and provides students with opportunities to acquire a breadth of knowledge and a grounding in the basic skills of intellectual inquiry. The other world supplies the basic preparation for the student's professional life by providing learning experiences leading to a career in a specific field.

The School of Business Administration maintains a balance between the specialization of professional courses and the diversity of liberal arts. Besides training students as qualified professionals for the business world, the School of Business Administration through its bachelor's degree and master's degree programs expands student capability in communication, analysis, and judgment, thus enabling our graduates to deal more effectively with today's complex economic environment.

The School of Education acts on the premise that developing and maintaining a quality educational setting in an urban area requires both advancing the field of education and meeting changing societal needs. The faculty is committed to producing quality research, teaching excellence, and extending these research and teaching capabilities to the community. The School does these things through its undergraduate and graduate teacher-education offerings, its Midwest Community Education Development Center, and through the School's activities both on campus and in the field.

The Evening College was established to provide a university education for those who cannot attend classes during the day. For those interested in traditional university study, the Evening College offers almost all of the degree programs available to day students and ensures that these programs conform to the same standards and requirements as their daytime counterparts. For students seeking innovative approaches to education, the Evening College has the Bachelor of General Studies (BGS) Program, a unique concept designed for mature individuals who want more flexibility in reaching their educational goals. BGS students choose courses from the UM-St. Louis curriculum that they view as important to their education, and their degree program's structure will thus vary according to their needs. All campus services available to day students are also available to Evening College students.

Programs offered in the UM-St. Louis Graduate School fall into two categories: professional programs designed to develop a special competence in a particular field, and academic programs designed to develop the student's command of a range of related subjects within a field. These graduate programs are carefully structured to meet the needs of the metropolitan area and to give students the skills and professional competence to succeed in today's world.

The School of Optometry, opened in the fall of 1980, provides its students with a combined professional optometric education and clinical experience. It is furnished with the newest equipment for teaching and research and operates two clinics that offer a full range of diagnostic services to St. Louisans. At the same time, the School of Optometry provides professional clinical experience for optometry students.

The Pierre Laclede Honors College, newly inaugurated in 1989, brings together a highly select group of intellectually curious and gifted students who are pursuing various career goals and earning degrees in disciplines offered by the University's other undergraduate schools and colleges. These Honors Scholars follow a special curriculum that combines a series of innovative Honors College classes and course work done for Honors credit in their major areas. They actively engage in their education in small seminars led by some of the University's finest teachers. In addition to offering scholarships and stipends, the Honors College has unique features such as the Community Mentorship Program which links Scholars with model urban citizens who share their interests.
Introduction to UM-St. Louis

The School of Nursing is the newest addition to the University. Housed on the South Campus, the School provides an innovative upper-division, baccalaureate nursing program, specifically designed for the registered nurse (R.N.), with either a hospital school of nursing diploma or associate degree in nursing. The Bachelor of Science in Nursing degree program is designed for either full-time or part-time students.

The Continuing Education-Extension Division extends the University’s expertise to the community by offering a variety of credit and noncredit courses, both on and off campus. It also sponsors programs in the community, such as the annual St. Louis Storytelling Festival. In 1991-92 the UM-St. Louis Continuing Education program is the largest in the Midwest and its noncredit course enrollment is the fourth largest in the country.

The University: Student Life

UM-St. Louis is an educational institution that both provides and demands excellence in its enterprise. But the life of the University is not all work. There are many leisure-time activities, either free or at reduced cost to students. Numerous student organizations, from the Accounting Club to Zeta Tau Alpha sorority, seek members—and leaders. Interesting speakers, concerts, film series, plays, exhibits, recitals and a host of informal gatherings crowd each week’s schedule. And, if that’s not enough, the St. Louis area offers still more recreational, sports, and cultural events.

The University offers a wide range of varsity and intramural sports of interest to UM-St. Louis students, whether as players or spectators. On the varsity level, the UM-St. Louis Rivermen and Rivernwomen compete in most major sports. UM-St. Louis men’s soccer teams have participated in numerous NCAA Division II tournaments; the team won the national title in 1973. The men’s basketball and baseball teams also frequently play in national tournaments. The expanding women’s program includes varsity competition in basketball, soccer, softball, volleyball, swimming, and tennis. The UM-St. Louis women’s soccer team is annually ranked in the top 20 teams nationwide.

The Mark Twain athletic facility offers weight and exercise rooms, a swimming pool, and basketball, volleyball, handball, and racquetball courts. Outdoor facilities include tennis, basketball, handball courts, a fitness trail, and baseball fields.

Students will find fitness activities, both organized and individual, to suit their interests and needs. Intramural sports are available to all students, with schedules designed for maximum participation.

The University: Its Graduates

More than 32,000 St. Louisans hold degrees from UM-St. Louis. Our graduates have a fine reputation in St. Louis. Many are still young, with challenging careers ahead of them, working in widely diversified fields for large and small corporations or in government and education. They are represented in almost every profession throughout the metropolitan area. Each year, St. Louis employers hire more graduates from the University of Missouri-St. Louis than from any other college or university. With more than 80 percent of the graduates remaining in this metropolitan area, the impact and influence of UM-St. Louis alumni will continue to grow. These graduates represent a new kind of university—a public urban university with standards of excellence, opportunities in education, and service to the community. That’s an important and valuable asset to the metropolitan St. Louis area and to the state of Missouri.
Undergraduate Study

This section includes admission, general education degree requirements, and academic policies for students seeking undergraduate degrees from the University of Missouri-St. Louis.

Admission and Application Procedure

Admission for First-Time Freshmen

The University of Missouri has a uniform policy for the admission of freshman students to its four campuses. The four campuses are of equal stature in the University system, and a common standard is applied at each campus. The procedure for regular admission from high school is described in this publication.

Selection of students for regular admission is based on high school class rank, performance on a standardized college aptitude test, and required high school units. Students must also submit their high school transcripts and, where appropriate, recommendations by persons knowledgeable of their potential for success in university-level education.

Admission Procedure

Students applying as first-time freshmen (i.e., students without previous college work) need to submit to the University of Missouri-St. Louis Director of Admissions three documents:

1) Undergraduate Application for Admission form: You may request one by calling the Office of Admissions at (314) 553-5451.

2) High School Transcript and Class Rank: The transcript must be sent directly from the high school to the UM-St. Louis Admissions Office. The transcript should indicate the class rank at the time of application and all courses satisfactorily completed. For those students applying during their senior year in high school, which will include most applicants, class rank as of the end of six semesters (end of junior year) will be used. If a later class rank is available at the time application is made, it should be used.

3) College Aptitude Test: The University’s freshman admissions procedure requires that a test score be submitted for each applicant. This requirement may be met by a score from any one of the following College Aptitude Examinations:

American College Testing Program (ACT) This test is administered at many locations across the country under the auspices of the ACT program. Students who participate in this program should request that score reports be sent to the university campuses to which they apply.

Cooperative School and College Ability Test (SCAT) This test is administered to Missouri high school students through the statewide Missouri College Testing Program. The student should request that a record of his or her score be sent to the university campus to which he or she applies for admission.

Scholastic Aptitude Test (SAT) This test is administered at many locations across the country under the auspices of the College Entrance Examination Board. Students who take the SAT should request that score reports be sent to the campuses to which they apply.

Admission Requirements

(Effective Fall, 1991)

Any high school graduate is admissible without further data upon submission of a transcript or other evidence indicating he or she meets both the following requirements:

1) At least 15 units of credit (1 unit = 1 year in class) as follows:

- English: Two units emphasizing composition or writing skills are required. One of the remaining two units may be in speech or debate.
- Mathematics: (Algebra 1 and higher).
- Science: Not including general science, one of which must be a laboratory course.
- Social Studies: 
- Fine Arts: 

Three additional units selected from foreign language, English, mathematics (Algebra 1 and higher), science, or social studies. Among these options, two units of foreign language are strongly recommended.

The fifteen units are considered minimum and for those individuals interested in specific fields, e.g., engineering, business, the sciences, a fourth year of high school math is strongly recommended.

2) In addition, each student will be evaluated on the basis of High School Rank Percentile (HSCRP) and Test Score.

The University seeks a heterogeneous student body reflecting diversity of race, ethnicity, age, geography, (including international students) and physical disability. Factors given prime consideration for admission to undergraduate study are an applicant’s previous academic success and the quality of the record presented. Applicants who do not meet the criteria set forth in sections 1 and 2 may be considered by applying to the Director of Admissions. Additional factors considered for admissions include:

- Extensive extracurricular activity involving school, church, or community;
- Outstanding talent and/or abilities;
- Number and scope of college preparatory courses taken;
- Evidence of marked improvement over time in high school academic record;
- Significant work experience and/or family responsibilities;
- Supporting evidence attesting to one or more of the above in student’s own hand in the form of essay.
Undergraduate Study

Out-of-State Freshmen  The same admissions requirements apply to all out-of-state freshmen who have graduated from an accredited high school. Students should be aware that the University of Missouri-St. Louis provides no dormitory facilities. Nonresident students must pay nonresident educational fees in addition to regular educational fees.

When to Apply  Qualified applicants are admitted and notified by letter of admission in the order that completed applications are received. Applications are accepted after October 1 for the next Fall Semester on the basis of six or more high school semesters. Completed applications, including high school transcripts and test scores, should be on file by July 1 to guarantee that they will receive full consideration. Datelines are July 1 for the Fall Semester; December 1 for the Winter Semester; and May 1 for the Summer Session.

Acceptance  Upon acceptance to the Fall or Winter Semester, students must submit a final high school transcript indicating their class rank and graduation date. First-time freshmen must take placement examinations in English and mathematics. Arrangements for these exams are made with students through the Office of Admissions after notification of admission.

Advanced Standing for Entering Freshmen  The University of Missouri-St. Louis grants credit hours to entering freshmen who, through their performance on College Entrance Examination Board Advanced Placement Tests and faculty-administered tests, demonstrate proficiency in certain college-level courses, such as accounting, biology, chemistry, English, foreign languages, history, mathematics, political science, and physics. For further information and applications, write to College Board Placement Examinations, Box 592, Princeton, New Jersey 08540. The score-reporting institution code number for the University of Missouri-St. Louis is 6889. Test scores should be sent to the Director of Admissions and must be on file before the first day of classes. A brochure with detailed information is available in the Office of Admissions.

Dual High School/University Enrollment  Superior high school students may be admitted in a special student category for the purpose of taking one or more university courses concurrently with their final year or two of high school or during the summer session prior to these years. Students must submit a regular application for admission as well as a special request which includes a high school recommendation. Students are admitted on an individual basis on the basis of academic standards that exceed those required for regular admission from high school. Admission is limited and governed by available space, and students must meet the prerequisites for the desired course or courses.

College Level Examination Program  Individuals over age 18 who have had no previous college work may earn advanced credit through the College Level Examination Program (CLEP) General Examination, provided they score at or above the 50th percentile. A maximum of 28 semester hours of credit may be earned. In addition, CLEP offers subject examinations for credit in one specific area. These examinations can be taken any time, provided the student has not taken a course in the test area. A score at or above the 50th percentile must be earned to receive credit. Consultation with an adviser is recommended. CLEP tests are given the third week of every month. Contact the Office of Admissions at 553-5451 for complete information. A brochure with detailed information is available.

Credit for Military Service  Credit may be allowed for service training programs conducted by the various Armed Forces branches. The American Council of Education recommendations in A Guide to the Evaluation of Educational Experiences in the Armed Services generally serve as a basis for granting such credit. To count toward a degree, the credit granted must be appropriate to the student's curriculum.

Trial Admission  High school graduates who do not meet the regular admission standards may be admitted on a trial basis in the summer session. Usually enrollment is for six hours and if grades of C or better are earned, the student may submit an application at the end of the summer session. If space is available, the application is reviewed and the student is permitted to enroll in the fall semester.

High School Equivalency Applicants  Individuals may seek admission on the basis of high school equivalency earned from performance on the United States Armed Forces Institute General Educational Development (GED) tests. Admission is based on an evaluation of the educational merits of military and other experiences since leaving school, GED test scores, and performance on other aptitude tests.

Veterans and Mature Adults  Applicants may be admitted as special or irregular students, not degree candidates, if they are veterans of the military service or over age 21 and have not previously earned college credit, have not been in school for several years, have not earned a high school diploma, or passed the GED; or if they have a diploma, but do not meet regular admission requirements from high school. Admission is based on special preparation, attainment, or exceptional aptitude as judged by an evaluation of military and other experiences, test scores, and other indicators of potential success at the University. Students can become degree candidates on the basis of their performance in university course work.
Admissions and Academic Policies

Undergraduate Study

Transfer Students

Missouri state institutions of higher education welcome transfer students; however, students should be aware that actual requirements for degrees vary from institution to institution. This factor makes it particularly important that students who plan to transfer make contact, very early in their academic career, with the campus from which they eventually wish to graduate. By arranging in advance for appropriate courses to be taken prior to transfer, they can likely minimize their problems. Your own campus dean’s office or Office of Admissions can help you contact the institution to which you might transfer if you need assistance.

Students transferring from other colleges and universities must submit the following information to the UM-St. Louis Director of Admissions:

1. Undergraduate Application for Admission;
2. High School Transcript;
3. Official Transcripts from all Colleges/Universities attended.

Official transcripts must be sent by each institution directly to the Admissions Office. Hand-carried credentials are not accepted. All credentials submitted for admission become the property of the University. The above material should be submitted by July 1 for the Fall Semester; December 1 for the Winter Semester; and May 1 for the Summer Session.

A transferring student who has completed less than 24 semester hours of college-level work must apply under the procedures for admission to the freshman class and must have at least a 2.0 overall grade point average (4.0 system) in all college-level courses attempted at previous institutions.

Transfer applicants applying to the University of Missouri-St. Louis from regionally accredited colleges or universities with grade point averages of 3.0 or higher, based on a 4-point system, may be admitted at any time. Students with grade point averages of 2.5 or higher may be accepted any time during the semester before desired admission, while students with grade point averages of 2.0 or higher may be accepted any time during the last half of the semester before desired admission. UM-St. Louis may not admit any student who is under suspension or dismissal or whose previous record shows work of an inferior or unsatisfactory quality.

CBHE Statement

Students transferring to the University of Missouri-St. Louis and students transferring out of UM-St. Louis may utilize the Coordinating Board of Higher Education Articulation Agreement. The agreement outlines statewide undergraduate general education requirements which satisfy the general requirements for students transferring into UM-St. Louis and students transferring out of UM-St. Louis to other public higher education universities in the state.

These requirements are detailed on the page prior to the Appendix in this catalogue.

Advanced Standing

According to a recent Articulation Agreement among public institutions within the state of Missouri, the following guidelines will govern transfer of credit to the University of Missouri-St. Louis from colleges and universities within the state of Missouri. These guidelines also apply to students transferring to the University of Missouri-St. Louis from schools located outside the state of Missouri.

Advanced standing in the form of credit hours may be allowed for work satisfactorily completed in another college or university of recognized standing, public or private, located in the state of Missouri, as long as the work satisfies the requirements of the university division in which the student registers.

The academic record at a given institution will include all courses attempted. Grades of D or better, earned in college-level work at an accredited or approved institution of higher education, should receive full credit when transferred to the University of Missouri-St. Louis. The University, however, will treat all grades on courses attempted on the same basis as that of the UM-St. Louis student. For example, if a UM-St. Louis student is required to repeat a specified course, having earned a D grade, a transfer student will also be required to repeat the same course, if it carried a D grade.

Advanced standing for work of the senior year is not granted. To receive recognition, claims for advanced standing must be made by students within one semester after entrance.

Shortly after all official transcripts are on file, a student’s previous academic record will be evaluated to determine which courses are applicable. Should there be any question concerning the applicability of any courses, the student should contact the Office of Admissions by writing or calling the Director of Admissions at (314) 553-5451.

The University of Missouri-St. Louis Bulletin: Undergraduate Catalogue in effect at the time of the transfer student’s initial enrollment in a college will govern the degree requirements, provided the student has had continuous, full-time enrollment and remains in the same degree program after transferring to UM-St. Louis. If full-time continuous enrollment has not been maintained, or if students change their program objective, the Catalogue in effect at the time of a student’s latest enrollment, or at the time the student elects the new program, may be followed.

Degree checks, that is, determining whether courses meet a specific degree requirement and whether courses are accepted as a part of the student’s academic major, are made in the office of the dean concerned. Should any questions arise, a student may contact the Director of Admissions, who will inform the student of the appropriate procedure to be followed in pursuing the question. Unresolved problems related to the transferability of credit may be appealed to the Senate Committee on Admissions and Student Financial Aid.
Undergraduate Study

Associate Degree Transfers from Junior Colleges
A student admitted to the University and holding an associate degree oriented toward the baccalaureate degree will be accepted in junior standing. Students fulfilling the general education requirements outlined by the Missouri Coordinating Board of Higher Education and certified by the sending institution will have met the lower division general education requirements at UM-St. Louis. However, this does not exempt the student from meeting the specialized lower division degree requirements of departments or divisions of the University. Courses completed in the associate degree program are evaluated for application to specific degree requirements by the same criteria used for transfer students from other colleges and universities located in Missouri, other University of Missouri campuses, and other divisions on this University campus.

Credit earned in or transferred from a community college shall normally be limited to approximately half the baccalaureate degree program requirement, and to the first two years of the undergraduate educational experience.

Transfer Within the University of Missouri System
A student not in good standing at another campus of the University of Missouri (suspended or dismissed) is not eligible to enroll at the University of Missouri-St. Louis campus.

Any course that leads to an undergraduate degree in any campus of the University of Missouri shall be accepted in transfer toward the same degree on any campus of the University offering that degree. Grades, including D and F grades, and honor points earned in such courses will also transfer and will be included in the cumulative grade point averages of the transferring student.

Questions concerning acceptability of credit should be referred to the Director of Admissions. Unresolved problems related to transferability of credit may be appealed to the Senate Committee on Admissions and Student Financial Aid.

Students within the last 30 hours of graduation may take a limited number of courses at another campus in the UM system, provided the last 15 hours are taken at UM-St. Louis and the work is approved by their respective deans and departments.

Students from Other Countries
Prospective students living outside the United States and its possessions should write the Director of Admissions at least one year before the date of desired admission for information about and admission to the University of Missouri-St. Louis and the approximate expenses, and for the required application forms. Upon approval of application papers and official records, students are notified by official letter. Students should not make plans to leave their countries without first obtaining permission to enter the University.

All students must take the Test of English as a Foreign Language (TOEFL). Write to Test of English as a Foreign Language, Educational Testing Service, Princeton, New Jersey 08540.

Foreign students now studying in the United States may be admitted only after completion of at least 24 semester hours of work, with a grade of C or better, in an accredited school offering a college-level program, provided that school’s letter of admission was the basis for the student’s receiving a visa. To complete their credential file, students must furnish original and official transcripts from each school attended, both in this country and abroad. Students should not consider admittance final until they receive an official acceptance letter.

Former Students
Former students not currently enrolled should file a request for a Permit to Re-Enroll with the Director of Admissions at least 30 days before the registration period. If Fall Semester applicants receive an Early Admission decision, they may preregister in July and August; preregistration for the Winter Semester and the Summer Session is limited to students enrolled during the preceding term.

Visiting Students
Students who do not wish to earn a degree from the University of Missouri-St. Louis may be admitted to the Summer Session as visiting college students. Admission requires certification by the student’s college or university that the student is in good standing and has permission to enroll in approved course work for transfer credit back to that institution. Application forms for certification can be obtained from the Office of Admissions. At the end of the session, students must request that their grades be reported by transcript to their respective schools.

Auditor
A student may enroll as an auditor in any course with the prior consent of the instructor and dean of the School or College in which the auditor is registered. They may be dropped from the course when, in the judgment of the instructor and dean, their record justifies such action. Auditors are charged full fees and receive no academic credit.

Evening College Applicants
The admission procedure for the Evening College is the same as for the day division. For further information, see the next section, “Enrollment and Academic Advising: Evening College,” and the Evening College special section of this Bulletin.
Undergraduate Study

Registration

New Students
Upon admission to the University, students are notified that instructions will be sent by the registrar's office before registration.

Former Students
Former students not currently enrolled must submit requests for permits to re-enroll.

Currently Enrolled Students
Currently enrolled students are given the opportunity to preregister, by appointment, before all other students. Students wishing to preregister for the next semester in a different Division or School must complete a Change of Division form at the Office of Admissions.

After the close of the preregistration-by-appointment period, all students are eligible to register upon obtaining the written approval of their adviser. Students wishing to register for more than a normal course load must obtain approval from their dean.

Registration Cancellation
Students who have enrolled and paid their fees but do not wish to attend the University may cancel their registration any time before the first day of the semester. Cancellation forms may be obtained at the Office of the Registrar. If cancellation is made before the first day of classwork begins, a full refund of fees (less $20 for the cost of handling registration) will be made by mail. For the refund schedule for cancellation of registration after classwork begins, see the "Fees: Refund of Fees" section of this Bulletin.

Enrollment and Academic Advising

In most cases, incoming undergraduate students are enrolled in the College of Arts and Sciences or the Evening College. Exceptions are transfer students who meet the specific admission requirements of the School of Business Administration, the School of Education, or the School of Nursing.

Students in the College of Arts and Sciences planning to pursue degrees in the School of Education or the School of Business Administration remain in the College until they obtain 60 credit hours with a cumulative grade point average of 2.0. Refer to the School of Business Administration or the School of Education sections in this Bulletin for additional admission requirements.

Students in the Evening College who have completed 40 semester hours must declare their majors. They are assigned according to their choice of major to departmental advisers in the College of Arts and Sciences or advisers in the appropriate School.

Registered nurses pursuing a B.S.N. degree are admitted to and advised by the School of Nursing if they have a cumulative grade point average of 2.5, a total of 30 hours of college credit, and meet all admission requirements of the University and the School of Nursing.

Those registered nurses who do not meet these requirements are enrolled in the College of Arts and Sciences or the Evening College until the requirements are met. They are advised, however, in the School of Nursing even though enrolled in one of the other Schools.

The dean's office in each division will assist students in the assignment of academic advisers and with the following matters: making a change in course schedule, evaluating transfer credit, withdrawing from school, placing a course on a satisfactory/unsatisfactory basis, availing oneself of grade modification, and filing for degree candidacy.

College of Arts and Sciences

All incoming students may receive professional academic advice in the dean's office, 303 Lucas Hall, (314) 553-6330. Students expecting to major in business administration or education who have completed fewer than 30 credit hours and students who have not declared a major in the College of Arts and Sciences may also receive academic advising in the dean's office. Faculty advisers for those students considering a career in one of the health sciences or in law are also located in the dean's office.

The First Year Program, also within the College of Arts and Sciences, provides ongoing advising and assistance to new students in structuring their academic schedules and development of a two-year plan of study consistent with their career goals. Students are involved in a semester-long Freshman Seminar focusing on orientation to college, utilization of university resources, campus involvement, major selection, and career planning. Assistance is provided in time management, study skills, and other areas essential to student success. The office is located in 464 Lucas Hall. For more information, contact the First Year Programs Office at (314) 553-6330.

Since it is important for students to determine what specific requirements must be satisfied to complete their chosen baccalaureate program, they are urged to declare a major as soon as possible. Once students have declared a major, they should inform the office so that the appropriate academic adviser can be assigned. The adviser, a faculty member in the student's area of interest, will assist in selecting suitable courses and advise the student in matters relating to degree requirements.

Students transferring into the College from other institutions may seek assistance from the dean's office to effect as smooth a transition as possible. The College will evaluate all transfer credit to determine its applicability to the specialized degree requirements of the College.
Undergraduate Study

School of Business Administration

The School of Business Administration's Office of Academic Advising has available a staff of professional academic advisers who provide assistance to students in planning their academic careers and in dealing with the following concerns:
- Appropriate Course Selection
- School of Business Administration Requirements
- General Education Requirements
- Evaluation of Transfer Credit
- Course Prerequisites
- School Policy and Regulations
- Graduation Requirements

Other matters related to a student's academic matriculation should also be directed to this office.

Prospective business students who are admitted to the College of Arts and Sciences or the Evening College should submit an official declaration of their major to the dean's office of the College to which they have been admitted. When they have completed 30 hours of credit, they will then be assigned to the School of Business Administration for advisement.

Transfer students at the junior or senior level who have been admitted to the School of Business Administration should contact the advising office and plan to meet with an adviser early in the semester for an evaluation of transfer credit and the planning of their degree programs.

All students are urged to make advising appointments early during each semester, prior to registration dates, to obtain approval of schedules for upcoming semesters. Advising is a continuous and ongoing process. For information, call (314) 553-5888.

School of Education

Students wishing to prepare for teaching careers may choose either of the following alternatives:

1) After completing 60 hours of course work at the University or another accredited institution, students who intend to teach in elementary, early childhood, special education, business education, or physical education settings must apply for admission to the School of Education.

2) Students who intend to teach in other secondary-school classrooms may elect to apply for admission to the School of Education to pursue the Bachelor of Science in Education degree (B.S.Ed.) or they may elect to earn a degree from another College or School at UM-St. Louis and take courses additionally to meet state teacher certification requirements.

With either option, students must meet University and departmental requirements as well as those for teacher education in Missouri. Careful planning of individual schedules is necessary to ensure selection of appropriate courses and to avoid extending programs beyond 120 hours. Students should, therefore, seek advisory help from the Office of Undergraduate Studies in Education (155 Manillac Hall) at the earliest opportunity. Regular consultation with advisers is essential. For information, call (314) 553-5837.

The Office of Undergraduate Studies in Education provides assistance to all students interested in professional education programs and certification requirements. Questions about admission to the Teacher Education Program, sequences of courses, prerequisites, graduation requirements, and related matters should be directed to that office.

Evening College

The Evening College academic advising staff helps students plan degree programs or select courses appropriate to their individual needs. Their services are available to all new and current undergraduate Evening College students. Advisers will review transfer credit courses, prerequisites, and degree requirements. Once Evening College students have declared a major, usually after completing approximately 40 semester hours of credit, they are assigned to a faculty adviser in the student's area of study. A Declaration-of-Major form must be completed in the Evening College office so that the faculty adviser may be assigned. For an appointment, call the Evening College Office, (314) 553-5162.

School of Nursing

The School of Nursing offers a Bachelor of Science in Nursing degree (B.S.N.) to registered nurses who are graduates of a hospital diploma program or an associate degree nursing program.

A junior-senior level program, this program at the University of Missouri-St. Louis is designed to build on the student's prior education and experience in nursing. The program includes 63 credit hours, with approximately half in general education, including humanities, natural and social sciences, communicative skills, and mathematics. The other half of the program is composed of nursing courses, including nursing theory and research, health assessment, nursing management, patient education, and nursing care with families, groups, and in the community.

All qualified applicants are admitted to the School of Nursing; however, enrollment in some clinical courses may be limited due to the availability of clinical facilities. Preregistration is advised.

Prospective students are advised to contact the Advising Office, 119 South Campus Classroom Building, in the semester prior to anticipated admission to determine prerequisite courses needed.
Undergraduate Study

Pierre Laclede Honors College

Honors Scholars receive both academic advising and personal counseling from the College's administrative and teaching staff throughout their undergraduate careers. During the first two years, particular attention is given to the ways in which students fulfill their Honors College and University General Education Requirements and prepare themselves for their majors by taking the necessary prerequisites. After a major is declared, Honors College advisement with regard to work done for Honors credit continues and is supplemented by major-related advising provided by the appropriate academic unit. The College identifies candidates for major graduate fellowships and assists them in preparing their dossiers. Similar assistance is given to Scholars planning to go on to graduate and professional schools or seeking career opportunities immediately upon graduation.

General Education Requirements

Students must successfully complete the general requirements of the University, the School or College in which they are enrolled, and the specific requirements of their area of specialization. Described below are the general education requirements for all degrees.

Credit Hours

All candidates for baccalaureate degrees must complete 120 semester hours. At least 45 of these hours must be courses numbered 100 or above (or comparable courses transferred). Students must maintain a minimum 2.0 grade point average, overall as well as in their area of specialization. Students seeking two degrees must meet all degree and residency requirements.

Basic Skills

All students must show from their high school or college transcript, by examination or by appropriate courses, competency in basic communicative and mathematical skills. Students should check with their divisional dean's office at the end of the first year to verify that their proficiency in these skills has been properly recorded.

An additional communicative skill requirement must also be completed before graduation. Students should check with their divisional dean's office at the beginning of their senior year to verify that fulfillment of this requirement has been recorded.

Communicative Skills (two requirements)

1) Either submit a satisfactory score on the English Placement Test. (Contact the Office of Admissions for test date schedule.)

or achieve a grade of C or better in a college-level English Composition course—at the University of Missouri-St. Louis, English 10, Composition.

2) Effective since the Fall Semester, 1986, students wishing to complete a degree at the University of Missouri-St. Louis must complete English 210, Advanced Expository Writing, or its equivalent with a grade of C or above.

Mathematical Skills

Any one of the following will serve to demonstrate proficiency in the basic mathematical skills area:

1) Satisfactory score on the mathematics placement test.

2) A grade of C or better in a college-level mathematics course.

3) A grade of C or better in Mathematics 02C.

Breadth of Study

Students must complete at least 42 hours in the following three areas, with at least three courses in each area. (Courses meeting these requirements are listed at the beginning of each departmental section of the separate booklet, University of Missouri-St. Louis Bulletin: Description of Courses. This booklet is available for purchase in the campus bookstore. Copies are also in the University Libraries.)

1) Humanities: art history or art appreciation (applied art and music courses do not count); literature, music history, literature, theory, or appreciation; philosophy and logic; theatre appreciation, theory, and history. (Symbol [H])

2) Natural sciences and mathematics: applied mathematics; astronomy; atmospheric science; biology; chemistry; computer science; geology; mathematics; physics; statistics. (Symbol [SM])

3) Social sciences: administration of justice; anthropology; communication; economics; geography; history; political science; psychology, social work; sociology. (Symbol [SS])

Other Requirements

American History and Government

Students must satisfactorily complete a course or courses in American history or government taken at the University of Missouri or at other colleges or universities in Missouri. Transfer students should check with the dean's office of their division to find out if they have fulfilled this requirement.

The requirement may be satisfied by one of the following courses:

History 3, American Civilization I
History 4, American Civilization II
History 5, Honors American Civilization
History 107, The History of Missouri
History 302, United States History: Revolution and the New Nation 1763 to 1815
History 311, Topics in American Constitutional History
Political Science 11, Introduction to American Politics
Political Science 121, Civil Liberties
Political Science 130, State Politics
Political Science 135, Introduction to Urban Politics
Political Science 140, Public Administration
Undergraduate Study

Political Science 230, The American Presidency
Political Science 231, Congressional Politics
Political Science 232, Introduction to Political Behavior
Political Science 235, Political Parties and Elections
Political Science 240, Bureaucratic Politics
Political Science 245, Urban Administration
Political Science 320, Introduction to American Constitutional Law
Political Science 331, Legislative Processes
Political Science 346, Urban Planning and Policies

Courses Not Approved for Degree Credit
ELS ED 082, Effective Reading and Study Skills
English 09, English Composition
Mathematics 02a, Mathematics 02b, or Mathematics 02c, Fundamentals of Algebra I, Algebra II, or Algebra III
Mathematics 03, Trigonometry
Psychology 09, Seminar in Career Choice and Life Planning

Business Education Courses
The following courses are approved for degree credit only in the Business Education degree program and in the Bachelor of General Studies degree program with the dean's approval:
SEC ED 160, Shorthand Theory I
SEC ED 161, Shorthand Theory II
SEC ED 162, Business and Professional Typewriting I

Reserve Officers Training Courses
Courses in ROTC do not receive Arts and Sciences credit, nor are they counted in the student's grade point average.

Other Considerations

Assessment
The University of Missouri has been directed by the Board of Curators to implement a variety of studies designed to assess the outcomes of university education. All students are required to participate in such studies, should they be so requested.

Academic Residence
Students must be in residence for at least 24 of the last 30 hours of graded credit (exclusive of courses graded on a satisfactory/unsatisfactory basis), except under unusual circumstances, to be decided by the dean.

Graduation
Students must file a degree application form with their respective dean's office at least one year before the expected graduation date. The dean's office makes a final check to determine that all graduation requirements have been met. Students should check with the dean's office or an adviser to be sure their program fulfills the requirements of the department and College or School as well as the University general requirements.

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 Admissions no later than the official date for submission of final semester grades.

Academic Policy

Course Descriptions
Undergraduate and graduate courses offered at UM-St. Louis are published in a separate booklet, the University of Missouri-St. Louis Bulletin: Description of Courses. All course listings are grouped first by School and then by individual department. This booklet is available for purchase in the Bookstore. Copies also are available in the University Libraries.

Six times during the year, a Schedule of Courses is published listing the specific courses offered that semester and their meeting times and locations. This Schedule is available as follows:
Fall Semester Schedule: in the preceding April; revised edition in August.
Winter Semester Schedule: in the preceding October; revised edition in January.
Summer Session Schedule: in the preceding March; revised edition in May.

The University reserves the right to cancel without notice any course listed in the Bulletin or the course schedules for any semester or to withdraw any course which does not have adequate enrollment at the close of registration.

Credit Hours
The University credit unit is the semester hour, which represents a subject pursued one period weekly for one semester of approximately 16 weeks or for a total of approximately 16 periods for one term. Generally, a course valued at three semester hours meets for three periods weekly for one semester, a two-credit course two periods a week for a semester, and so on. Normally, the lecture or recitation period is fifty minutes long and the laboratory period one hour and fifty minutes.

In the Description of Courses booklet, the number of credit hours is in parentheses after each course title. If the credit is variable, it is shown by (credit arranged) or by minimum and maximum credit, such as Research (2-8).

Grading System
The grading system for undergraduate courses consists of A, B, C, D, F, S (Satisfactory) or U (Unsatisfactory), EX (Excused), DL (Incomplete), and Y (No basis for a grade). The grade of A indicates superior work; the grade of B, above-average work; and the grade of C, average work. The grade of D indicates the work is below average, and the grade of F means that the student's work does not meet the minimum standards. The grade of S or U, indicating satisfactory or unsatisfactory, is used when a student has formally requested this option for a course. (See "Satisfactory/Unsatisfactory Option" below.)
Undergraduate Study

A four-point grading system (A=4, B=3, C=2, D=1, F=0) is used for all undergraduate students. Grade point average is computed by dividing the total quality points (number of credit hours for a course multiplied by the grade value received) by the number of hours taken.

At the end of each semester and summer session the Director of Admissions informs students of their grades. A copy will be mailed to parents at the student's request.

Delayed Grade A student whose work is incomplete at the end of any semester and who has, in the instructor's judgment, sufficient reasons for failing to complete the work, may, with the approval of the instructor and department chairperson, be assigned a delayed grade. Such work must be made up no later than one semester after the incomplete grade is given or the grade automatically becomes F. The dean may, in unusual circumstances, extend this time limitation. (Summer Session is not counted as a semester.) Notice of a change in a delayed grade shall be given to the Director of Admissions on a special form.

Y Grade When, in the instructor's judgment, there is no basis for evaluating the work of students who do not officially drop a course or officially withdraw from the University, a mark of Y (unauthorized withdrawal—no basis for evaluation) is given. After a two-semester waiting period has elapsed, the Y will be changed to an F, unless the student can demonstrate sufficient reason for not completing the requirements of the course. The instructor (or the chairperson of the department, if the instructor is no longer on the faculty) may then change the Y to "Excused." Initiating the process is the student's responsibility.

Examinations Examinations may be given only at regular class meeting times or as designated by the Senate Committee on Curriculum and Instruction.

Satisfactory/Unsatisfactory Option Since the Fall Semester 1985, undergraduate students may elect to take up to 18 credit hours during their academic careers at UM-St. Louis on a satisfactory/unsatisfactory basis (S/U). This includes courses taken as electives or those which satisfy the general education requirements. Most courses required for a specific degree may not be taken on a satisfactory/unsatisfactory basis, and academic departments may designate other courses within their jurisdiction which may not be taken under the option.

Students register for courses in the normal manner and may exercise the satisfactory/unsatisfactory option before the end of the first four weeks of the semester or the first two weeks of the Summer Session. Requests for this option are made through the proper dean's office. Instructors are not informed of students taking courses on a satisfactory/unsatisfactory basis.

A satisfactory grade (S)—equivalent to "A"—"C"—has no numerical value in computing overall academic average but it does satisfy credit-hour graduation requirements. An unsatisfactory grade (U)—"D" or "F"—neither satisfies credit-hour graduation requirements nor is computed into the overall academic average. Grades will be recorded on transcripts as "S" or "U."

Major Differences Between Pass/Fail and S/U Option

1) The former Pass/Fail (P/F) option (prior to Fall 1985) has been replaced by the Satisfactory/Unsatisfactory (S/U) option.
2) More than a change in names, the new S/U option makes "D" work "unsatisfactory," whereas it was "passing" under the former Pass/Fail system.
3) No satisfactory or unsatisfactory grade will be included in the G.P.A. Under the former Pass/Fail system, failing grades were averaged in the G.P.A., but passing grades were not. The new option will bring the University of Missouri-St. Louis into conformity with national collegiate standards.
4) It is worth emphasizing that a student doing "D" work in a course under the new system will receive no credit for that course. Under the Pass/Fail rule, "D" work received credit.

Repeating Courses

Students who pass a course they are repeating do not receive credit except in those courses which require a minimum C grade as a prerequisite for other courses in the same department. In such cases, students receiving D or F grades do not receive double credit hours toward graduation, but the points of the grades assigned them and the hours of the repeated courses are used in computing the grade point average.

Grade Modification

The following policy was passed by the University Senate April 26, 1988.
1) When the grade received in an initial attempt in a course is a D or F, the grade may be replaced in the calculation of the GPA by the grade received in a second or subsequent attempt. All grades received in second and subsequent attempts will be included in GPA calculations. A maximum of 15 hours may be dropped from the calculation of the student's GPA.
2) All attempts of a given course will appear on the official transcript with the grade(s) earned.
3) The transcript will have an explanation which states that the GPA is calculated using all grades earned in a course except the initial attempt when a course has been repeated.

Note Grade modification is not automatic. Students must process the necessary paperwork with an academic adviser in the academic unit in which they are currently enrolled.


Undergraduate Study

Enrollment Policies

Prerequisites for a Course
A minimum grade of C is required to meet the prerequisite requirements of any course except with the permission of the department in which the second course is taught. An “academic-standing” prerequisite is stated by class; for example, “senior standing” means senior class standing. Requirements for class standing vary. Students should determine the requirements for their School or College. Individual course restrictions are specified in the individual course description. See the University of Missouri-St. Louis Bulletin: Description of Courses.

Course Load
A normal full-time semester work load is 15 hours. Six hours is normal for the Summer Session. Minimum full-time enrollment is 12 hours. Students who have demonstrated the ability to carry more than 17 hours successfully may enroll for additional hours with the approval of their dean.

Attendance
Students are expected to attend class regularly, and, in accordance with the UM-St. Louis Bylaws, faculty may establish penalties for excessive absences. Students absent for more than three successive classes may be reported to the dean.

Students should tell their divisional dean’s office of an extended absence. An absence known in advance should be reported to the instructors of courses that will be missed. Make-up of examinations or work missed is allowed at the instructor’s discretion. Students, excused from class for valid reasons by their deans, shall be permitted, if possible, to make up work missed; the dean must have notified the instructor in writing.

Dropping/Adding Courses
To add courses to their original enrollment, students must get approval from their advisers. Students may not enter courses after the first two weeks of the semester or the first week of the Summer Session. Courses may be dropped, without approval, through the fourth week of a regular semester and the second week of a Summer Session. Students may withdraw from courses without a grade up to the end of the fourth week of the semester and the second week of the Summer Session.

From the fifth through the twelfth weeks of the Fall or Winter Semesters (for Summer Session, the third through the sixth week) students may withdraw from a course with an “Excused” grade, providing they are passing the course and receive the approval of their instructor, adviser, and dean’s office representative. Otherwise, a failing grade is given. Students not attending classes who fail to drop officially receive F or Y grades. The Y later changes to F or, with the instructor’s permission, to “Excused.” (See page 24 for a fuller explanation of the Y grade.)

After the allowable period mentioned above, “Excused” grades are given only in exceptional instances where the instructor’s approval and dean’s approval is given. These grades are recorded on the students’ official records at the end of the term. If an F grade is recorded it is counted in computing the grade point average. No partial credit is granted to students who withdraw from a course during any semester or otherwise fail to complete the work required for full course credit.

Section Changing
Section changing is normally done during the first two weeks of a regular semester and the first week of a summer session. No forms need be completed during this time. However, after the second week of a regular semester and the first week of a Summer Session, a section change form must be obtained from the departmental office for day courses and from the Evening College office for evening courses. The signatures of both instructors (of both sections) are required. The form is to be submitted to the Registration Office, 230 Woods Hall.

Change of Major
To change academic majors, students should consult their adviser and the dean’s office. Students admitted to one College or School may pursue work in others under the conditions set forth by the other division’s faculty. The chairperson of a student’s major department shall determine which courses in other Colleges or Schools, or even other institutions, shall apply as credit toward the degree.

Withdrawal after Classes Begin
After classes begin, students may withdraw from the University by completing the withdrawal form, available in the dean’s office. During the first four weeks of the semester and the first two weeks of a summer session, students may withdraw from the University without receiving grades. After this period, grades of F or “Excused” are issued, based on whether the student is passing or failing. After the semester’s twelfth week (for the sixth week in the summer session), “Excused” grades are given only in exceptional instances with the instructor’s and dean’s approval.

These grades are recorded on the student’s official record at the end of the term. An F grade is counted in computing the grade point average. No partial credit is granted to students who withdraw from school during any semester or otherwise fail to complete the work required for full course credit. Students who stop attending classes without withdrawing officially from the University are issued an F or the temporary Y grade. Any F grades are counted in computing grade point averages.
Admissions and Academic Policies

Undergraduate Study

Academic Probation, Suspension, and Dismissal

A student may be placed on academic probation any time that his or her cumulative GPA falls below a 2.00. Students should consult College or School advisers in their respective dean's office for additional information.

Students may be suspended if they do not pass more than two-thirds of their work, their semester grade point average is below 1.5, or their cumulative grade point average falls below 1.75. Students may be suspended if they have been on scholastic probation for two or more semesters, not necessarily consecutive, and again become subject to probation. The dean may retain students on probation rather than suspend them if circumstances justify such action.

Students who have been suspended may be dismissed if they again become subject to suspension. Students placed on probation because of poor scholastic records at other institutions are regarded as having been once suspended under these rules.

Normally, students who have been dismissed are not considered for readmission. In certain unusual cases, students may be readmitted on probationary status after one year.

Students admitted on probation to the Summer Session shall enroll for at least six academic hours. If they receive any grades below C, their work will be reviewed by the College or School dean or appropriate committee to determine eligibility to re-enroll. Students enrolled in the Summer Session whose grade point averages are below 1.5 may have their work reviewed. Students suspended or dismissed from one School or College shall not be admitted to any other School or College until they are eligible for readmission to the original College or School, unless they obtain the consent of the School's dean or appropriate committee. In this event, the dean or committee shall file a written statement for the student's official records, stating the reasons for the decision.

Academic Dishonesty

Academic dishonesty is a serious offense which may lead to probation, suspension, or expulsion. One form of academic dishonesty is plagiarism—the use of another's ideas, statements, or approaches without crediting the source. Academic dishonesty also includes such acts as cheating by copying information from another student's examination, take-home test, or laboratory manual. The code of student conduct is in the back of this Bulletin and is also available in the UM-St. Louis Student Handbook and Activities Calendar, available from the office of the vice chancellor of Student Affairs.

Honors

Pierre Laclede Honors College

The Pierre Laclede Honors College offers a select group of academically qualified and intellectually serious students the opportunity to focus a significant portion of their undergraduate careers upon a special Honors curriculum. Prospective Honors Scholars must apply for admission into the Honors College.

Honor Societies

The following is a list of honorary societies at the University of Missouri-St. Louis:

- Alpha Phi Sigma (Criminology and Criminal Justice)
- Alpha Sigma Lambda (Evening College)
- Beta Alpha Psi (School of Business Administration, Accounting Majors)
- Beta Gamma Sigma (School of Business Administration)
- Beta Sigma Kappa, (School of Optometry)
- Financial Management Association National Honor Society (Finance)
- Kappa Delta Pi (School of Education)
- Omicron Delta Epsilon (Economics)
- Phi Alpha Theta (History)
- Phi Kappa Phi, (Campus-wide)
- Pi Sigma Alpha (Political Science)
- Psi Chi (Psychology)
- Sigma Delta Pi (Spanish)
- Sigma Iota Rho (International Studies)
- Sigma Tau Delta (English)

Dean's List

At the end of each semester the College of Arts and Sciences, School of Business Administration, School of Education, the Evening College, and the School of Nursing send letters of commendation to undergraduates completing at least nine hours of graded courses with grade point averages of 3.2 or above for the semester.

In addition, each College and School, on an annual basis, sends letters of commendation to part-time undergraduate students who have earned a 3.2 grade point average or above in at least nine but not more than seventeen grade hours during the Fall and Winter Semesters combined.

Who's Who Among Students in American Universities and Colleges

Eligible students may be nominated to Who's Who Among Students in American Universities and Colleges by students (whether for themselves or others), faculty members, or administrators. Nominees are selected on the basis of scholastic ability (a cumulative grade point average of 2.5 or higher), participation and leadership in academic and extracurricular activities, service to the University, and a promise for future usefulness. Nomination forms and further information may be obtained at the Office of Student Activities, 267 University Center.
Undergraduate Study

Latin Honors  To graduate with Latin honors, students must have attended the University of Missouri-St. Louis for at least 60 graded hours and must meet the following qualifications: *cum laude* - 3.2 to 3.49 grade point average; *magna cum laude* - 3.5 to 3.79 grade point average; *summa cum laude* - 3.8 to 4.0 grade point average. If a student has the necessary GPA at UM-St. Louis to qualify for Latin honors but has fewer than 60 graded hours at UM-St. Louis, all credit hours and the associated grades earned within the UM-System will be included when the total credit hours earned in the UM-System are at least 80 graded hours. In determining one's eligibility for Latin honors, all graded hours will be considered, including the original grade in each grade-modified course. No Latin honor higher than that which is consistent with the UM-St. Louis grade point average will be awarded. All honors must be recommended by the student’s major department. (Effective August 1990.)

Transcripts and Commencement

The director of Admissions will furnish transcripts of credits to a student upon written request. Transcripts are furnished to students' parents or guardians or other parties or institutions only if students have filed written consent with the Office of Admissions. There is no charge.

Students transferring to another University of Missouri campus may ask the UM-St. Louis director of Admissions to furnish a transcript to the Office of Admissions at the other UM campus.

Requests for transcripts by organizations either financially supporting a student or with fee compensation programs are not honored unless the student has filed a consent form with the Office of Admissions, authorizing the release of such information.

Transcripts are not issued to or for students who have financial obligations to the University until those obligations are paid in full.

Commencement

Degrees are conferred at commencement with candidates present for the awarding of diplomas. Only in unusual circumstances may degrees be conferred in absentia.

Fees for Undergraduate Study

Detailed information regarding current fees and residency regulations is furnished in the Schedule of Courses, a newspaper schedule, distributed before each semester registration, and in the pamphlet, Tuition and Residency Rules, available at the cashier's office. 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.

Educational Fees (1991-92)

All students enrolled in the University must pay an Educational Fee based on either the schedule for Missouri residents or the schedule for nonresidents which follows.

Undergraduate Educational Fee

**Regular Semester**

**Lower-Division Students** (Freshman-Sophomore/0-59 credit hours)

Missouri Residents: $67.20 per credit hour

*Nonresidents*: $201.30 per credit hour

**Upper-Division Students** (Junior-Senior/50 credit hours or more)

Missouri Residents: $74.30 per credit hour

*Nonresidents*: $222.10 per credit hour

**Intersession and Summer Sessions**

The Educational Fee per credit hour for these sessions follows the same schedule as listed above.

**Partial Enrollment**

Since the Educational Fee owed by a student is on a per-credit-hour basis, the Educational Fee for partial enrollment is also according to the above schedule.

**Fees for Auditing Courses**

Courses taken as an auditor for reduced credit are counted at their normal credit value in computing the fees to be paid. Students enrolling in zero credit courses are also required to pay according to the equivalent course credit.

For **Graduate Student** Educational Fees, see section entitled "Graduate Study: Fees."

For **Optometry Student** Educational Fees, see the section of this catalogue for the School of Optometry.

*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 Fee. They are also responsible for raising any questions if there is a possibility that they are subject to the Nonresident Educational Fee schedule.

Other Fees

Instructional Computing Fee
Students registered in the University are required to pay an Instructional Computing Fee of $3.50 per credit hour.

Student Facility and Student Activity Fee
All students registered in the University are required to pay a Student Facility and Student Activity Fee. The fee shall be calculated at the rate of $6.30 per credit hour up to a maximum of $75.60 for 12 credit hours in regular sessions. In the Summer Session, the maximum fee is $37.80 for 6 or more credit hours.

The Student Facility and Student Activity Fee is used for programs of broad interest within the University community. The fee for a full-time, regular semester is distributed as follows:

- Bond Retirement on University Center: $18.96
- Athletic Program: $26.28
- Student Activities: $12.96
- Student Services: $2.40
- Mark Twain Renovation Fee: $15.00

Total (for 12 credit hours): $75.60

Late Registration Fee
Students registering after the close of the regular registration period must pay the late fee, equal to the Lower-Division Resident Educational fee for one credit-hour, $67.20.

Parking Fees
Students wishing to operate motor vehicles on campus must register them and pay a fee at the time of registration. Failure to comply with traffic regulations may subject students to disciplinary action, payment of an additional fee, and the denial of the privilege to operate a motor vehicle on campus. Copies of Traffic Regulations for the University of Missouri-St. Louis are available at the UM-St. Louis Police Office.

The parking fee for 1990-91 is $2.90 per credit hour, up to a maximum of $46.40 for 16 credit hours in the regular semester, for each motor vehicle used by a student on campus. Parking fees in the Summer Session are at the same per credit hour rate up to a maximum of $23.20 for 8 or more credit hours. Students who do not drive regularly may park in the daily parking lot for a fee of 75 cents a day. Special parking rates are available for car pools, Motorcycle and motor scooter fees are $1.50 per credit hour up to a maximum of $24 in the regular semester and $12 in the Summer Session.

The revenue from parking fees is used to construct and maintain roads, parking garages, and surface parking; to rent parking space off campus when necessary; to pay for the printing of parking stickers and regulations; and to pay for all other related expenses. Detailed information on parking regulations and fee refunds is available from the cashier's office.

Parking fees are refundable under the same schedule as other fees. Students must return the scraps of the parking sticker to obtain a refund if they decide to cancel parking privileges. See the "Refund of Fees" section below.

Payment of Fees

It is necessary for all students to have arranged with the University for the payment of Educational Fees as a condition of admission to classes. An installment plan, described below, is available only for eligible students who preregister or register during regular registration periods.

*The following students are not eligible for selecting an installment plan of payment:
- Students with delinquent accounts;
- Students whose enrollments are processed on the basis of financial aid;
- Third-Party Billings—scholarships, Employee Educational Assistance;
- Students enrolled in five (5) credit hours or less;
- Students who register after classes begin.

At the time of either preregistration or regular registration, each eligible student will need to select one of two payment plans:
1) full payment on due date; or
2) an installment plan.

The Installment Plan Schedule

Preregistered Students
Payment 1—due August 12 (Fall Semester): administrative charge of $20; Student Facility Fee; any optional charges (i.e., parking and/or insurance); and 1/3 of Educational Fees
Payment 2—due September 12 (Fall Semester):
1/3 of Educational Fees
Payment 3—due October 12 (Fall Semester):
1/3 of Educational Fees

Students Registering at Regular Registration
Payment 1—due On Day of Registration: administrative charge of $10; Student Facility Fee; any optional charge (parking and/or insurance); and 1/3 of Educational Fees
Payment 2—due October 12 (Fall Semester):
1/3 of Educational Fees

Important! A late payment charge of $5 will be assessed for each installment not paid on time. Installment Plan
Undergraduate Study

due dates will be specified for other semesters in the Schedule of Courses.

Personal Checks
Personal checks in payment of fees or other obligations to the University will be accepted only when the amount of the check does not exceed the amount due from the student.

A student, presenting a check to the University in payment of student fees that is returned unpaid and remains unpaid after the close of regular registration period, shall be considered a late registrant and shall pay a late registration fee, equal to the Lower-Division Educational fee for one credit-hour, $67.20.

Credit Cards
MasterCard or Visa credit cards are accepted in payment of fees.

Delinquent Indebtedness
All delinquent indebtedness to the University must be cleared before transcripts or diplomas will be released.

Student Insurance
An optional accident and sickness insurance plan is available at low cost to students and their dependents. Information concerning premiums and coverage is available upon request from the cashier's office.

Refund of Fees
Students who officially withdraw from the University or drop courses for which they have been assessed fees during the regular semester or summer session will receive a refund in accordance with the schedules below. Parking fees are also refunded in accordance with these schedules. These schedules are based on number of class days expired and exclude Saturdays, Sundays, and holidays. Students who cancel parking privileges must return the scraps of their parking sticker in order to receive a refund. A minimum $20 enrollment cancellation fee will be charged for all withdrawals.

Regular Semester
100 percent refund (less $20 for cost of handling registration) if a student withdraws before the day classwork begins.

90 percent if withdrawal is within the first through the fifth day, including the day classwork began.

70 percent if withdrawal is between the sixth through the tenth day from the day classwork began.

50 percent if withdrawal is between the eleventh through 25th day from the day classwork began.

No refund if withdrawal is after the 25th day from the day classwork began.

Summer Session
This schedule is based on class days expired and excludes Saturdays, Sundays, and holidays.

100 percent refund (less $20 for the cost of handling registration) if a student withdraws before the day classwork begins.

90 percent if withdrawal is within the first through third day, including the day classwork began.

70 percent if withdrawal is within the fourth through fifth day from the day classwork began.

50 percent if withdrawal is within the sixth through thirteenth day from the day classwork began.

No refund for withdrawal after the thirteenth day from the day classwork began.

Financial Assistance
Financial assistance is available to qualifying undergraduates in the form of grants, loans, scholarships, and workstudy. Funds for these programs are available from federal, state, and institutional resources.

Scholarships are provided by private, institutional, state, and federal funding. Scholarship requirements vary and may require the student to have financial need. To determine need for scholarship consideration the standard financial aid application is used. Specific requirements for scholarships are available from the Student Financial Aid Office or the Financial Aid Brochure. Applications are available in the Student Financial Aid Office from January 2 through April 1.

All aid recipients must meet the following general eligibility requirements:

- Be enrolled in a degree-granting program;
- Be a citizen, national or permanent resident;
- Maintain satisfactory progress toward a degree in four years;
- Not be in default on any Perkins or guaranteed student loan (Stafford, SLS, PLUS);
- Not owe a refund or repayment on any aid program;
- Sign statements of educational purpose, drug certification (Pell only); Selective Service.

All students must file a standardized financial aid application: Family Financial Statement (FFS) by American College Testing (ACT); Financial Aid Form (FAF) by College Board (CSS); Single File by United Student Aid Funds (USAFA). Applications are available from area high school counselors or the Student Financial Aid Office. Applications received by April 15 will be assured of completed processing and maximum allowable funding by the start of the Fall semester.
Financial Aid is available for the Fall, Winter, and Summer semesters only. Financial aid is not available for Intersession. Completed applications must be received by October 31 for the Fall semester; March 1 for the Winter semester; April 30 for the Summer semester. A separate application is required for Summer aid and is available in the Financial Aid Office beginning January 2. Applications or necessary documents received after these deadlines will not be processed.

Complete information on all available financial aid programs is found in the Financial Aid Brochure. Contact the Student Financial Aid Office to obtain a copy.

For a complete list of scholarships, refer to the Financial Aid Bulletin.

Curators' Award Programs

The Curators of the University of Missouri first established the Curators' Scholars Award program in 1890. The intent of the program has always been to encourage superior high school graduates from Missouri to attend the University. The University Scholars Award program, established later by the Curators, recognizes superior academic excellence of enrolled University students. Both the Curators' and University Scholars Programs are open to full-time and part-time University students. Detailed regulations are available from the Office of Student Financial Aid, 209 Woods Hall.

Curators' Scholars Program

Initial Selection Criteria This undergraduate scholarship program recognizes graduating high school seniors from accredited Missouri schools. The scholarship is awarded jointly by the University and by the local high school. In order to be eligible for the scholarship a student must: be a resident of the state of Missouri; graduate from a regionally accredited high school within the state; rank in the upper 3 percent of all high school students in that graduating class as of the end of the sixth semester; score at or above the 90th percentile on a standardized college entrance or admissions test; be recommended by the local principal and counselor; and enroll the next academic semester following graduation on one of the campuses of the University of Missouri.

Initial Award Amount For those students selected to receive the Curators' scholarship, the amount of the Educational Fees for the first 24 credit hours of continuous enrollment in graded course work shall be waived. This excludes courses taken on a satisfactory/unsatisfactory (S/U) basis.

Renewability The Curators' Scholars Award is renewable after completion of the first 24 credit hours of attempted and graded course work if the student's cumulative GPA is 3.5 or above. The amount of the award is based on the cumulative GPA and the amount of the assessed Educational Fees. For information on the current standard criteria for renewal, students should consult the Office of Student Financial Aid.

University Scholars Program

This undergraduate scholarship program is designed to recognize enrolled University students for superior academic excellence. In general, the determination of academic eligibility is made at the conclusion of the Winter Semester for the following academic year. The director of Student Financial Aid may, however, make a determination of eligibility outside of the normal sequence. These scholarships are open to sophomores, juniors, and seniors.

Students who have transferred from a Missouri college or university are also eligible if they meet the selection criteria. Nonresidents of Missouri may be designated a University Scholar but may not receive the monetary award.

Selection Criteria Selection as a University Scholar is based on the following:
1) Students must have completed at least 24 credit hours of graded work (not including courses taken on a satisfactory/unsatisfactory (S/U) basis) during the previous academic year.
2) Students must have achieved a minimum cumulative grade point average of 3.5.

Award Amount The monetary amount of the award is based on the student's cumulative grade point average and the amount of the assessed Educational Fees. Renewal is available if the student remains continuously enrolled and has a minimum of a 3.5 cumulative GPA. For information on the current standard criteria for the monetary award, students should consult the Office of Student Financial Aid.

Scholarships

Chancellor's Scholarship

This competitive scholarship is designed to recognize graduating high school seniors with outstanding academic achievements. Scholarships will be awarded to students who:
1) have applied for admission at the University;
2) have been nominated by a high school counselor;
3) rank in the top quarter of high school class; and
4) have a high percentile score on a standardized college entrance test (ACT, SAT, or SCAT).

This nonrenewable award provides the successful nominee with the amount of educational fees for one year (two semesters) full-time enrollment (12 credit hours or more).

Annual institutional fundings will determine the number of scholarships being presented.

Community College Transfer Scholarship

Scholarship for Missouri residents, designed to recognize students with high academic achievement who have attended a community college exclusively. Provides the amount of $1,000 for one year (two semesters), to be applied directly to student's fees. A minimum enrollment of 12 credit hours per semester required. Awarded on a competitive basis.
Undergraduate Study

Nonrenewable. Awarded according to the following criteria:
1) admitted to UM-St. Louis with final transcripts from all
community colleges attended by June 15; and
2) with 60 hours of college-level course work completed at a
community college exclusively with a cumulative grade point
average of 3.20.

Minority Scholarship
A competitive scholarship designed to recognize graduating
high school seniors with outstanding academic achievements.
Awarded according to the following criteria:
1) admitted to UM-St. Louis;
2) recommended by a high school counselor;
3) rank in the top 15 percent of student’s high school class.

Students from the following ethnic backgrounds are eligible
for the minority scholarship: Black non-Hispanic, Asian or
Pacific Islander, Hispanic, American Indian, or Alaskan native.

This nonrenewable award provides $700 for one year (two
semesters), to be applied directly to student’s fees. A
minimum enrollment of 12 credit hours required per semester.

Annual institutional funding will determine the number of
scholarships to be awarded. Deadline for recommendation is
April 1.

Academic Scholarship Program
This award provides successful nominees with the amount of
$1,000 for one year (two semesters) to be applied directly to
the educational fees of the student. A minimum of 12 credit
hours is required per semester. A scholarship application is
not required to receive the Academic Scholarship. To be
considered, students must:
1) be admitted to UM-St. Louis by April 1; and
2) have a combined standardized college entrance test score
and class-rank percentile of 150 or higher.

Pierre Laclede Honors Scholarship
A number of scholarships are awarded each year to some of
the entering freshmen who apply for and are granted
admission into the Pierre Laclede Honors College. This award
covers a recipient’s educational fees and is renewable if
specific grade point and course enrollment criteria set by the
Honors College are met.

ROTC Financial Aid

Air Force ROTC College Scholarships
Scholarships covering all of the required Educational Fees,
University Center fees, and laboratory expenses are awarded
to qualified cadets in the Air Force Reserve Officer Training
Corps Program. The scholarships cover only those expenses
incurred during the regular academic session in which cadets
are enrolled in the AFROTC program. Recipients also receive
$100 per month for the period and reimbursement for book
costs.

Students interested in the four-year program must apply
during their high school senior year to Headquarters
AFROTC, Maxwell Air Force Base, Alabama, 36112-6663
before December 15. Cadets who do not receive four-year
scholarships may continue to compete annually under the
program administered locally by the Aerospace Studies
Program, Parks College of St. Louis University, Cahokia,
Illinois, 62206; telephone (618) 337-7500, extension 259.

Army ROTC Financial Assistance
The Army ROTC program provides a $100 monthly
subsidy allowance for up to ten months of the school
year for students enrolled in the Advanced ROTC Course.
Another program, the Simultaneous Membership Program
(SMP), conducted by Army ROTC and the U.S. Army
Reserves or National Guard, will provide approximately $220
per month to qualified students. For more information
contact the ROTC Department at 553-5176.

Army ROTC Scholarships
In addition to four-year ROTC scholarships awarded to
graduating high school students, Army ROTC scholarships
are available to qualified college students in two- and three-
year increments. These scholarships pay all of the required
Educational Fees, the University Center and Student Activities
fees, a book cost-stipend, lab fees, and a $100 monthly
subsidy allowance for up to ten months of the school
year. Selection for the scholarships is based upon academic
achievement and leadership potential. Additional information
is available from the ROTC Office, 44 Blue Metal Office
Building, UM-St. Louis, telephone 553-5176.

Center for Academic Development/Special
Services Unit
A limited amount of financial aid is available through Special
Services, an academic assistance program providing attention
to the needs of UM-St. Louis students who have not yet
reached full academic potential. Participants are chosen on
the basis of need, prior academic preparation and
achievement, and sustained interest and motivation. For more
information contact the Center for Academic Development/
Special Services office.

Accounting Scholarships
The following scholarships are awarded to an accounting
student upon recommendation of the accounting faculty.

Arthur Anderson and Company Accounting Scholarship
Ernst and Whinney Accounting Scholarship
Price Waterhouse Accounting Scholarship
Arthur Young Accounting Scholarship
Undergraduate Study

Other Scholarships

Art Scholarship Fund
Scholarship awarded to undergraduate art students.

Muriel E. Babcock Memorial Fund
Scholarships awarded by members of the UM-St. Louis biology department to UM-St. Louis students who will be going on for advanced study in biology.

Biology Scholarship
Undergraduate scholarship for study in biology. Recipient chosen by recommendation of department.

Ruth Boulecault Scholarship Fund
Scholarship awarded by the Creve Coeur Democratic Township organization to a full-time undergraduate student of junior standing, majoring in political science. Student must demonstrate financial need.

Lena Key Cassidy Scholarship
To provide financial assistance to students of the University of Missouri-St. Louis who are returning to formal higher education to assist them in successfully undergoing significant lifestyle or career change. The fund is generally intended for students as single parents who have financial responsibility for themselves and one or more minor children.

Lucia Kramer Collins Memorial Scholarship
The Lucia Kramer Collins Memorial Scholarship assists needy individuals who are returning to school and have financial responsibility for themselves and one or more dependents. Applicants must be full-time students who can expect to complete their degree in four additional semesters. Applications are available from the Office of Student Financial Aid. Deadline for submission of application and ACT Family Financial Statement is May 31.

Communication Scholarships
The Department of Communication offers partial stipends to students who have demonstrated potential for excellence in forensics and debate, theatre, or mass communication. The awards are primarily directed at prospective incoming freshmen and may be renewable. Debate scholarships assume participation in intercollegiate forensics while at UM-St. Louis.

Granger Biology Teacher Development Award
The scholarship is awarded by a committee of biology and education instructors. It is open to any high school senior in the St. Louis area planning to attend UM-St. Louis in the Fall Semester as a biology teaching major.

Evening College Scholarship Fund
The scholarship is awarded to an Evening College undergraduate who demonstrates need. The Evening College recommends the recipient.

Elizabeth Horkits Scholarship Fund
The scholarship is awarded to an undergraduate for tuition and fees. Women will be given primary consideration.

William T. Isbell II Scholarship Fund
Awarded to an undergraduate art student who is recommended by the art department and the donor.

Thomas J. Knapp Memorial Scholarship Fund
The scholarship is awarded to a history major interested in becoming a history teacher. This award is given on the recommendation of the history department.

Mathematical Sciences Alumni Scholarship
The Mathematical Sciences Alumni Scholarship is a monetary award for outstanding junior or senior majoring in mathematical sciences as evidenced by a grade point average of 3.5 or higher in at least 24 graded hours of coursework at UM-St. Louis, and superior achievement in courses in mathematical sciences. Application forms may be obtained from the Department of Mathematical Sciences. The deadline for applications is March 15.

Charles Matlock Memorial Scholarship
The scholarship is awarded to a graduate student who has achieved distinction in the area of pediatric optometry. It is a plaque only, and not a monetary award.

Modern Languages Scholarship
The scholarship award is to be used only to provide partial scholarships for students who will attend summer language institutes in a German-speaking country.

Monsanto Minority Math and Science Scholarship
In order to receive the scholarship, students must be admitted to UM-St. Louis to pursue an undergraduate degree in math, computer science, biology, chemistry, or physics. Student must have participated in Bridge Program Activity.

Music Scholarship Fund
This scholarship award by a music department committee goes to a qualifying music major.

Marian Oldham Scholarship
The Marian Oldham Scholarship is awarded to a black first-time freshman admitted to the University of Missouri-St. Louis who is committed to pursuing a degree. The award shall be made to a student(s) who ranks in the top fifteen percent of his/her high school class, demonstrated leadership abilities at work or in school activities, and shows financial need.
Undergraduate Study

Interco Scholarship
Seven renewal scholarships are awarded to minority students who achieve high academic performance during high school. Full educational fees are provided. (Student must have financial need.) Students must enroll as a full-time student (12 credits or more per semester). Renewability is dependent on achieving satisfactory academic progress in their coursework.

Sean Phares Soccer Scholarship Account
An annual gift in memory of Sean Phares is awarded to a soccer player. The award is made by the Office of Student Financial Aid upon recommendation of the soccer coach.

Robert E. Rea Mathematics Education Scholarship Fund
This is a scholarship awarded to a graduate student to improve proficiency at teaching mathematics to children and youth, upon recommendation of a special committee of the School of Education.

St. Louis Mayors' Scholarship
The St. Louis Mayors' Scholarship provides educational opportunities for persons planning to enter public service. Recipients are chosen from applicants who are full- or part-time undergraduate students, residents of Missouri, have a minimum cumulative grade point average of 3.0 for 24 hours of graded coursework, and who can give evidence of a commitment to public service in the city of St. Louis. In addition to the application, students must present a statement describing their community-service experiences and plans for applying their University education in the area of public service. Applicants also submit at least three letters of recommendation, one of which must be from a University faculty member who knows the student. The amount of the yearly award is variable and applicable toward fees. Applications are available from the Office of Student Financial Aid after January 1.

Lewis J. Sherman Memorial Scholarship Fund
The scholarship is awarded to graduate students in clinical psychology upon recommendation of the psychology department.

Robert E. Smith Memorial Scholarship Fund
The English department awards scholarships for superior students in the writing programs.

Eve and Stuart Symington Scholarship Fund
This scholarship is awarded to a student with good academic performance in political science upon recommendation of the political science department.

Emery Turner Business School Scholarship
The scholarship is awarded to a minority business student on the basis of need. The student is recommended by the School of Business Administration.

Consumer Information
Consumer information for students can be found in the UM-St. Louis Financial Aid Bulletin, available at the Office of Student Financial Aid, Room 209 Woods Hall.
Graduate Study

This section describing admission, general education, degree requirements, and academic policies for students seeking graduate degrees from the University of Missouri-St. Louis, is derived from the Rules and Regulations of the Graduate Faculty and is intended as an informal statement. The wording of the Rules and Regulations is the formal authoritative statement. Persons seeking more precise information may read the Rules and Regulations by consulting academic advisers or visiting the Graduate School office.

Admission and Application Procedure

Students with bachelor's degrees or the equivalent from accredited colleges and universities may apply for admission to the Graduate School. Applications are reviewed by the departments or schools in which students propose to do graduate study and by the Graduate School. Within limitations, students may be admitted by the Graduate School if their previous academic records and backgrounds suggest reasonable likelihood for success in their proposed programs. Students are admitted by the dean of the Graduate School only upon recommendation of the department or school involved.

Inquiries concerning admission and requests for application forms should be sent to the Director of Admissions. A list of admission requirements for the particular degree program is sent with each application form. Application forms for financial assistance are also sent on request.

To ensure consideration, completed admission applications for selected programs, with additional required materials, should be filed with the Director of Admissions by July 1 for the Fall Semester; December 1, for the Winter Semester; and May 1, for the Summer Session. Where applications are accompanied by financial aid requests, the last date for acceptance is usually March 15. Some departments with heavy enrollments have earlier final acceptance dates. Inquiries concerning Graduate School admission should be made as early as possible.

To be admitted, applicants to selected programs must take the Graduate Record Examination (GRE) aptitude and advanced tests as required by the department. All doctoral programs require the GRE's. In the MBA program, the Graduate Management Aptitude Test is required. These examination scores must be presented in the admission application. Students who have not taken the examination should do so at the earliest possible test date. The TOEFL test is required of applicants whose first native language is not English, unless they have lived in the United States for the last two years.

Applications for the TOEFL and other examinations must be made several months before the test date. Information and application forms may be obtained from the Office of Admissions.

Credit

Only graduate students earn graduate credit. Persons holding bachelor's degrees do not earn graduate credit unless they are enrolled in the Graduate School. Unclassified students receive undergraduate credit.

Matriculating Students

Matriculating students are defined as students applying for admission to pursue graduate degree or certificate programs. Classifications within this category include regular, restricted, and provisional students.

Regular Students

Students may be admitted to pursue degree or certification programs as regular graduate students if their undergraduate and major field grade point averages are 2.75 or above for their undergraduate years, and if their test scores meet departmental requirements.

Restricted Students

Students with 2.5 to 2.75 undergraduate grade point averages who do not present supporting evidence sufficiently strong to justify admission as regular students may be admitted as restricted students. Explicitly, this is not entry in the sense of full admission to the Graduate School. It is partial admission only and is not an authorization to continue beyond 12 hours. Students admitted in this category have a quasi-probationary status and are provided an opportunity to show their academic talents. Failure to complete courses, e.g., incomplete grades, dropping courses, etc., will be construed as evidence of inadequacy. When students have completed no more than 12 hours of graduate course work, their records are reviewed, and their status is either changed to regular or they are dismissed from the program.

A student with an undergraduate grade point average below 2.75 is normally not admitted as a regular student unless there is strong supporting evidence in other areas as described above. When students with grade point averages between 2.5 and 2.75 are admitted it is only on a restricted basis. This partial admission is possible only for 12 hours. It expires with the accumulation of 12 hours credit. Only a departmental recommendation, with Graduate School concurrence, advising regular admission can lead to taking more work. A student admitted as a restricted student who is later denied regular admission cannot register as a special, non-degree student.
Graduate Study

Students with acceptable records but some deficiencies may be admitted as restricted students under admission conditions set by the department or Graduate School. When deficiencies are removed, students are granted regular status. Recommendations to change students to regular status are made by petition to the Graduate School from the department or School.

Students seeking master's and doctoral degrees have six and eight years, respectively, to complete all requirements; the time span includes courses taken previously at other institutions.

Provisional Students
Students who seem qualified for admission but who have not submitted all required admission materials may be admitted provisionally, for one semester or the summer term only. Provisional admission requires students to agree to take the necessary admissions tests at the next administration, and to provide needed information. Admission to study in a second or subsequent semester as a provisional student will not normally be granted.

Courses in which provisional students enroll apply in the regular way to degree programs. When all admission materials are reviewed, the Office of Admissions sends a change of status form to the department or School for review before finally recommending regular or restricted admission or denial.

Nonmatriculating Students
Nonmatriculating students are defined as students who wish to take graduate courses, but who are not pursuing graduate degree programs at UM-St. Louis. Classifications within this category include special, non-degree students; intercampus exchange students; and Continuing Education-Extension, Institute, workshop, and certificate students. Their status is not regular and their enrollment in courses carries no connotation of permission to enroll in a curriculum leading to a graduate degree.

Special, Non-degree Students
Space permitting, students may be admitted as special, non-degree students if they are visiting students, are not intending to pursue degree or certificate programs, or are planning to enter programs close to establishment, through a cooperating department approved by the Graduate School.

Students must be accepted by the appropriate department or school and must generally meet requirements for admission as restricted students, except they are not required to submit test scores. Special, non-degree student status is only a category of admission. It may not be acquired by students whose restricted status, for example, has not led to regular admission. Course work completed by special, non-degree students is not regarded as completed within a degree program. However, such course work may be incorporated into a degree program by action of the department and the Graduate School at a later date. Courses taken as a special non-degree student may not be counted as part of the degree residence requirement. Acceptance of such course work, based on the student's status, by other universities may not be automatic. Credit earned may be applied to certificate or degree programs, but such work may not exceed more than 9 hours of the required program hours nor may it be used to satisfy degree residence requirements. The 9-hour limitation includes any transfer credit as well.

Intercampus Exchange Students
Graduate students regularly enrolled at another University of Missouri campus who are in good standing may enroll in graduate courses at UM-St. Louis as intercampus exchange students. Intercampus exchange students are not included in the quota of graduate students set by departments or schools. Registration regulations are the same as for special, non-degree students. Intercampus exchange students must have prior approval of their home campus advisers to enroll in graduate courses at another University of Missouri campus.

Continuing Education-Extension, Institute, and Workshop Students
Students holding bachelor's degrees (or such qualifications as may be determined by workshop or institute directors) may participate in extension courses, institutes, and workshops. Credit granted for this participation is subject to the limitations set forth under graduate institutes and graduate workshops in Regulations, Policies, and Procedures of the Graduate School.

Participation in such programs is not to be construed in any way as admission to a graduate degree curriculum or a guarantee of graduate credit at another university.

Unclassified Students
The University may not be able to help applicants by admitting them to the Graduate School. It can help by providing enrollment as an Unclassified (undergraduate) student. Students denied admission to the Graduate School may request admission to the University of Missouri-St. Louis as Unclassified Students (not a Graduate School classification). These students do not meet the standards of regular, restricted, or special, non-degree students and do not earn graduate credit. Courses taken in this category do not apply to graduate degree programs at a later date. Unclassified students may not enroll in graduate courses, nor may their course credit become graduate credit, retroactively, at a later date. People holding bachelor's degrees do not automatically receive graduate credit. When enrolled as Unclassified students, people holding bachelor's degrees receive undergraduate credit.
Graduate Study

A department or School may define remedial undergraduate programs to give students the opportunity to demonstrate their ability to enter graduate programs, despite unsatisfactory records. Such remedial programs require some discriminating measures of performance and ability. Completion of such a program provides the University with additional information for the decision process. It is not a substitute for regular standards of admission, and admission to the Graduate School is not guaranteed.

Foreign Students

Students must be competent in both written and spoken English; facility in the language cannot be gained at the same time that serious study is begun. Submission of TOEFL scores is required for students whose first language is not English. When it is not possible for a student to take the TOEFL examination for reasons more fundamental than personal convenience, the department to which the student has applied may develop alternate ways for the particular student to demonstrate English language competency prior to admission, with the prior approval of the dean of the Graduate School. (See “Undergraduate Study Academic Policy: Foreign Students” for further information.)

Students from abroad who wish to study at the University of Missouri-St. Louis are welcome. Students are advised, however, that UM-St. Louis is a nonresident campus, designed to serve a population of local students. Accordingly, the University has no campus housing, but a good deal of housing is available in the community. Students make their own living arrangements, although some assistance in locating housing is available through the Office of Student Activities. For information, telephone (314) 553-5536. Public transportation is also available to some extent including buses, van pools, and car pool/ride sharing. For information, write the Office of Student Activities or telephone (314) 553-5536.

Married foreign students with families should be aware that the cost of living is high and part-time work may be hard to find. Medical expenses also may appear high. While some scholarships are available, most are intended for United States students.

Foreign students are urged to take all these considerations into account when applying for admission. Once accepted, they are welcome members of the campus community.

Enrollment

Undergraduate Students

Undergraduate students with exceptional records at UM-St. Louis may be enrolled in graduate-level classes in the last year of their undergraduate programs. Graduate credit for such course work is given only in the student's last semester and if each course is approved in advance by the Graduate School on the recommendation of the department or School involved. To receive credit, students must be registered in the Graduate School and must meet the requirements of their undergraduate College or School.

Credits earned as a special student do not apply toward graduate degrees.

Students graduating with an excess of undergraduate credits without having registered in the Graduate School do not subsequently receive graduate credit for that work. The same credits may not, in any case, be applied to both undergraduate and graduate programs.

Intercampus Exchange Program

Graduate students in good standing at any University of Missouri campus are normally permitted to enroll in graduate courses at UM-St. Louis as nonmatriculating graduate students. Separate applications must be filed every semester and approved by the student's adviser, the Graduate School, and the Office of Admissions. Application forms are available from graduate school offices on students' home campuses. A similar arrangement permits enrollment on MASUA (Big Eight) campuses.

Inter-University Agreement Program

Regularly admitted graduate students are permitted to take a course not offered by the University of Missouri-St. Louis at Washington University or St. Louis University under an agreement among the three institutions. Students pay UM-St. Louis fees and enroll through the UM-St. Louis Registrar. For details consult departmental Graduate Advisers. Students are cautioned to take courses before the last semester of study. This program envisages students taking one course only, and a second course only under special circumstances.

Postdoctoral Study

Individuals with doctoral degrees and similarly qualified persons wishing to pursue special studies at the University of Missouri-St. Louis may be appointed postdoctoral research fellows or visiting fellows by the dean of the Graduate School on the recommendation of the appropriate University division. Such appointments normally include the right to use University facilities. Inquiries should be addressed to the Graduate School, or appropriate department chairperson or faculty member.

Registration

To remain in good standing, a student must enroll for at least one term during each calendar year. Students failing to do so are removed from the Graduate School enrollment list unless they have been granted leaves of absence. In some programs, students may be required to enroll each term. Students discharged from the Graduate School or a graduate program who subsequently wish to continue must submit new admission applications.

Class Attendance

Only students who have previously paid fees may attend a class. Instructors are not authorized to allow students to attend classes if fees have not been paid previously. Students may not register and pay fees after the prescribed dates.
Graduate Study

Preregistration
Enrolled students may preregister for the next term during regular preregistration periods. Registration is not complete until all University fees are paid. Students who preregister must pay their fees by announced deadlines or their preregistration is canceled. Special, non-degree students and individuals who have graduated are not allowed to preregister.

Maximum Course Load
The normal full-time course load for a regular semester is between nine and fifteen hours, with the maximum to be determined by the individual department or school. For an eight-week summer session, the maximum load is two courses, totaling no more than eight semester hours. Three hours is the maximum load during intersessions.

Graduate students who are employed full-time may not register for more than six hours. Students employed part-time must adjust their course loads according to the number of hours employed. Students may either work full-time or carry a full load of courses, but not both. Assistants may not work full time.

Petitioning Into or Out of a Course
Students must receive the approval of their advisers and the dean of the Graduate School to enroll in or withdraw from a course after registration.

Entering a Course in Progress
Students wishing to enter a course in progress must have the approval of the instructor, their adviser, and the dean of the Graduate School. Only under exceptional circumstances may students enter courses after the first week of the semester.

Dropping a Course
With the approval of their advisers and the dean of the Graduate School, students may drop courses before the end of the fourth week without receiving grades.

At the end of this period and until the end of 12 weeks (or from the third through the sixth weeks of the Summer Session), students may withdraw from courses with "Excused" grades providing they are passing the course and have the approval of the instructor, their adviser, and the dean of the Graduate School. Otherwise, a grade of F is given. Students who stop attending classes without officially dropping courses also receive grades of F.

Academic Policy
Course Level
In most degree programs, the bulk of required course work must be taken at the 400 level. In all programs, at least one-half of the minimum number of credits in the degree program must be at the 400 level, while other courses may be taken at the 300 level.

In exceptional cases, with the adviser's permission, students may receive graduate credit for 200-level courses, taken in a department or school other than the one offering their degree program.

Institute and Workshop Courses
Institute courses carry graduate credit at the level they are designated (200, 300, or 400). Institute courses may be included as part of the degree program with the prior approval of the adviser, department chairperson, and dean of the Graduate School. They do not, however, count toward the residency requirement. Institute credit, together with all other nonresident credit, may not exceed one-third of the required program hours.

Foreign Language Requirement
The Graduate School does not have any general foreign language requirements for advanced degrees. Where departments or schools establish required levels of competence in one or more foreign languages, that competence shall be shown in one of the following ways, as determined by the department or school:
1) An examination given by the department or school
2) Satisfactory completion of a language course at a specified level

Evidence that the foreign language requirement has been satisfied shall be presented to the Graduate School in each case.

Grading Standards
Grades in all courses carrying graduate credit are reported as A, B, C, or F on the transcript. Graduate credit is not given for work completed on a satisfactory/unsatisfactory (S/U) basis at UM-St. Louis or any other institution.

The grade of A is awarded for work of outstanding merit, B for work that is entirely satisfactory, and C for work that is acceptable only to the limited extent of fulfilling advanced degree requirements. The grade of D is considered failing at the graduate level and is therefore not used for graduate students. A grade of A is assigned 4 points; B, 3 points; C, 2 points; and F, no points. The satisfactory/unsatisfactory (S/U) option is not available to students taking 400-level courses or 300-level courses for graduate credit. Students may enter courses as Auditors but may not change from Audit to credit after registration closes. Equally, students may not switch from credit to audit status. Auditors are charged full fees and receive no academic credit.

Delayed grades may be given when a student's work is incomplete but otherwise worthy of credit. Delayed grades must be removed within two regular semesters after the time recorded or they automatically become F grades. In such cases, course instructors may subsequently change F grades to other grades when all work has been completed. Delayed grades recorded for courses in thesis or dissertation research are left as delayed grades until the final, regular grades are reported by the instructor.
Graduate Study

Probation and Dismissal
Graduate students enrolled in degree or certificate programs must maintain at least a 3.0 grade point average overall in courses for which graduate credit is given. Students cannot graduate with less than a 3.0 grade point average in courses listed on the degree program. Students whose grade point averages fall below 3.0 are placed on probation; students with averages below 2.0 are dismissed from the Graduate School. Upon the recommendation of the Office of the Dean and adviser, students should define the program modifications the leave of absence requires. Requests should indicate the reason for leaving and the expected date of return to the University. Approval of the Graduate School is required. A leave of absence does not affect the maximum time limitation set for a degree program, unless a specific exception is approved. The primary effect of a leave of absence is to suspend the requirement for continuous enrollment.

Master's Degree Requirements
The following requirements and regulations apply to all students admitted to master's degree programs. Each School, department, and area of concentration establishes its own requirements in addition to these. Students responsible for verifying that all requirements are met.

Advisers
The chairperson or director of graduate studies in a student's major department or School assigns a graduate student to an appropriate adviser. The adviser is responsible for verifying that all requirements are met.

Grade Point Average Calculation
Only work taken while students are enrolled in the Graduate School is included in the grade point average. Neither extension work, institutes, or workshops, nor courses transferred from other institutions or University of Missouri campuses are included, even though the course may be included as part of the degree program. Graduate work taken for graduate credit by undergraduate students who have been dually enrolled is included.

Transfer of Credit
A minimum of 30 semester hours carrying graduate credit is required for every master's degree program. No degree credit is allowed for correspondence courses. Credit may be granted for thesis work taken at another university to be incorporated into a doctoral degree program. Once admitted to the Graduate School, students must obtain departmental approval before enrolling in courses for transfer credit from other institutions.

Residence Requirement
Students who have completed course credits in certificate programs may transfer such credits into a master's degree program with the consent of the department or School, as long as the credits fall within the time limitations set for master's degrees. No credits transfer into certificate programs.

Withdrawal from the University
Withdrawal from the University is arranged through the Office of Admissions. Students leaving the campus before the completion of the semester or session, without formally withdrawing, are given grades of F in all courses.

Leave of Absence
Graduate students who are forced to interrupt their studies for a period of one or more years should request a leave of absence from the University. In consultation with their department and adviser, students should define the program modifications the leave of absence requires. Requests should indicate the reason for leaving and the expected date of return to the University. Approval of the Graduate School is required. A leave of absence does not affect the maximum time limitation set for a degree program, unless a specific exception is approved. The primary effect of a leave of absence is to suspend the requirement for continuous enrollment.
Graduate Study

Time Limitation
All work included in a master’s degree program at UM-St. Louis or at any other institution must be completed within six years after initial enrollment in the program. Graduate work completed outside the six-year period between admission and graduation may not be included in the degree program. In connection with an authorized leave of absence, an exception to the time limitation may be approved in advance.

Filing for Degree Program
Before completing one-half of the required hours in a degree program, graduate students, in consultation with their advisers, should file a program of studies with the graduate dean. This program must be approved by the department or School involved and the dean of the Graduate School. Graduate students whose degree programs require more than 40 credit hours must file a program before completing two-thirds of the work required.

Thesis and Comprehensive Examinations
Although not a general Graduate School requirement, a thesis may be required by departments in particular degree programs. Where required, the thesis is directed by a three-member committee of graduate faculty appointed by the graduate dean on the recommendation of the department or School.

Comprehensive examinations, oral, written, or both, are required in most master’s degree programs. Examinations are administered by a committee of not less than three graduate faculty members appointed by the dean of the Graduate School on the recommendation of the department or School.

Dual Master’s Degrees
With approval of the department or School and the dean of the Graduate School, students who have completed one master’s degree may transfer appropriate credits to a second master’s degree program. The number of transferable credits may not exceed one-third of the credit hours required by the second program; subsequent transfers to a third degree are not permitted.

With approval of the departments or Schools involved and the dean of the Graduate School, students may simultaneously pursue two master’s degrees under the following conditions:
1) No more than ten credit hours may be overlapping or common to both programs.
2) Students must obtain approval of the departments, Schools, and program advisers from both areas before they have completed 12 hours in either program. Under normal circumstances, two degrees will be pursued consecutively rather than concurrently.

Doctoral Degree Requirements
The doctoral degree is based on evidence that candidates have achieved a high level of scholarship and proficiency in research. The proficiency of students and their ability to work independently are established by a series of qualifying and comprehensive examinations and by the quality of their dissertations.

Cooperative Programs
In addition to the doctoral degree programs offered at the University of Missouri-St. Louis, limited opportunities exist for work in programs at other University of Missouri campuses. Specific inquiries should be directed to the chairperson of the department on the appropriate campus.

Advisers
Following admission to the Graduate School, students intending to qualify for the doctorate should so inform the department chairperson or division dean in the student’s area of specialization. Upon acceptance by the appropriate area as an applicant for the doctorate, students, in consultation with the appropriate chairperson or dean and with the concurrence of the dean of the Graduate School, select advisers to assist in planning the program. The graduate dean appoints the adviser.

Residence Requirement
Minimum residence requirements for the doctoral degree are the equivalent of at least three academic years of full-time advanced study beyond the bachelor’s degree. Additional requirements may be set at the department’s discretion. Residence requirements may be fulfilled with part-time enrollment. At least two consecutive semesters (or a consecutive semester and a regular summer session) of full-time residence work (nine hours or more each semester and six hours or more during a regular summer session) on the UM-St. Louis campus must be included in the last two-thirds of the program.

On recommendation of a department, the course credits of a master’s degree may be counted as the first year of graduate study leading to doctoral degrees, but they will not meet the residence requirement at that level. When students present two master’s degrees, relevant course work may be selected for credit, bearing in mind the eight-year regulation on recency of transferred courses. In the case of transferable credit associated with both degrees, the relevant consideration is the quality and level of work—that is, doctoral-oriented courses, qualitatively distinguishable from introductory graduate courses, may be recommended. The majority of credits used to satisfy requirements for a doctoral degree must be completed at the University of Missouri-St. Louis. For example, for a doctoral degree requiring 90 hours of work beyond the bachelor’s degree, at least 46 hours must be taken on this campus, including dissertation credit.
Doctoral degree work must be completed within eight years of admission to pre-candidacy (i.e., initial admission to a doctoral program) on the campus.

**Qualifying Examination**
Upon the student's completion of approximately one year of residence requirements, the appropriate chairperson or dean and advisers may recommend to the dean of the Graduate School that the student be allowed to pursue work toward the doctorate as a precandidate doctoral student. Such recommendations may be based upon a qualifying examination as well as the student's academic record and personal program. At this time the student, with approval of the chairperson or dean and adviser, files a detailed program (excluding the dissertation topic) with the dean of the Graduate School. After approval, copies are filed with the student, his or her adviser, departmental chairperson, and divisional dean.

**Advancement to Candidacy**
When students have completed the major portion of the doctoral program and fulfilled language or research skill requirements established by the department, they may be eligible for advancement to candidacy for the doctoral degree. Advancement is based upon an examination or series of examinations administered by the department under the Graduate School dean's supervision. Examinations may be written, oral, or both. Upon successful completion, applicants are advanced to candidacy by the Graduate School dean on the department's recommendation.

**Dissertation Proposal**
At a time appropriate to the pattern of study, and before beginning the research project, students are to file dissertation proposals with the dean of the Graduate School, using the appropriate forms. After acceptance of the proposal, students may begin formal research and earn doctoral dissertation credit.

When students are advanced to candidacy, they remain in continuous enrollment until the degree is awarded or until the eight-year limitation has been reached. If students are actively engaged in degree work on campus, they shall enroll for credit commensurate with this activity. If away from campus, students shall enroll for at least one credit hour each semester and summer term.

**Dissertation Committee**
After acceptance as candidates, students, in consultation with their advisers and appropriate department members, ask the Graduate School dean to appoint the dissertation committee. The committee consists of four Graduate faculty members, including one member outside the discipline or School involved. Dissertation committee members are selected by students and their advisers in consultation with the department and with the concurrence of the Graduate School dean. The dissertation director must be a member of the doctoral faculty, with a personal history of relevant research.

**Dissertation and Final Examination**
One copy of the dissertation, certified as complete and provisionally acceptable by all dissertation committee members, must be submitted to the Graduate School at least six weeks before commencement. The dean of the Graduate School may assign the dissertation to other readers, on or off campus, or seek such other advice as the dean feels pertinent.

Upon preliminary acceptance of the dissertation, the Graduate School dean appoints the Defense of Dissertation Committee to conduct the final examination. The dean appoints members of the dissertation committee and such other members of the Graduate faculty as seem appropriate to the Oral Examination Committee.

Candidates must submit an abstract of their dissertation to the Graduate School three weeks before the oral examination.

At least six weeks prior to graduation, candidates for doctoral degrees are required to submit to the Graduate School one copy of the dissertation and abstract. The abstract should not exceed 350 words in length.

The Defense of Dissertation Committee certifies the final acceptability of the dissertation to the Graduate School dean on the basis of a final examination open to all Graduate faculty members. Students are eligible for graduation upon receipt of Form I-17 in the Graduate School office.

**Probation and Dismissal**
Students are subject to dismissal if any of the following conditions exist:
1) Failure to pass appropriate departmental cumulative examinations.
2) Failure to complete the required doctoral program work within eight years of the date of admission to precandidacy.
3) Failure to remove deficiencies indicated by placement examinations by the end of the second year.

A grade point average of 3.0 is required to graduate, but the essence of advanced graduate work is quality. Accumulation of graduate hours should not be confused with the demonstration of quality scholarship expected by the Graduate and doctoral faculties and by the Graduate School.

**Graduation**
Candidates for the doctoral degree ordinarily attend Commencement.
Graduate Study

Fees for Graduate Study

Detailed information regarding current fees and residency regulations is furnished in the Schedule of Courses, a newspaper schedule, distributed before each semester registration, and the pamphlet, Tuition and Residency Rules, available at the cashier’s office. 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.

Educational Fees (1991-92)

All students enrolled in the University must pay an Educational Fee based on either the schedule for Missouri residents or the schedule for nonresidents which follows.

Graduate Educational Fee

Regular Semester
Missouri Residents .......... $89.90 per credit hour
*Nonresidents ................ $244.00 per credit hour

Intersession and Summer Sessions
The Educational Fee per credit hour for these sessions follows the same schedule as listed above.

Partial Enrollment
Since the Educational Fee owed by a student is on a per-credit-hour basis, the Educational Fee for partial enrollment is also according to the above schedule.

Fees for Auditing Courses
Courses taken as an auditor for reduced credit are counted at their normal credit value in computing the fees to be paid. Students enrolling in zero credit courses are also required to pay according to the equivalent course credit.

For Optometry Student Educational Fees, see the section of this catalogue for the School of Optometry.

*Nonresident Graduate 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 Fee. They are also responsible for raising any questions if there is a possibility that they are subject to the Nonresident Educational Fee schedule.

Other Fees

Instructional Computing Fee
Students registered in the University are required to pay an Instructional Computing Fee of $3.50 per credit hour.

Student Facility and Student Activity Fee
All students registered in the University are required to pay a Student Facility and Student Activity Fee. The fee shall be calculated at the rate of $6.30 per credit hour up to a maximum of $75.60 for 12 credit hours in regular sessions. In the Summer Session, the maximum fee is $37.80 for 6 or more credit hours.

The Student Facility and Student Activity Fee is used for programs of broad interest within the University community. The fee for a full-time, regular semester is distributed as follows:

- Bond Retirement on University Center ........... $18.96
- Athletic Program ........................................... $26.28
- Student Activities ......................................... $12.96
- Student Services .......................................... $2.40
- Mark Twain Renovation Fee ......................... $15.00

Total (for 12 credit hours) $75.60

Late Registration Fee

Students registering after the close of the regular registration period must pay the late fee, equal to the Undergraduate Lower-Division Resident Educational fee for one credit hour, $67.20.

Parking Fees

Students wishing to operate motor vehicles on campus must register them and pay a fee at the time of registration. Failure to comply with traffic regulations may subject students to disciplinary action, payment of an additional fee, and the denial of the privilege to operate a motor vehicle on campus. Copies of Traffic Regulations for the University of Missouri-St. Louis are available at the U.M.-St. Louis Police Office.

The parking fee for 1990-91 is $2.90 per credit hour, up to a maximum of $46.40 for 16 credit hours in the regular semester, for each motor vehicle used by a student on campus. Parking fees in the Summer Session are at the same per credit hour rate up to a maximum of $23.20 for 8 or more credit hours. Students who do not drive regularly may park in the daily parking lot for a fee of 75 cents a day. Special parking rates are available for car pools. Motorcycle and motor scooter fees are $1.50 per credit hour up to a maximum of $24 in the regular semester and $12 in the Summer Session.
Graduate Study

The revenue from parking fees is used to construct and maintain roads, parking garages, and surface parking; to rent parking space off campus when necessary; to pay for the printing of parking stickers and regulations; and to pay for all other related expenses. Detailed information on parking regulations and fee refunds is available from the cashier's office.

Parking fees are refundable under the same schedule as other fees. Students must return the scraps of the parking sticker to obtain a refund if they decide to cancel parking privileges. See the "Refund of Fees" section below.

Final Semester Educational Fee

Candidates for graduate degrees who have completed degree requirements except for filing a thesis or dissertation and/or taking the final examination must register for at least one credit in the term in which they expect to receive the degree. Only students so registered may file applications for graduate degree.

Thesis and Dissertation Fee

Graduate students must also pay a fee for the binding and microfilming of the thesis or dissertation.

Payment of Fees

It is necessary for all students to have arranged with the University for the payment of Educational Fees as a condition of admission to classes. An installment plan, described below, is available only for eligible* students who preregister or register during regular registration periods.

*The following students are not eligible for selecting an installment plan of payment:
- Students with delinquent accounts;
- Students whose enrollments are processed on the basis of financial aid;
- Third-Party Billings—scholarships, Employee Educational Assistance;
- Students enrolled in five (5) credit hours or less;
- Students who register after classes begin.

At the time of either preregistration or regular registration, each eligible student will need to select one of two payment plans:
1) full payment on due date; or
2) an installment plan.

The Installment Plan Schedule

Preregistered Students
Payment 1—due August 12 (Fall Semester): administrative charge of $20, Student Facility Fee, any optional charges (i.e. parking and/or insurance), and $/3 of Educational Fees
Payment 2—due September 12 (Fall Semester): $/3 of Educational Fees
Payment 3—due October 12 (Fall Semester): $/3 of Educational Fees

Students Registering at Regular Registration
Payment 1—due on Day of Registration: administrative charge of $10, Student Facility Fee, any optional charges (i.e. parking and/or insurance), and $/3 of Educational Fees
Payment 2—due October 12 (Fall Semester): $/3 of Educational Fees

Important! A late payment charge of $5 will be assessed for each installment not paid on time. Installment Plan due dates will be specified for other semesters in the Schedule of Courses.

Personal Checks

Personal checks in payment of fees or other obligations to the University will be accepted only when the amount of the check does not exceed the amount due from the student.

A student, presenting a check to the University in payment of student fees that is returned unpaid and remains unpaid after the close of regular registration period, shall be considered a late registrant and shall pay a late registration fee, equal to the Lower-Division Educational fee for one credit hour, $67.20.

Credit Cards

MasterCard or VISA credit cards are accepted in payment of fees.

Delinquent Indebtedness

All delinquent indebtedness to the University must be cleared before transcripts or diplomas will be released.

Refund of Fees

Students who officially withdraw from the University or drop courses for which they have been assessed fees, during either the regular semester or other sessions, will receive a refund in accordance with the schedule explained in the section "Undergraduate Study: Fees" under the heading Refund of Fees. Graduate students should refer to this section for such information.
Graduate Study

Financial Assistance

Teaching Assistantships
Most departments with established graduate programs offer teaching assistantships to qualified graduate students. Appointments are usually half-time appointments and carry stipends. Students receiving assistantships are expected to pay all Educational fees but are exempt from the difference between the Missouri resident and the Nonresident Educational Fee. Normally students with these stipends register for nine hours each semester.

Teaching assistant appointments are made directly by the departments, and inquiries and applications should be addressed to the Graduate Studies Coordinator of the appropriate department. Applications should be submitted no later than March 15 for the Fall Semester. Occasionally a few teaching assistantships are available for the Winter Semester. Interested students should contact the appropriate department.

Since some departments observe different deadlines, applications should be submitted as early as possible. Appointments are normally announced by April 1 for the Fall Semester and by November 1 for the Winter Semester.

Research Assistantships
A small number of research assistantships are available in some departments and Schools. Appointments are made by the Graduate School on the recommendation of the appropriate division. Conditions of appointments are generally similar to those of teaching assistantships. Inquiries should be addressed to the department or School.

Fellowships and Scholarships
A small number of doctoral fellowships may be available for graduate students. In addition, certain departments or divisions have available a limited number of traineeships, fellowships, or scholarships.

For example, the School of Business Administration offers the following graduate scholarships.

Graduate Business Scholarship
Scholarship awarded to a graduate business student selected by the School of Business Administration faculty.

Noel K. Mahr Graduate Accounting Scholarship
Scholarship awarded to a minority graduate accounting major upon recommendation of the School of Business Administration faculty.

Motorola International Business Scholarship
An award for a graduate student interested in International business. The recipient is selected by the School of Business Administration faculty.

For more information consult individual departments.

Other Graduate Financial Aid
Graduate students may apply for both the Perkins Loan (formerly NDSL) and the College Work-Study Program, as well as the Guaranteed Student Loan Programs. Students who have earned their first baccalaureate degree are no longer eligible for federal and state grant programs. For information on the Loan or Work-Study Programs or for additional financial aid information or consumer information, contact the Student Financial Aid office.
Confidentiality Policy

The Family Educational Rights and Privacy Act of 1974

These statements are set forth as guidelines and procedures to implement the University of Missouri policy on student records developed from The Family Educational Rights and Privacy Act of 1974.

The University of Missouri-St. Louis as charged in the Act will annually inform its eligible students by including in the Student Handbook, the Schedule of Courses, and the UM-St. Louis Bulletin and the Current Student newspaper the following information:

1) "Education Records" are those records, files, documents, and other materials which contain information directly related to a student and are maintained by the University. Those records, made available under The Family Educational Rights and Privacy Act of 1974, are student financial aid, the student's cumulative advisement file, student health records, disciplinary records, the admissions file, and the academic record.

Confidential letters and statements of recommendation which were placed in student credential folders at the Office of Career Placement Services after January 1, 1975, are also made available if the student has not waivered the right to view these recommendations.

2) The University of Missouri-St. Louis "Education Records" do not include:
   a) Records of instructional, supervisor, and administrative personnel and educational personnel ancillary thereto which are in the sole possession of the maker thereof and which are not accessible or revealed to any other person except a substitute.
   b) The records and documents of the University of Missouri Police Department that are maintained solely for law enforcement purposes and are not available to persons other than law enforcement officials of the same jurisdiction.
   c) In the case of persons who are employed by the University but who are not in attendance at the University, records made and maintained in the normal course of business which related exclusively to such persons and that person's capacity as an employee where the records are not available for any other purpose.
   d) All records on any University student which are created and maintained by a physician, psychiatrist, psychologist, or other recognized professional or para-professional acting in his professional or para-professional capacity, or assisting in that capacity, and which are created, maintained, or used only in connection with the provision of treatment to the student, and are not available to any other than persons providing such treatment, provided, however, that such records can be personally reviewed by a physician or other appropriate professional of the student's choice.

3) The University of Missouri-St. Louis students have access to the educational records identified in Paragraph 1 above. In accordance with Pub. Law 93-330 as amended, the University of Missouri-St. Louis will not make available to students the following materials:
   a) Financial records of the parents of students or any information contained therein
   b) Confidential letters and statements of recommendation which were placed in the education records prior to January 1, 1975, if such letters or statements are not used for the purpose other than those for which they were specifically intended.
   c) Confidential recommendations respecting admission to the University, application for employment and receipt of honor or honorary recognition, where the student has signed a waiver of the student's rights of access as provided in 6.0404, the University Policy on Student Records.

4) The director of Financial Aid, the appropriate academic dean, the coordinator of the Student Health Service, the vice chancellor for Student Affairs, the director of Career Placement Services, the director of Admissions and Records are the officials responsible for the maintenance of each type of record listed in paragraph 1.

5) Any student may, upon request, review his or her records and, if inaccurate information is included, may request the expunging of such information from his file. Such inaccurate information will then be expunged upon authorization of the official responsible for the file.

6) Students desiring to challenge the content of their record may request an opportunity for a hearing to challenge the content of his or her educational record in order to provide an opportunity for the correction or deletion of any such inaccurate, misleading, or otherwise inappropriate data contained therein, and to insert into such records a written explanation respecting the content of such records.

7) The University official charged with custody of the records will attempt to settle informally any disputes with any student regarding the content of the University's educational records through informal meetings and discussions with the student.

8) Upon request of the student or the University official charged with custody of the records of the student, a formal hearing shall be conducted as follows:
   a) The request for a hearing shall be submitted in writing to the campus chancellor who will appoint a hearing officer or a hearing committee to conduct the hearing.
   b) The hearing shall be conducted and decided within a reasonable period of time following the request for a hearing. The parties will be entitled to written notice 10 days prior to the time and place of the hearing.
   c) The hearing shall be conducted and the decision rendered by an appointed hearing official or officials who shall not have a direct interest in the outcome of the hearing.
   d) The student shall be afforded a full and fair opportunity to present evidence relevant to the hearing.
   e) The decision shall be rendered in writing within a reasonable period of time after the conclusion of the hearing.
   f) Either party may appeal the decision of the hearing official or officials to the campus chancellor. Appeal from the chancellor's decision is to the president. Appeal from the president is to the Board of Curators.
Confidentiality Policy

9) The University of Missouri-St. Louis will mail grade reports only to a student's permanent mailing address. Grades will not be mailed to parents unless the students in question have completed the necessary authorization in the registrar's office.

10) The University of Missouri-St. Louis may permit access to or release the educational records without the written consent of the student to the parents of a dependent student as defined in Section 152 of the Internal Revenue Code of 1954.

11) If any material or document in the educational record of a student includes information on more than one student, the student may inspect and review only such part of such material or document as relates to him or her or to be informed of the specific information contained in such part of such material.

Provisions for Auxiliary Aids and Services to Disabled Students

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 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 requirements of the particular course or program.

If the University determines that some type of auxiliary aid is required, it will assist the qualified student with a disability in obtaining the necessary auxiliary aid from other sources. If the necessary auxiliary aid is not available from other sources, the University, at its option, shall provide the necessary appropriate auxiliary aid.

Requests for the assessments must be made to the administrator for Special Student Programs no later than six weeks prior to the beginning of the next semester. If an unfavorable determination is made, the student may appeal the decision. See Discrimination Grievance Procedure, Appendix.
UM-St. Louis Libraries

UM-St. Louis Libraries
Joan Rapp, Director of Libraries
M.L.S., Rutgers; M.A., University of Washington; M.B.A., Southern Illinois University-Edwardsville

Librarians
Cheryle Cann, Head, Health Sciences Library
M.A., University of Missouri-Columbia
Linda d'Avignon, Reference Librarian
M.S., University of Illinois-Urbana-Champaign
Ellen Grewe, Head, Technical Services
M.A., University of Missouri-Columbia
Mushira Haddad, Head, Library Support Services and Assistant to the Director
B.A., American College
Peter Monat, Reference Librarian
M.A., St. Louis University; M.S., University of Illinois-Urbana-Champaign
Theresa Norton, Reference Librarian
M.S., University of Illinois-Urbana-Champaign
Genevieve Owens, Acting Head, Collection Development
M.S., University of Illinois-Urbana-Champaign
Frances Piesbergen, Reference Librarian/Government Documents
M.A., University of Missouri-Columbia
John Mark Scheu, Reference Librarian
M.A., A.B.D., University of Kansas; M.S., University of Illinois-Urbana-Champaign
Sandra Snell, Head, Reference
M.A., University of Wisconsin; M.S., University of Illinois-Urbana-Champaign
Anne Taylor, Reference Librarian
M.L.S., University of Pittsburgh
Virginia Workman, Head, Ward E. Barnes Education Library
M.A., University of Missouri-Columbia

Western Historical Manuscript Collection and University Archives

Archivists
Ann N. Morris, Associate Director, Western Historical Manuscript Collection; Associate Archivist, University Archives
M.A., Webster University
Kenneth F. Thomas, Senior Manuscript Specialist, Western Historical Manuscript Collection
M.A., University of Missouri-St. Louis
Natalie M. Drew, Senior Manuscript Specialist, University Archives
M.A., University of Missouri-St. Louis

The Western Historical Manuscript Collection (WHMC) contains primary source materials for research in many fields, including local history, the environment, women's history, politics, and black history. The Collection is open to the University community and the general public. Material from the other three campuses in the WHMC-System may be borrowed for research use at UM-St. Louis. A complete catalogue to the holdings of the other branches of WHMC is available.

The Archives contain official records, campus publications, student newspapers, photographs, and other materials on the history of the University of Missouri-St. Louis.

Located on Level II in the Thomas Jefferson Library, the office is open for reference service Monday through Friday, 8 am to 4:45 pm and until 9 pm on Tuesday. Archival and manuscript material does not circulate.

The University Libraries support the educational objectives of the University and meet the teaching, research, and informational needs of the campus community. Housed in three locations—the Thomas Jefferson Library (North Campus), the Ward E. Barnes Education Library and the Health Sciences Library (both on South Campus) — the Libraries' collections consist of more than 540,000 volumes, including 3,000 periodical subscriptions, one million U.S. Government documents, and some 1,600,000 items in microform.

Materials from other University of Missouri libraries can be identified through the use of the University's online catalog (LUMIN) and are available through Interlibrary Loan. Faculty and students engaged in research can also request materials from other libraries across the country through this service. An automated database retrieval service providing access to approximately 250 databases is also available to UM-St. Louis students and faculty.

The libraries are open more than 80 hours per week during regular sessions. Specific hours for various library services are posted in all libraries.
University Center

The University Center houses University food services, the Bookstore, Normandy Bank, University Center, and Student Activities administrative offices and meeting rooms. A computer lab, student government offices, the Black Culture Room, and graphic arts/copy services are also located in the University Center. Lounge space provides a comfortable environment for relaxation or study and a TV room and amusements area provide places for recreation.

University Center Funding
At the University of Missouri-St. Louis, as is the case with the majority of universities and colleges, students themselves made the financial commitment necessary to construct the University Center and administer its functions. Every semester a Facilities Fee is collected from each student. This money is used to retire the bonds which were originally sold to raise the $2,000,000 spent in construction. In addition, some money is spent on administering the facility and some is set aside for major repairs and replacements. (All student money collected for the building is used to support it.)

Food Services
The University Center's dining area features a "food market" or "scramble-type" food service in the lower level Underground, offering customers a complete menu selection ranging from popular fast-food items to hot meal service, between the hours of 7:30 am and 7:00 pm, Monday through Thursday, and 7:30 am to 2 pm on Friday. The upper level Summit is designed as a comfortable lounge-dining area, with vending service available for those seeking snacks or beverages, including late-night customers.

A cafeteria in Marillac Hall provides snacks and meals for students and staff at the South Campus Complex from 7:30 am to 7:00 pm, Monday through Thursday, and 7:30 am to 2 pm on Friday.

Complete catering services are also available and may be arranged through the food service office in the University Center.

Hotline
The University provides three Hotline phones for the purpose of providing the University community with information concerning the suspension of campus operations and/or cancellation of classes during periods of severe weather. The telephone numbers are 553-5865, 553-5867, and 553-5148. Call for this information after 6 a.m.

Audiovisual Services
The University Center can provide audiovisual equipment for student organizations and campus departments scheduling events in the University Center and J.C. Penney Building. Equipment includes 16mm, slide, and overhead projectors; record and tape players; a ¾" and a ¼" VHS player/recorder with a 25" color monitor; lecterns and portable sound systems. Experienced operators are also available for an additional charge.

Bookstore
In addition to the programs and services listed above, the Bookstore is located in the University Center and is headquarters for ordering and selling textbooks and supplementary reading materials, including paperback books. The Bookstore also sells class and study supplies, college jewelry, and insignia items. Commencement announcements, caps, and gowns are ordered through the Bookstore.

Computer Lab
A 10-station computer lab in 256 University Center is available for student use weekdays during regular building hours (Monday-Thursday, 7 am-5:00 pm; Friday, 7 am-5 pm). A network of five Macintosh SE units and a network of five IBM Model 50 units are each linked to a laser printer. Software packages for word processing, spreadsheet, and database design are loaded on each machine. Manuals for the various software packages may be checked out in room 267 University Center.
Student Activities Office

Organizations
Organizations for UM-St. Louis students range in size from three to more than 50 with a scope of activities as diverse as the interests of those who organized them.

Social fraternities and sororities, performing and fine arts, curriculum-related, and special interest clubs address the co-curricular needs of students.

Student organizations may be contacted through the Office of Student Activities, Room 267 University Center.

Program Offerings
Recent programs have featured noted authors and lecturers from a variety of fields. Dr. Wilson Bryan Key's presentation on "Subliminal Seduction" drew a capacity audience.

Mirthday, an annual spring festival, features nationally recognized performers, such as Otis Day and the Animal House Band, The Fabulous Thunderbirds, Sha-Na-Na, and the Gregg Allman Band, in addition to many other activities.

The University Program Board hosts weekly programs featuring the best of St. Louis' local and regional bands, comedians, variety performers, and poetry readings. The University Program Board also sponsors games, tournaments, and discounted tickets for local sporting events, concerts, and theatre. Most events are free to the campus community and are subsidized by Student Activity fees.

Transportation Services
The Office of Student Activities coordinates a car pool service, and works with the Bi-State Transit Development Agency to make the campus more accessible to those who use public transportation. Students interested in ride-sharing or requiring transportation are invited to drop by 267 University Center or call 553-5291 for information.

Housing Referral
The Office of Student Activities maintains a list of available apartments, rooms, and flats in the North County area. Lists of persons requesting roommates are also available.

Design and Printing Services
Computerized graphics and printing services are provided at reasonable rates for student groups. Single or multiple copies, design of brochures and flyers, and transparency production are a few of the services available. This operation, called Graphix-Plus, is located in the University Center; call 553-5555 for information.

Black Culture Room
The Black Culture Room, located in room 254 University Center, houses a tutorial service and is equipped with a study area and lounge. Sponsored by the Associated Black Collegians, the room is called "Umajaa," an African word meaning brothers and sisters working together. For more information call the Black Culture Room at 553-5731.

Office of the Vice Chancellor for Student Affairs
The Office of the Vice Chancellor for Student Affairs, located in 301 Woods Hall, offers assistance and a wide variety of services to students. The office is responsible for administering the Student Conduct Code, confidentiality of student records, and Discrimination Grievance Procedure for Students.

In addition, the Administrator for Special Student Programs is located in this office. This staff member provides information, guidance, referral services, and assistance for disabled and international students. Special arrangements and assistance in providing for the accessibility needs of permanently or temporarily disabled students are available through this office.

For the hearing impaired, this office also provides a TDD (telecommunication device) and can be reached through telephone number 553-5212. For more information or questions, call the Office of the Vice Chancellor for Student Affairs at 553-5211.

Counseling
Counseling Service
The Counseling Service offers free professional assistance to students, faculty, and staff with personal, social, educational, or career concerns.

Services include individual and group counseling, a range of workshops with specific aims as well as career testing and career development counseling. A well-stocked library of career-related materials is available. People may use the Career Resource Center without an appointment.

SIGI PLUS, a computer-based interactive guidance system for career exploration and decision-making, is also housed in the Counseling Service. SIGI PLUS may be used by appointment, without charge, by members of the University community.

The Counseling Service receptionist will arrange a meeting with a staff member weekdays from 8 am to 7 pm except Friday, 8 am to 5 pm. In an emergency, however, students can be seen almost immediately. For more information, call 553-5711 or visit the Counseling Service office at 427 SSB.

Horizons
Horizons is a student organization providing a rather unique service to the student body. The staff is composed of undergraduates who have completed certain required course work in listening and helping skills.

The Horizons staff is available to talk with a student, to listen or to provide information about such typical student concerns as career exploration, time management, and even resume writing—to name a few. Most important, Horizons offers caring support and a friendly atmosphere.
Student Affairs Office

Services are immediate, confidential, and free of charge to anyone enrolled at UM-St. Louis. Horizons also offers workshops on a variety of topics and information and referral services for a wide range of concerns. Horizons is located in the Counseling Service office at 427 SSB.

Women’s Center
The Women’s Center serves as an educational resource center offering an information and referral service, advocacy, programs on women’s issues and career choices, cultural events and exhibits, a library of literature by and about women, topical resource files, and information on women’s activities, networks, organizations, and services in St. Louis.

Located in 211 Clark Hall, the Women’s Center is a good place to get support and assistance coping with sexual harassment, help in doing research on women, and answers to questions about almost anything. The Center is also a good place to relax, drink coffee, and share ideas and experiences with other UM-St. Louis students in a comfortable atmosphere.

There are opportunities for students to get involved at all levels in the activities and work of the Women’s Center which is open full time, Monday through Friday; evening hours vary by semester. The coordinator of the Women’s Center directs the campus-wide orientation program so students can become acquainted with University rules, procedures, and services. For more information call 553-5380.

The Student Emergency Contact Form has been developed by the Center for students who may need to be contacted in emergency situations. This service is especially useful for students who are parents. Call the Center or stop by and complete an Emergency Contact Form.

Career Placement Services
Job placement services are available to all UM-St. Louis students and alumni. Students may call 553-5111 for an appointment or stop by the office in 308 Woods Hall for career information.

Students can visit the Career Placement Library where career-related brochures, company information, videos, and a variety of information are available. Workshops on resume writing, interviewing skills, and orientations to the services are scheduled regularly.

Services provided to graduating students and alumni include listings of immediate full-time positions available. On-campus recruiting by representatives of business, government, and school districts, begins in September. Students must register early each semester to take advantage of this opportunity.

The Cooperative Education Program, including summer internships, 553-5100, is available to students who have completed 30 credit hours. This program allows students to gain career-related work experience while in school and to practice and develop skills needed to enter the work force after graduation.

Veteran Affairs
The Veteran Affairs Office, 346 Woods Hall, serves as liaison to various government offices to provide information on educational benefits, privileges, and responsibilities relating to Veteran Administration benefits. A certifying official is available to answer veterans’ questions and process official paperwork.

Veterans are certified to the Veteran Affairs Regional Office (VA) beginning with the date of initial registration, and regularly until the expected completion date of the VA approved program or degree. Veteran students must promptly inform the certifying official at 346 Woods of any changes in status which might affect benefits. Failure to report such changes can result in overpayments and other complications in receipt of benefits.

Veteran students are expected to attend classes, perform academic duties as assigned by instructors, and adhere to academic policies. Failure to do so will result in reports to the VA of unsatisfactory progress, which may result in discontinuance of benefits. Veteran students who cease attending, but do not officially withdraw from class or from the University, will be reported as not making satisfactory progress. If enrollment status is altered in any way, the VA will be notified and an overpayment may be charged against the veteran.

For complete details and information, contact the Veteran Affairs Office at 553-5315.
Student Affairs Office

Student Health Service
The Student Health Center, located in 127 Woods Hall, offers basic health services, screening and education. It is staffed with nurses, and there is no charge for services rendered. Referrals are made for treatment by a physician or for specialized or long-term care. The Health Center is open from 8 am to 9 pm, Mondays through Thursdays, and from 8 am to 5 pm on Fridays. Evening hours are in effect only when evening classes are in session.

For a medical emergency on campus, dial 5155 to summon assistance.

The University requires of students born after 1956 documented proof of immunity to Measles and Rubella. Immunization records are to be sent to the Student Health Center. Exemption forms for medical or religious/philosophical reasons may also be obtained from the Student Health Center.

Handicapped Parking Permits are issued by the Health Center upon presentation of a medical certificate verifying a mobility disability. Auto license and parking sticker numbers are also necessary in order to process an application for Handicapped Parking.

Information, application and claim forms for the Student Accident and Sickness Insurance Plan are available at the Health Center. Claims, however, must be filed directly with the off-campus Insurance Company.

For further information phone 553-5671.

Drug and Alcohol Prevention Program
Pursuant to the Drug-Free Schools and Communities Act Amendments of 1989, the University of Missouri-St. Louis is required to establish a drug and alcohol prevention program for its students and employees. A biennial review of this program will be done to determine its effectiveness, to implement changes to the program if they are needed, and to ensure the University's disciplinary sanctions are consistently enforced.

Standards of Conduct
University of Missouri regulations prohibit the unlawful possession, use, distribution and sale of alcohol and illicit drugs by the University students and employees on University-owned or controlled property and at University-sponsored or supervised activities.

Legal Sanctions
Local, state, and federal laws also prohibit the unlawful possession, use, distribution, and sale of alcohol and illicit drugs. Criminal penalties for violation of such laws range from fines up to $20,000 to imprisonment for terms up to and including life.

University Discipline
Violation of these University of Missouri regulations can result in disciplinary action up to and including expulsion for students and discharge for employees.

Health Risks
Specific serious health risks are associated with the use of illicit drugs and alcohol. Some of the major risks are listed below.

Alcohol and Other Depressants (barbiturates, sedatives, and tranquilizers): Addiction, accidents as a result of impaired ability and judgment, overdose when used with other depressants, damage to a developing fetus, heart and liver damage.

Marijuana: Addiction, panic reaction, impaired short-term memory, increased risk of lung cancer and emphysema (particularly in cigarette smokers), impairment of driving ability.

Cocaine: Addiction, heart attack, seizures, lung damage, severe depression, paranoia, psychosis. Similar risks are associated with other stimulants, such as speed and uppers.

Hallucinogens (acid, LSD, PCP, MDMA, etc.): Unpredictable behavior, emotional instability, violent behavior, organic brain damage in heavy users, convulsions, coma.

Narcotics (heroin, Demerol, Morphine, Codeine, etc.): Addiction, accidental overdose, risk of hepatitis and AIDS from contaminated needles.

Inhalants (gas, aerosols, glue, nitrites, etc.): Loss of consciousness, suffocation, damage to brain and central nervous system, sudden death, nausea and vomiting, nosebleeds, impaired judgment.

Resources
A variety of resources exist for drug or alcohol counseling, treatment, or rehabilitation programs. For detailed information concerning these resources available from the University and/or community agencies, students, employees, and faculty may contact the offices below. Such referrals will respect individual confidentiality. The UM-St. Louis Drug and Alcohol Prevention Program is described in a brochure. To obtain the brochure and more information, contact Counseling Service, 427 Social Sciences and Business Building, 553-5711; Student Health Center, 127 Woods Hall, 553-5671; Office of Human Resources, 211 General Services Building, 553-5904; or Vice Chancellor for Academic Affairs, 407 Woods Hall, 553-5371.
**Student Affairs Office**

**Smoke-Free Campus Policy of UM-St. Louis**
Effective June 1, 1991, smoking is prohibited throughout the University of Missouri-St. Louis campus.

To assist smokers among University staff, faculty and students, Environmental Health and Safety offers non-smoking clinics held on an ongoing basis in conjunction with the American Lung Association. These clinics are offered at no cost to the employee or student. This approach has been used by several large institutions and corporations that have successfully established smoke-free environments.

All members of the campus community are responsible for upholding this policy. Anyone who wishes to enroll in the non-smoking clinics should call Steve Scruggs, Safety Representative, at 553-6306.

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**Sports**

**Intramural Sports**
The University's intramural program is geared toward the interests of the entire University community. Students, faculty, staff, and alumni are encouraged to take active roles in the creation of new intramural programs.

Activities currently offered include touch football, basketball, volleyball, swimming ("Swim the Mississippi River Club"), racquetball, golf, tennis, bowling, softball, hoc soc, fun run, soccer, and weight lifting. For more information call 553-5124.

**Intercollegiate Sports**
A variety of intercollegiate sports is available for both men and women at UM-St. Louis.

Both the men's and women's athletic teams have brought both local and national recognition to the University for more than 20 years with one national championship and trips to the NCAA Tournament in at least one sport in 18 of the last 19 years.

The women's intercollegiate athletic program includes basketball, soccer, tennis, volleyball, and softball. The men's intercollegiate athletic program includes basketball, soccer, golf, baseball, tennis, and swimming. Scholarships are available for both men and women in all sports.

The UM-St. Louis athletic department also sponsors a coed cheerleading squad.

Intramurals and intercollegiate athletics are supported in part by the University Center and Student Activities fees. UM-St. Louis students with validated IDs are admitted free to all home athletic contests. Harris-Stowe students are also admitted free to these events.

**Facilities**
The athletic and exercise areas in the Mark Twain Building are available for use by the University community at specified hours. During the regular semester, the building is open seven days a week and on specified evenings. Facilities include basketball, volleyball, badminton, and handball/racquetball courts, an aerobic dance room, and an NCAA regulation swimming pool. With the completion of the renovation project, the facilities also include two conditioning and fitness rooms with state-of-the-art equipment, an indoor running track suitable for walking or running, a sauna, and a whirlpool. Outdoor facilities include baseball, softball, soccer, and intramural fields, and tennis courts. For further information call 553-5641.
Student Government

The Student Association of the University of Missouri-St. Louis is the student governance body composed of both elected student representatives from each School and College, and of organizational representatives from every recognized student organization which petitions for representation on the Assembly.

The purpose of the Student Association is to represent University of Missouri-St. Louis student concerns at every level of governance within the University and at the state and local level. This is done by ensuring adequate and capable student representation within the University Senate, the policy-making and governance body of the University of Missouri-St. Louis. In addition, Student Government, the policy-making arm of the Student Association, has its own standing committees to address student concerns.

On the local and state levels, Student Government leaders visit various officials to address student concerns and priorities throughout the year.

An educated, qualified, well-rounded individual is the desired result of a college education. The University of Missouri-St. Louis Student Association, in its capacity as representative of and advocate for students, plays an important role in developing such individuals.

For more information call 553-5105 or drop by 262 University Center.

The Student Court is nominated by the Student Assembly and appointed by the Vice Chancellor for Student Affairs. The five-member Court rules on student appeals concerning matters such as parking violations and disputes between individuals and organizations; organizations and organizations.

The Evening College Council serves the evening student body as a liaison between students, faculty, and administrators. It functions as a sounding board for Evening College students' ideas and interests, and it coordinates social activities of special interest to evening students. Membership is open to all Evening College students who are in good standing. Contact the Evening College, 324 Lucas Hall, or any council member for more information or call 553-5162.

Other Services

University Senate

The Senate is the governing body for the campus, exercising many of the functions of the faculty and the student body subject to the University of Missouri-St. Louis Bylaws. Twenty-five students and 75 faculty members are elected to the Senate by their constituent groups. The Senate includes a number of administrators who serve as voting or non-voting ex officio members. Much of Senate business is carried out by its elected committees. The standing committees on which students may serve include: Admissions and Student Aid, Budget and Planning, Bylaws and Rules, Committee on Committees, Curriculum and Instruction, International Relations, Physical Facilities and General Services, Student Affairs, Student Publications, University Libraries, and University Relations. In addition, ad hoc committees are established as needed.

Alumni Office

As today's students form the present University community, our alumni help shape the future of the University of Missouri-St. Louis by supporting necessary improvements. The Alumni Association and the Alumni Activities Office in 421 Woods Hall work together to promote the St. Louis campus and to establish mutually beneficial relations between the University and its alumni. Membership in the Alumni Association is open to all graduates and former students with payment of modest dues.

The Alumni Association sponsors a scholarship fund for UM-St. Louis undergraduates, provides special funding of certain campus projects, and works as an organization to obtain increased public support for the University. For more information, call 553-5833.

A refurbished Alumni Center across the street from the main campus entrance offers students, faculty, staff, and alumni a pleasant gathering place for community receptions and other social events. Contact the Alumni Center at 553-5722 for further information.

Gallery 210

Gallery 210 sponsors five major art exhibitions yearly. These include professional work of national importance in all media with a primary emphasis on contemporary art. In conjunction with these exhibits, the Gallery frequently sponsors symposia, lectures, and other events which enhance the impact of the works of art that are displayed.

Under the auspices of the art department, the exhibits offered by the Gallery meet the best of both educational and aesthetic standards and serve the visual interests of both the metropolitan community and the University's students and staff.
Other Services

Police Department
The UM-St. Louis Department of Police is located in the General Services Building and serves the students, faculty, and staff by providing year-round campus security. The UM-St. Louis police are trained to give emergency aid in the event of accident or illness, and all incidents should be reported immediately to the police department, telephone 563-5155. This number is monitored 24 hours a day. Call for help or to report fire or any existing hazardous conditions. Emergency telephones on campus include the red “Hot-Line” phones, which are located in every building. In addition, there are a number of outdoor emergency phones that connect directly to the police dispatcher.

Traffic regulation is also a responsibility of the campus police, including issuance of annual parking permits and temporary parking permits. These permits may be picked up at the police department office. Informational booklets on traffic regulations and parking, as well as campus maps, tips on crime prevention, and other useful publications are available outside the police department office.

The department has an on-going bicycle registration program, offering registration tags to students, faculty, and staff. A registration file with bicycle serial numbers and description is maintained for each registrant. Also available through the UM-St. Louis police is a service which offers a deterrent to automobile theft. Campus police officers engrave the vehicle identification number (VIN) on the automobile’s window. This service is free of charge to UM-St. Louis faculty, staff, and students.

The UM-St. Louis police report and investigate all crimes that occur on campus. A crime prevention officer conducts self-help programs throughout the year and makes security surveys to identify potential problems before a crime occurs.

For information on any of these services, contact the University of Missouri-St. Louis Police by calling 563-5158, Monday through Friday, 8 am to 5 pm. For emergencies, remember to call 563-5155.
Specialized Centers and Facilities for Research, Teaching, and Public Service

Research

Center for Business and Industrial Studies
The Center for Business and Industrial Studies is organized within the School of Business Administration for studying managerial problems and performing applied research. The Center operates on a not-for-profit basis to help organizations in their diversified business communities understand factors affecting their business environments and to enhance their productivity. University faculty, supported by a powerful computer system, statistical databases, and sophisticated software, provide consultation in a wide variety of business applications. Studies are undertaken in marketing, computer systems, operations management, human resources management, planning and business development, facilities location, distribution, and financial analysis. The Center provides nationwide demographic, economic, and financial data through the University business database and information service. Organizations can contract with the Center for studies tailored to their specific needs. A brochure outlining the Center's services can be obtained by writing the Center for Business and Industrial Studies, School of Business Administration, University of Missouri-St. Louis, 8001 Natural Bridge Rd., St. Louis, MO 63121-4499, or by calling (314) 553-5857.

Center for Cornea and Contact Lens Research (CCCLR)
The Center for Cornea and Contact Lens Research (CCCLR) is a part of the University of Missouri-St. Louis School of Optometry. The Center is comprised of clinical and research faculty from the School of Optometry, researchers from the Department of Chemistry, and a research panel made up of 10 to 12 St. Louis area Optometrists and Ophthalmologists. The major goals of the CCCLR are: (1) to expand clinical trials studies of contact lens designs, materials, applications and solutions; (2) to foster basic ocular research as it applies to the effects of contact lenses, contact lens solutions, diagnostic and therapeutic medications and instruments on corneal physiology; (3) to engage in collaborative interdisciplinary research in biomedical materials; and (4) to participate in multidisciplinary research in laser corneal reshaping.

Center for Economic Education
The Center for Economic Education is sponsored by the College of Arts and Sciences and the Continuing Education-Extension Division to support and enhance economic education. The Center provides in-service programs in economic education. Working closely with local school districts, the Center serves to improve and evaluate present economics curriculum. The Center also promotes the goals of economic education among business, professional, educational, labor, and other organizations and individuals in the St. Louis community.

Center for International Studies
The Center for International Studies supports academic programs, research activities, seminars, and conferences designed to promote and improve research methods in international studies, improve the methods of teaching international studies in schools and colleges, and encourage an interest in international affairs in the University and area communities. The Center promotes interdisciplinary and multidisciplinary courses and assists in staffing courses within individual departments. It arranges seminars to meet specific faculty and student needs and interests, sponsors conferences and seminars, issues occasional papers, administers undergraduate certificate programs in East Asian studies, European studies, international studies, and Latin American studies for the College of Arts and Sciences, and administers the Graduate Certificate in International Studies. The Center serves as the campus depository for information on Exchange and Study Abroad programs and provides assistance to students seeking information on such programs. In addition, the Center's Community Education Office maintains the Missouri International Studies Resource Collection and operates a comprehensive global education program.

Center for Molecular Electronics
Molecular electronics lies at the cutting edge of recent developments in the study and application of thin-film materials, in the growth of semiconductor device material, in the fabrication of electronic sensors and devices, and in the development of high-performance polymers. In all of these areas, knowledge and control at the atomic or molecular level is essential for state-of-the-art materials and devices. In recognition of the critical importance of research, education, and industry-university cooperation in these areas, the University of Missouri-St. Louis has established the Center for Molecular Electronics. The goals of the Center are both to encourage cooperation between university and corporate scientists and engineers, the membership of the Center includes physicists, chemists, and engineers from the following St. Louis-based institutions: University of Missouri-St. Louis, Washington University, McDonnell-Douglas Corporation, and Monsanto Company. Through the shared expertise, equipment, and facilities, the Center will investigate the following technological areas: (a) Organometallic Vapor Phase Epitaxy; (b) Plasma Chemical Vapor Deposition of Diamondlike Carbon Films; (c) Electro-Optics of High Performance Polymers; (d) Nanometer-scale Lithography; (e) Electrochemistry of Sensors; (f) Gallium Aluminum Arsenide Lasers and Waveguides; (g) Langmuir-Blodgett Films. All these technological areas are of interest to St. Louis area companies, as well as being exciting and important fields of scientific inquiry.

Center for Science and Technology
The University of Missouri-St. Louis Center for Science and Technology was established in 1987 to serve as a resource broker between the University of Missouri-St. Louis and the St. Louis scientific community.
Specialized Centers and Facilities for Research, Teaching, and Public Service

The Center fosters research collaboration and provides customized post-baccalaureate programs on technological advances for the almost forty thousand scientists and engineers in the St. Louis area, and for science educators, corporate managers, and for top-level executives.

The Center also promotes citizen awareness on technological trends and issues, linking University projects with organizations such as the St. Louis Science Center, the St. Louis Center for Math and Science, and the St. Louis Technology Center.

International Center for Tropical Ecology
The International Center for Tropical Ecology promotes education and research concerning the study of biodiversity, conservation, and sustainable use of tropical ecosystems. It was established to centralize the activities of faculty at UM-St. Louis and researchers at the Missouri Botanical Garden who specialize in ecology, evolution, systematics, and conservation biology. A major priority of the International Center is to provide funding for international and United States graduate students interested in tropical ecology and conservation who are enrolled in the cooperative graduate program between UM-St. Louis and the Missouri Botanical Garden. The International Center for Tropical Ecology sponsors multidisciplinary lectures and symposia on biological, political, and cultural issues related to tropical ecology. It also is involved with the development of innovative multidisciplinary curriculum in biology, public policy, and economics of conservation and sustainable use of resources. By supporting talented international and United States graduate students and attracting visiting scholars in ecology, evolution, systematics, and conservation biology, a major goal of this Center is to create an intellectual atmosphere that can contribute to the solutions of our global crisis concerning the destruction of tropical ecosystems.

Inter-University Consortium for Political and Social Research
The consortium, an academic partnership between the University of Michigan Center for Political Studies and more than 140 colleges and universities in the United States and abroad, is an interdisciplinary, inter-university research and training facility for both students and faculty in the social sciences. Through various consortium archives, students and faculty have direct access to a variety of multipurpose data of a socio-political nature that may serve a variety of research and training needs. The Office of Computing and Telecommunications provides data processing services for consortium resources. Students and faculty are also eligible to participate in the consortium’s summer training program, a series of intensive eight-week courses of interdisciplinary work for historians, political scientists, sociologists, and other social scientists.

Office of Computing
Computing facilities at the University of Missouri provide access to powerful computing resources, which are available to students, faculty and staff for educational, research and administrative needs. Access to local facilities is provided at no cost.

Hardware on the UM-St. Louis campus, used primarily for academic computing, includes: a DEC VAX 8600, three DEC MicroVAX II minicomputers, an IBM 4381, 30 Apple IIe microcomputers, 52 Apple Macintoshes, 40 AT&T X-Window terminals, 127 IBM PC's and 63 terminals for mainframe access. These microcomputers and terminals are housed in 17 public computing labs located throughout the campus. All microcomputer labs are equipped with printers. Dial-up access is provided to the DEC and IBM systems.

UM-St. Louis is part of the University of Missouri Computer Network, the Missouri Research Network (MORNET), BITNET, and the Internet.

Staff provides consultation, programming, error analysis, and operations services. Data entry is available from an outside vendor. Noncredit short courses are taught during the fall and winter semesters on a wide variety of microcomputer and mainframe topics. Microcomputers, peripherals, and software are available for purchase at substantial discounts.

The UM Central Computing Facility operates an IBM 3090 and an IBM 4381. These systems support the library system, LUMIN, and the University’s administrative applications.

The office telephone number is 553-6000. Questions concerning open student labs should be directed to 553-6036.

Office of Research
The Office of Research provides services to faculty and others who are seeking external support for their university activities of research, instruction, or public service. The Research Office maintains a library of information about funding agencies, a specialist in searching for funding, and an assistant who can help build a grant budget.

Research regulations, such as those affecting human subjects or the laboratory uses of radioactive substances, are administered through this office, as is the administration of grants received.

Parents as Teachers Program
Early in 1987, the Missouri Department of Elementary and Secondary Education established the "Parents as Teachers National Center" to provide information about PAT, plus training and technical assistance for those interested in adopting the program. The Center is affiliated with the University of Missouri-St. Louis.
Specialized Centers and Facilities for Research, Teaching, and Public Service

The National Center offers the following services for school personnel in Missouri and for professionals across the nation: (1) PAT Institutes on program implementation. The week-long institutes cover program organization and management, marketing and recruitment, home visits and group meetings, monitoring children's progress, and program evaluation. PAT Institutes are led by the Center's professional staff who have trained personnel to successfully implement PAT programs in Missouri's 543 public school districts. Educators and other professionals from more than 30 other states, Great Britain, Canada, and Saudi Arabia also have attended the institutes. The institutes are scheduled throughout the year and offer two hours of graduate and undergraduate credit. (2) Advanced PAT training during the summer. (3) Scheduled trips to see PAT in action, including a home visit, observation of a local school's PAT Center, and consultation with local school personnel and Center staff. (4) Customized training programs, follow-up consultation by Center and/or program staff, and internships in local PAT programs. (These services are available by special arrangement.)

The Center has initiated a series of research and evaluation activities to further study program effectiveness and to document program adaptations for diverse populations, e.g., low income, urban and rural, and teen families.

A National Advisory Board, appointed by the Department of Elementary and Secondary Education, lends direction and support to the Center. The board includes leading educators and child development specialists from across the nation. For more information, contact: Parents as Teachers National Center. University of Missouri-St. Louis, Marillac Hall, Room 312, 8001 Natural Bridge Road, St. Louis, MO 63121-4499.

Urban Information Center

The Urban Information Center (UIC) is a specialized area within the Office of Computing and Telecommunications. The UIC has been providing demographic information and data processing for researchers, business, and government since 1970. It is a Coordinating Agency of the Missouri State Census Data Center, a program which provides the citizens of Missouri with easy access to information released by the U.S. Bureau of the Census. The UIC maintains an extensive database of primarily, but not exclusively, Census-based data which are available in a variety of machine-readable or printed formats. UIC-developed software allows for easy manipulation of commonly used census files using the SAS software package as well as the generation of statistical summaries and individualized reports. While specializing in data for the St. Louis area and the state, the UIC's holdings cover the entire United States.

Cooperative Facilities Located at UM-Columbia

Environmental Trace Substances Research Center. The center concentrates on environmental surveillance and water quality research.

Sinclair Comparative Medicine Research Farm. The facility offers large and small animals as models for human health-related conditions in the study of chronic disease and aging.

Public Service

Center for School Relations and Services

The Center for School Relations and Services houses large, innovative school-based programs and projects which are designed to enhance K-12 learning and instruction, especially in mathematics, science and communication skills. Such programs and projects usually involve several school districts, many schools within the districts and other outside agencies as well as several academic and service units within the University which are involved in the delivery of the projects. Support for the projects is provided principally by the University but with important supplementary funding by major corporations and federal grants. Projects presently housed in the Center include the Bridge Program; the Access to Success Program; the Engelmann Institute; and The Junior Science, Engineering, and Humanities Symposium; and the Youth Employment and Career Development Program.

Child Development Center

The Child Development Center provides University students with observation, participation, research, and similar educational and clinical opportunities; it also offers quality daytime and evening child care programs for children of student, faculty, staff, and community families. Call 553-5658 for information.

Eldercare Center

The Eldercare Center, located at Mount Providence School, 8351 S. Florissant Road, is an adult day health care facility for frail elderly. Professional services include nursing, social work, recreational, and physical therapies. Practicum and research opportunities are available to students. The Center is open Monday through Friday from 7:15 a.m. to 5:30 p.m. The Mid-East Area Agency on Aging is a major cooperating agency. Call 524-0155 for further information.
Specialized Centers and Facilities for Research, Teaching, and Public Service

KWMU
KWMU, 90.7 FM, is the 100,000-watt public radio station of the University of Missouri-St. Louis and NPR/APR affiliate. The professionally staffed station broadcasts classical music, news, jazz, and other programs 24 hours a day. KWMU provides programming that is responsive to the educational, cultural, informational, and entertainment needs of the community. In training students who plan to pursue broadcast careers, KWMU augments the educational and training function of the University.

Mathematics and Science Education Center
The Mathematics and Science Education Center (MSEC) assists mathematics and science educators at the elementary and secondary levels. The MSEC is a division of the Network for Educational Development, the staff development arm of the Cooperating School Districts. The MSEC links public and private school educators with resource organizations and the corporate and university communities. This liaison fulfills primary goals established by the MSEC at its inception in 1986:

• to promote public and professional understanding and concern for mathematics and science education.
• to encourage collaborative activities that spur staff development and in turn excite children to learn science and mathematics.

Midwest Community Education Development Center
The Midwest Community Education Development Center, an office within the UM-St. Louis School of Education and the Division of Continuing Education-Extension, serves Missouri in the development of community education. The Center is located in the South Campus Complex and provides consultation, training programs, and materials to educational and human service agencies and to other groups and individual citizens concerned about their communities. The Center also cooperates with the School of Education in Master of Education and Doctor of Education programs with an emphasis in community education. Graduate courses in community and adult education are taught on a regular basis. For further information about graduate study, refer to the section in this Bulletin under Graduate Programs in Educational Administration, or call the Center at 553-5746.

Public Policy Research Centers
The Public Policy Research Centers are the focal point of the University of Missouri-St. Louis's activities in basic and applied policy research. The Centers are a partnership of three interdisciplinary research units affiliated in 1989-90 to coordinate and enhance the impact of public policy research on campus. The Centers offer professional services in applied policy analysis, survey research, and evaluation of important community issues. The Center for Metropolitan Studies; the James T. Bush, Sr., Center for Law, Social Change and Conflict Resolution; and Public Policy Extension/Survey and Applied Research make up the Public Policy Research Centers. Each center retains its unique mission while working in concert on major research projects that address the needs of the St. Louis region. Although not offering courses or degrees, the Centers serve as a policy laboratory for graduate and undergraduate students who participate in research projects. The Centers are made up of part-time fellows and full-time professional staff. The Centers disseminate knowledge through seminars, workshops, colloquia, public forums, and a variety of publications.

Center for Metropolitan Studies
The Center for Metropolitan Studies conducts research and provides community service to residents of the St. Louis area and the state of Missouri on issues of urban policy. The Center for Metropolitan Studies is involved in a number of applied research projects including a study of recruitment of students into the magnet school program for the Voluntary Interdistrict Coordinating Council; evaluating a St. Louis County pilot program to reduce welfare dependency; developing a regional economic model for St. Louis to help promote economic diversification and development; cosponsoring the Missouri Policy Choices project to improve the quality of information and analysis available to key state decision makers; and a study of the needs of St. Louis city children at risk. The Center for Metropolitan Studies has supported basic and applied research in the areas of urban economic development, government organization, ethnicity and neighborhoods urban policy-making, and aesthetics and public policy.

The James T. Bush, Sr., Center for Law, Social Change and Conflict Resolution
The James T. Bush, Sr., Center for Law, Social Change and Conflict Resolution was created to enhance the ability of St. Louis and the state of Missouri to promote and constructively manage social change. The Bush Center helps the St. Louis community in preparing itself for change through research and services provided to help understand and develop constructive methods of policy-making that affect a wide range of social issues including housing and homelessness, the changing nature of work, private/public collaboration, and interpersonal violence. The Center sponsors skill-building workshops and seminars, providing public officials, governmental agencies, civic organizations, corporations, and citizen groups with effective training in a wide range of practical skills useful to promoting and managing constructive social change. Research activities of the Center focus on the roles of law and conflict resolution, because these are the social devices that have proved both central and essential to the constructive management of change. The Center's name commemorates the social change ideals and leadership of James T. Bush, Sr., who, as president of the St. Louis Real Estate Brokers Association in 1948, played a key role in the case of Shelley v. Kraemer, the
landmark decision of the United States Supreme Court striking down state enforcement of private racial discrimination.

**Public Policy Extension/Survey and Applied Research**

Public Policy Extension/Survey and Applied Research links the Public Policy Research Centers to the University's Continuing Education/Extension programs and statewide network. It conducts public service activities and performs various services for organizations in the region and throughout the Midwest. A number of students are employed by the Centers to participate in these activities, and Public Policy Extension/Survey and Applied Research supervises internships in the public sector. Services include survey research, applied policy analysis, evaluation research, management consulting, credit and noncredit courses, colloquia, seminars, and other programs. Surveys are conducted to assist local governments and other public sector groups in determining citizen satisfaction with services and client needs. Most data are available for teaching and research purposes as well. Public Policy Extension/Survey and Applied Research also houses the University Extension Economic Development Specialist for the St. Louis metropolitan area.

The Public Policy Research Centers draw on the expertise of faculty and staff to build project research teams that assist nonprofit institutions, businesses, and governments. Reports, newsletter, publication list, and other information on the Centers can be obtained by writing to the Public Policy Research Centers, University of Missouri-St. Louis, 362 SSB, 8001 Natural Bridge Rd., St. Louis, MO 63121-4499, or by calling (314)553-5273.

**Teaching**

**Center for Academic Development**

The Center for Academic Development is an academic support program which focuses attention on the needs of UM-St. Louis students who seek success in pursuing higher education. The Center is comprehensive in nature and consists of the following programs:

**Supplemental Instruction:** Student leaders, attached to specific academic classes, conduct group review sessions at no cost. Course content and study skills are reviewed several times a week at scheduled sessions. Classes with supplemental instruction are identified in the schedule of classes.

**Writing Lab:** This lab gives free tutorial assistance in writing English prose. Students' writing needs are appraised, and individual and small group instruction in sentence clarity, organization, development, and conventions of usage is provided. Available materials include slide-tape programs, spelling and vocabulary tapes, and programmed texts. Instructors may arrange for lecture demonstrations in their classrooms. Graduate writing support groups are formed each semester. A Macintosh computer lab is available to students, and tutors will assist students in writing projects on the computers.

**Mathematics Lab:** This lab offers free individual assistance on a walk-in basis to students enrolled in any mathematics course from basic math through calculus or any course involving mathematical skills. In addition, the lab offers on-site use of videotaped lessons that accompany some mathematics courses, computer packages covering certain topics, and mathematics textbooks and worksheets on several basic topics. Students or prospective students who are preparing to take the Mathematics Placement Test may come to the lab for help and for review materials. A more intensive review is available periodically in the Mathematics Placement Test Review Sessions for which there is a fee. Dates for these reviews can be found in the Schedule of Classes.

**Support Program:** This unit provides supportive services which focus on the first two years of college. Participants are chosen on the basis of need, former academic preparation, achievement, and motivation. Services include counseling and financial aid. This unit also offers academic advisement for students in choosing courses and outlining schedules. Other areas of advisement include finance and social welfare.

**Tutorial Services:** Student tutors, certified by the appropriate academic departments, are available to give assistance in many disciplines; times and costs are arranged by student and tutor.

For more information, contact the Center for Academic Development office at 553-5194.
Specialized Centers and Facilities for Research, Teaching, and Public Service

UM-St. Louis/UM-Rolla Cooperative Engineering Center

The Engineering Center at the University of Missouri-St. Louis houses the UM-Rolla/UM-St. Louis Cooperative Engineering Program. This program includes the Engineering Graduate program formerly administered solely by UM-Rolla, and will shortly include an undergraduate program for nontraditional students in the St. Louis area. Both the graduate and undergraduate programs are conducted in the evening, making them suitable for students who are employed full-time. Graduate work leading to the Master of Science degree is available in computer science, engineering management, and engineering mechanics, as well as aerospace, civil, electrical, and mechanical engineering. The undergraduate program will initially include electrical and mechanical engineering.

The Center also 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 in-house training courses and engineering consultation services in the technical areas of competence of UMR faculty.

Video Instructional Program

The Video Instructional Program offers flexible, self-paced learning for students who are far from campus or whose schedules make it difficult to attend regular classes. Students may register for three sections each semester and take up to 20 weeks to complete a course.

Video lessons accompany each course. They are designed to visually clarify difficult concepts, as well as make the courses more interesting. Video lessons for various courses are available for viewing on cable.

Course Listing. A catalogue listing all Video Instructional Program courses and offering complete information on the program is available by calling 553-5370. New courses are currently being developed. The following courses from the UM-St. Louis curriculum are offered:

History 100, Topics in History: Science and Culture in the Western Tradition
Business Administration 392, Entrepreneurship/Small Business Management
Education 306, Graduate Institute, Microcomputers: Classroom Applications for Teachers
Education 308, Graduate Institute, Foundations of Adult Basic Education
Education 341, Teaching Science in the Elementary School
Nursing 220, Health Assessment
Philosophy 210, Significant Figures in Philosophy: From Socrates to Sartre
Education 340, Media in Education

St. Louis Area Cable Stations. Concom I, II, and III, Continental Cable, American, and United Video in St. Louis County; STL Cable and City Cable in the city will cablecast courses over the Higher Education Channel (HEC). Courses are also cablecast in St. Charles, St. Peters, O’Fallon, and Jefferson County. For complete information, call 553-5370.

Textbooks and Study Materials. Textbooks and study materials accompany the video lessons for each course and are available through the bookstore.
**Continuing Education-Extension**

An important mission of the University of Missouri is to extend its expertise to the community, thereby enhancing lives and making a contribution to community and state development. At UM-St. Louis, Continuing Education-Extension serves to carry out that mission.

Through Continuing Education-Extension, the University's Schools and Colleges administer a wide variety of credit courses, noncredit programs and problem-oriented research for the benefit of the people of the greater St. Louis metropolitan area and beyond. Programs are offered both on and off campus. Research, generally of an applied, urban-related nature, is designed to solve specific problems of client groups.

**Arts and Sciences**

Continuing Education-Extension in the College of Arts and Sciences includes credit courses and noncredit programs in all of the college's departmental disciplines including courses and workshops in the arts, microcomputers, music appreciation, writing, languages, and history. Interdisciplinary teaching and research programs deal with such fields as gerontology, the humanities, and economic education. Faculty members and students are engaged in studies of community organization, neighborhood revitalization, labor organizations, taxation, and municipal and governmental services.

Continuing Education-Extension in the College of Arts and Sciences also sponsors the Center for Economic Education which provides research and programs in economic education to local teachers and organizations, and the Archaeological Survey which carries out archaeological research and on-site studies of regional construction projects. The Microcomputer Program, which develops and teaches applied computer courses and awards the Chancellor's Certificate in Computers, is also a unit of Arts and Sciences-Extension.

The Advanced Credit Program is administered by Arts and Sciences-Extension. This program provides an enrichment experience for secondary students who are university bound by providing freshman-level courses for credit in selected high schools.

A Bachelor of Science degree majoring in sociology is offered by Arts and Sciences at the Missouri Eastern Correctional Center.

A wide variety of credit courses is offered at several locations throughout the St. Louis metropolitan area to enable students to obtain academic credit at locations convenient to where they live and work.

The Annual St. Louis Storytelling Festival is also sponsored by Continuing Education-Extension in the College of Arts and Sciences.

**Eldercare Center**

The Eldercare Center is an adult day health-care center serving frail elderly who are in need of health care supervision, socialization, and/or rehabilitation during the daytime. The center, which is sponsored by the University of Missouri-St. Louis in cooperation with Mid-East Area Agency on Aging and the Sisters of Divine Providence, serves as a clinical and research site for faculty and students.

**Center for Science and Technology**

The UM-St. Louis Center for Science and Technology has been established to provide an important link between UM-St. Louis and the community it serves. Its purpose is to facilitate collaborative research in the St. Louis area and to provide targeted, concentrated information to area employers and to the general public regarding scientific and technological advancements.

Training and research opportunities will be provided by the Center to area industries, while informational lectures and workshops on current issues will be offered to the interested public.

**Business Administration**

Continuing Education programs in business are offered in several areas, including organizational and management development, and individual professional growth. Programs range from a 40-hour certificate program for first-line supervisors to an intensive review course for the CPA examination. Also included is a 45-hour certificate program for personnel administrators. Special seminars and conferences are offered regularly on specific topics of current interest. In addition, the School co-sponsors programs in the area of microcomputing.

The Business Development Center, which administers an EDA Grant for small business development, provides financial and consultation services to owners and managers of small businesses in the St. Louis metropolitan area.

**Education**

The overall aim of the School of Education's extension activities is to provide services which bring about better teaching and learning situations in educational settings. The programs and courses help students complete Missouri teacher certification requirements, as well as provide work toward advanced degrees or professional growth. The school also offers instructional research and evaluation services to educational personnel in other parts of Missouri and the Midwest in addition to the St. Louis metropolitan area.

The Midwest Community Education Development Center is sponsored by Continuing Education-Extension and the School of Education and serves in the educational development of communities throughout Missouri. The Center assists various groups, agencies, and individuals concerning their communities, providing training programs and materials. (See Specialized Centers and Facilities for Research, Teaching, and Public Service in this Bulletin.)
Continuing Education-Extension

Nursing
The School of Nursing at UM-St. Louis offers a variety of Continuing Education programs for nurses. Also, a series of noncredit nursing management workshops are available to area nurses. Credit courses which apply to the B.S.N. degree are being offered at area hospitals and schools around St. Louis.

Optometry
The University of Missouri-St. Louis offers Continuing Education-Extension programs for optometrists through the UM-St. Louis School of Optometry. Diagnostic and therapeutic classes are held on a frequent basis with doctors coming from a variety of states. Each spring, the Optometric Institute draws several hundred optometrists, optometric assistants, and technicians for a two-day conference covering the latest optometric techniques.

UM-St. Louis Lindbergh
Continuing Education-Extension offers selected graduate and undergraduate credit courses at UM-St. Louis Lindbergh, a satellite center located at Lindbergh High School in south St. Louis County. In addition to UM-St. Louis Lindbergh, Continuing Education-Extension offered credit courses at 44 other metropolitan sites last year.

In-house Training
Specialized research and technical assistance as well as in-house training programs are available to local businesses and organizations. With the help of expert faculty and staff consultants, the University of Missouri-St. Louis is equipped to deliver specialized training on an in-house basis.

Video Instructional Program
A variety of credit courses are offered by UM-St. Louis on several cable stations in cooperation with the Higher Education Channel. For more information, call 553-5370.

J.C. Penney Building
This large conference facility at UM-St. Louis houses a 440-seat auditorium as well as six large conference rooms designed to provide an excellent academic environment and maximum convenience for course participants. A complete conference staff provides administrative support for seminars and conferences, as well as coordination for hundreds of hosted programs each year.

For more information on programs and services offered by Continuing Education-Extension, call 553-5961.
DEGREE PROGRAMS

Undergraduate
Graduate
Professional
College of Arts and Sciences
School of Business Administration
School of Education
Evening College
School of Nursing
School of Optometry
Pierre Laclede Honors College
Degree Programs

Undergraduate Studies

Undergraduate degree programs are offered by the College of Arts and Sciences, School of Business Administration, School of Education, Evening College, and School of Nursing. Information on these programs can be found on the pages indicated:

Bachelor of Arts (B.A.)
- anthropology, p. 71
- art history, p. 72
- biology, p. 76
- chemistry, p. 84
- communication, p. 89
- economics, p. 96
- English, p. 99
- French, p. 111
- German, p. 111

Bachelor of Science in Administration of Justice (B.S.A.J.), p. 92

Bachelor of Science in Business Administration (B.S.B.A.), p. 157

Bachelor of Science in Education (B.S.Ed.), p. 167
- early childhood education, p. 181
- elementary education, p. 183
- physical education, p. 185
- secondary education, p. 175
- special education, p. 170

Bachelor of Science in Nursing (B.S.N.), p. 201

Bachelor of Science in Public Administration (B.S.P.A.), p. 124

Bachelor of Social Work (B.S.W.), p. 133

Graduate Studies

Administered by the Graduate School, graduate study at the University of Missouri-St. Louis embraces study for degrees and certificates beyond the bachelor's degree in all divisions except the School of Optometry which administers the professional program leading to the Doctor of Optometry degree.

From its beginnings, graduate education at UM-St. Louis has been guided by four broad purposes: development of excellence in scholarship; encouragement of creative productivity in research; fostering of the highest standards in professional competence and commitment; and development of skill in the communication of knowledge. Responsive to the unique and comprehensive demands of the St. Louis area, the University has moved rapidly in the development of specialized facilities, a distinguished and creative faculty, and appropriate graduate programs to achieve these objectives.

In most cases, master's degree programs can be completed through part-time study.

Information on graduate degrees offered at UM-St. Louis can be found on the following pages:

Master of Accounting (MAcc), p. 160

Master of Arts (M.A.)
- administration of justice, p. 93
- economics, p. 96
- English, p. 101
- history, p. 103
- mathematics, p. 108
- political science, p. 126
- psychology, p. 131
- sociology, p. 138

Master of Business Administration (MBA), p. 159

Master of Education (M.Ed.), p. 168
- counseling, p. 171
- educational administration, p. 179
- elementary education, p. 183
- secondary education, p. 177
- special education, p. 172

Master of Public Policy Administration (MPPA), p. 195

Master of Science (M.S.)
- biology, p. 80
- chemistry, p. 86
- gerontology, p. 197
- management information systems, p. 160
- nursing (cooperative with UM-Kansas City), p. 202
- physics, p. 122
- physiological optics, p. 212


Doctor of Optometry (O.D.), p. 208

Doctor of Philosophy (Ph.D.)
- biology, p. 80
- chemistry, p. 87
- physics (cooperative with UM-Rolla), p. 122
- physiological optics, p. 212
- political science, p. 127
- psychology, p. 132
General Information

The College of Arts and Sciences consists of some 275 full-time faculty members in the following departments, each offering work in specific undergraduate degree programs: anthropology; art; biology; chemistry; communication; criminology and criminal justice; economics; English; history; mathematics and computer science; modern foreign languages and literatures; music; philosophy; physics and astronomy; political science; psychology; social work; and sociology.

Graduate study degree programs, administered through the Graduate School, are also offered in the following departments of the College of Arts and Sciences: biology, chemistry, criminology and criminal justice, economics, English, history, mathematics and computer science, physics and astronomy, political science, psychology, and sociology. An interdisciplinary master’s degree in public policy administration is offered in cooperation with the School of Business Administration.

Specific degree requirements for both undergraduate and graduate degree programs are described in the departmental sections which follow this general information on the College.

Requirements of the College of Arts and Sciences for Undergraduate Study

In addition to the University General Education requirements, all majors in the College of Arts and Sciences must meet the following requirements:

I Non-Euro-American Study

To expose students to a culture radically different from their own, the College requires that students complete a three-hour course focusing primarily upon aspects of a culture and not upon the interactions of that culture with Euro-American cultures. This requirement may be met by one of the following courses:

- Anthropology 71, Native American Literature
- Anthropology 121, Modern Aztec and Maya
- Anthropology 122, Indians of North America
- Anthropology 123, Cultures of Asia
- Anthropology 124, Cultures of Africa
- Anthropology 125, World Cultures
- Anthropology 131, Archaeology of Missouri
- Anthropology 132, Archaeology of North America
- Anthropology 133, World Prehistory
- Anthropology 134, The Inca, Aztec, and Maya
- Anthropology 141, Sexual Behavior
- Art 10, Introduction to Asian Art
- Art 15, Art of Africa, Oceania, and the Americas
- Art 107, The Arts of China
- Art 108, The Arts of Japan
- Art 116, North American Indian Art
- Art 117, African Art
- Art 119, Pre-Columbian Art of Mexico and Central America
- Art 208, Topics in Asian Art
- Art 215, Topics in Tribal Arts
- English 71, Native American Literature

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

1) the requirements of their chosen baccalaureate degree (i.e., B.A., B.S., B.M., etc.) in accordance with the policies of the College of Arts and Sciences, explained below.

2) the requirements of the department for their selected major or interdisciplinary program.

College of Arts and Sciences Academic Policies

Grade Requirements

To graduate, all majors in the College must satisfy either of the following grade point options:

1) Earn 120 graded hours with a C grade or better which constitutes a complete degree program and does not include a satisfactory/unsatisfactory basis.

2) Earn a cumulative grade point average of 2.0 or better for all hours attempted with a minimum of 120 hours.

This College of Arts and Sciences policy supersedes the statement under General Education Requirements.

Residency Requirements

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.

A transfer student must complete 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.
General Information

Specific Baccalaureate Degree Requirements

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.

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. Guidelines for students according to prior foreign language training are as follows:
1) Effective Fall Semester 1987, students entering with no high school language units must enroll in Language 1 or may enroll in the 115 series (see section 5).
2) Students with the degree of proficiency equivalent to 13 hours of college-level work may obtain exemption and/or credit 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 Modern Foreign Languages.
3) Native speakers may meet the foreign language requirement by presenting proof of competence. 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) Students in German and Russian may substitute Scientific Language 100 for Language 101. Students in French and Spanish may substitute Language 106 (Commercial) for Language 101.
5) Language 115 a, b, c (Intensive) will satisfy the foreign language requirement.
6) Students may not repeat, for either credit or quality points, 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, 62, etc.) toward graduation, including credit transferred. Moreover, courses in studio art and applied music (private lessons or performing organizations) do not fulfill general education requirements in the humanities.

Bachelor of Science (B.S.) The College offers the B.S. degree in applied mathematics, biology, chemistry, computer science, economics, physics (with emphasis in either applied physics or astrophysics), and sociology. The requirements are generally the same as for the B.A. degree with the following exceptions:
1) More credit hours in the major discipline may be counted toward satisfying the 120 hours needed for graduation. See departmental degree requirements for information.
2) Not all departments require a foreign language proficiency. See departmental degree requirements for information.

Bachelor of Science in Administration of Justice (B.S.A.J.) The College also offers a Bachelor of Science in Administration of Justice degree program with four emphasis areas: American Policing System, Planning and the Administration of Justice, Etiology and Prevention; and Treatment of Offenders. No foreign language proficiency is required.

Bachelor of Science in Public Administration (B.S.P.A.) The B.S.P.A. degree program is administered through the political science department and offers an interdisciplinary approach requiring 12 hours in a particular specialization along with a core curriculum in political science.

Bachelor of Social Work (B.S.W.) The Department of Social Work offers the B.S.W. degree, stressing the scientific and applied aspects of social work. No foreign language proficiency is required.

Bachelor of Music (B.M.) The requirements are the same as for the B.A. degree with the addition of music education courses for those music majors seeking state teacher certification. Although a foreign language proficiency is not required, foreign-language study is required for applied voice students.

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 either in the departmental or interdisciplinary sections of this Bulletin.
General Information

Special Programs in the College of Arts and Sciences

Certificate Programs
Certificate programs are offered in Biochemistry, Biotechnology, Gerontology, Photographic Studies, Studies in Religions, Writing, Women's Studies, and East Asian, European, Latin American, and International Studies. For details, see Certificate Programs.

Departmental Honors
Majors in the following departments may pursue Departmental Honors: biology, chemistry, economics, English, history, modern foreign languages, music, and political science.

College Honors
Students who have received Sophomore Honors and completed the requirements for Departmental Honors are eligible for College Honors. In addition, on an annual basis, the College sends letters of commendation to part-time undergraduate students who have earned a 3.2 grade point average or above in at least nine but not more than 17 graded hours taken during the fall and winter semesters combined.

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

College of Arts and Sciences Extension
Credit courses are offered at off-campus locations through the continuing education branch of the College of Arts and Sciences. These courses are open to UM-St. Louis students and qualify for regular academic credit toward degrees in the College. In addition, noncredit courses are offered in a range of disciplines within the College.
Anthropology

Faculty
Van A. Reidhead, Chairperson, Associate Professor
Ph.D., Indiana University
Margo Hurwicz, Assistant Professor
Ph.D., University of California-Los Angeles
Joseph M. Nixon, Director Archaeology Survey, Associate Research Professor
Ph.D., University of Illinois-Carbondale
Paul Rutledge, Associate Professor
Ph.D., University of Oklahoma
Pauline Strong, Assistant Professor
Ph.D., University of Chicago
Barrik Van Winkle, Visiting Assistant Professor
A.B.D., University of Chicago
Jeffrey P. Bonner, Adjunct Assistant Professor, Director of Research, St. Louis Science Center
Ph.D., Columbia University
Mridula Durbin, Research Associate
Ph.D., SUNY-Buffalo
Vicki Holtzapple, Adjunct Assistant Professor
Ph.D., Washington University
Hernan Torres, Research Associate
Ph.D., Washington University
L.L.D., University of the Cauca
Patti Wright, Adjunct Instructor
A.B.D., Washington University
Colleen Hamilton, Research Assistant
M.A., University of Missouri-St. Louis

*members of Graduate Faculty

General Information

Anthropology is the study of humans through all time and space. The discipline considers our struggle to adapt to and survive in the natural and social environment and to improve out lot in the face of perpetual change. Anthropologists teach how cultures evolve and the role of individuals and groups in the invention and perpetuation of cultural beliefs, behaviors, symbols, and systems. Anthropologists have accumulated in-depth knowledge of thousands of cultures and use this to understand better our own cultural beliefs, actions, and institutions as well as those of people from other cultures. As the science of cultures, anthropology brings a powerful perspective to bear in understanding the emerging global order. Cross-cultural and evolutionary insights and knowledge help us envision how we can incorporate vast human diversity into a unified world order of peace, prosperity, justice, and opportunity.

The Department of Anthropology strives to teach and encourage the following:

1) the concepts and skills required for responsible individual participation in the evolution of culture in the family, the work place, the local community, the nation, and the globe;
2) mastery of the academic skills of theoretical conceptualization, and critical evaluation, applied to cultural contexts;
3) individual and community skills for material and emotional survival in the high technology age;
4) development of ability to conduct independent investigations of social and cultural conditions, to draw conclusions, and to present findings and recommendations in a professional manner;
5) the use of academic and personal skills to make oneself valuable in diverse employment settings;
6) growth, in the individual, of a rooted sense of place and meaning in relation to self, society, and humanity.

The study of anthropology, in fact, provides a liberal education that is applicable to any work or life context.

Degrees and Areas of Concentration

A bachelor of arts in anthropology is offered with a focus on applied and theoretical skills. The anthropology faculty is actively involved in social, cultural, and archaeological research in the St. Louis area and elsewhere. These activities allow students to practice newly-acquired skills and do independent research at the undergraduate level. The projects UM-St. Louis students have worked on include studies of Soulard Farmers Market, a local day-care center, the cultural survival and economic self-development of the Native American Indian people of metropolitan St. Louis and the Navajo Reservation, the adjustment of foreign students to campus life at UM-St. Louis, and the role of advertising in creating culture. They have worked on numerous archaeological digs of prehistoric and historic Indian and pioneer cultures, and have played an active role in research aimed at preserving archaeological sites in the face of industrial development.

Papers written by students from these studies have been presented at professional meetings, published in national and local journals, and presented to government agencies for use in development and planning.

The Anthropology department supports the Archaeological Survey, a contract research office serving local, state, and national agencies and businesses. Students can be trained in this research through internships with the Archaeology Survey and through the Summer Archaeological Field School. Sites for summer field school excavations in recent years have been in the St. Louis metropolitan area.

Minor in Anthropology

The minor in anthropology is designed to offer students a flexible introduction to the fundamentals of the discipline to complement their major field of study. A minor is advisable for anyone planning a career with intercultural or international dimensions, where knowledge of cultural systems, environments, values, and symbols is useful.

Undergraduate Studies

General Education Requirements

Majors must satisfy the University and College general education requirements. Any foreign language may be used to meet the language requirement for the B.A. degree. Six hours of credit will be accepted for courses taken on a satisfactory/unsatisfactory (S/U) basis from any departmental elective or major requirement. (Seven hours will be accepted if Anthropology 5, a four-hour course, is taken on this basis.)
Anthropology

Degree Requirements

Bachelor of Arts in Anthropology  Candidates must complete the following core requirements:

- Anthropology 5, Human Origins
- Anthropology 11, People, Culture, and Society
- Anthropology 206, Introduction to Models in the Social Sciences, (Same as Political Science 205, Sociology 205, and Interdisciplinary 205) or Anthropology 202, Politics, Symbolism and Culture, or a 200-level course as authorized by the department.
- Anthropology 301, Ideas and Explanations in Anthropology, Intensive
- Anthropology 302, Strategies in Social Organization, Intensive
- Anthropology 308, Practicum in Research Methods, Intensive
- Sociology 220, Quantitative Techniques in Sociology or Psychology 201, Psychological Statistics, or Business Administration 131, Elementary Statistics, or Mathematics 31, Elementary Statistical Methods

In addition, students must take at least 12, but no more than 25, hours of electives in anthropology. No more than three credit hours may be from courses below the 100 level.

After fulfilling the general education and specific major degree requirements, students are to take the remaining 57 hours required to complete the B.A. degree from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, interdisciplinary, and other areas or courses not listed, upon approval by the chair of anthropology.

Minor in Anthropology  A minor in anthropology consists of six courses or 19 hours. All minor degree candidates must take:

- Anthropology 5, Human Origins
- Anthropology 11, People, Culture, and Society

Candidates for the minor must also select at least one course from the following three anthropology courses:

- 101/301, Ideas and Explanations in Anthropology
- 102/302, Strategies in Social Organization
- 108/308, Practicum in Research Methods

Candidates must also select nine hours or three courses in anthropology to complete the course/credit hour requirement.

Grades of C or better should be attained in all courses used to satisfy these requirements. One course taken on satisfactory/unsatisfactory (S/U) basis may be applied toward the minor.

Career Outlook

The B.A. in anthropology equips the student for employment in almost any area in which a bachelor's degree is sufficient and a sensitivity to cultural values is important. Graduates of UM-St. Louis' program have found employment in archaeology research programs, urban development, planning programs, health-care delivery, human services, many areas of business, government service, teaching, computer systems design, university administration, and many other areas.

Anthropology is an excellent preparation for graduate training in administration, the helping professions, development work, law school, environmental studies, business, and advanced education in many other areas depending upon individual interests. Many UM-St. Louis anthropology graduates have gone on to advanced training in master's and doctoral programs in respected universities around the country. The employment forecast for people with M.A. and Ph.D. degrees in anthropology is excellent.
Faculty
Tom Patton, Associate Professor*, Chairperson
M.F.A., University of New Mexico, Albuquerque
Kenneth Anderson, Associate Professor*
M.F.A., Southern Illinois University, Edwardsville
Janet C. Berlo, Professor*
Ph.D., Yale University
Ruth L. Bohan, Associate Professor*
Ph.D., University of Maryland
Yael Even, Associate Professor*
Ph.D., Columbia University
Paul Corby Finney, Associate Professor* (on leave)
Ph.D., Harvard University
Thomas Kochheiser, Lecturer; Director, Gallery 210
M.A., Oberlin College
W. Jackson Rushing III, Assistant Professor
Ph.D., University of Texas
Juliana Y. Yuan, Lecturer/Slide Curator
M.A., University of Michigan
Marilyn Heldman, Adjunct Assistant Professor
Ph.D., Washington University

*members of Graduate Faculty

The art department faculty has distinguished itself through its research and publications, its exhibitions and awards, and its acquisitions of honors and grants. Faculty members in art history have received grants from NEH, the American Philosophical Society, NEA, the Missouri Arts Council, the Getty Foundation, and the Mellon Foundation. Department research in art history has been published in distinguished journals and presented to academic meetings and organizations. All studio faculty exhibit nationally in group- and solo-juried and invited exhibitions. Their work has been supported by show awards, NEA, Ford Foundation, and University Research grants.

General Information

Degrees and Areas of Concentration The department offers course work leading toward the bachelor of arts in art history. Some courses survey traditional areas of study in the history of art, others concentrate on important artists, artistic theories, or movements. Several special-interest courses are available in non-Euro-American areas and on other topics. The diverse academic interests of the art history faculty ensure a varied selection of courses within a traditional art historical framework. The department has a slide collection of over 70,000 works and maintains facilities for students to study slides. A slide curator is available for special assistance to staff and students.

Studio offerings are also available in the department. Currently, course work is offered as enrichment to students majoring in art history and other fields. Students who wish to enroll in a substantial number of studio courses should consult with a faculty adviser. The faculty wishes to increase the visual skills and the insights of students who have varied experiences and backgrounds. Drawing, painting, print-making, graphic design, and photography labs may be available. Individual study is offered under special circumstances.

Gallery 210 In addition to academic and studio courses, the department maintains an exhibition space, Gallery 210. The gallery produces a variety of public exhibits during the academic year under faculty supervision or with the assistance of distinguished guest directors. Through the gallery, the department offers aesthetic displays not otherwise available in the area and makes them available to the campus and metropolitan communities.

Internships A limited number of internships and work opportunities are also sponsored by the department.

Undergraduate Studies

General Education Requirements Majors in art history must meet the College and University general education requirements. A foreign language is required. Art history courses required for the degree may not be taken on a satisfactory/unsatisfactory (S/U) basis.

Departmental courses in art history fulfill the humanities general education requirement; courses meeting the non-Euro-American study requirement are Art 8, Survey of Asian Art; Art 15, Art of Africa, Oceania, and the Americas; Art 107, Chinese Art; Art 108, Japanese Art; Art 118, North American Indian Art; Art 117, African Art; Art 119, Pre-Columbian Art of Mexico and Central America; Art 238, Topics in Asian Art; and Art 215, Topics in Tribal Arts.

Students may take any number of studio courses and apply them as elective credit toward a degree in other fields. They do not fulfill the humanities requirement.

Degree Requirements

Bachelor of Arts in Art History Candidates for this degree study the history of the visual arts from prehistory to the present. A minimum of 36, but no more than 45, hours in art history must be taken. The following courses are required:

Art 5, Introduction to Art
Art 195, Sophomore/Junior Seminar: The Methods of Art History
Art 203, Media and Technique in Art History
Art 395, Senior Art History Seminar

In addition to these specific requirements, majors must:

Take at least three lower division period courses chosen from among three of the following four categories:

111, Art and Archaeology of the Ancient World
112, Greek Art and Archaeology
113, Roman Art and Archaeology
114, Early Christian Art
125, Medieval Art
Take four 200-level courses. Two of these courses must be chosen from two of these four categories:

Ancient and Medieval
212, Topics in Ancient Art
225, Topics in Medieval Art

Renaissance and Baroque
235, Topics in Renaissance Art
245, Topics in Baroque Art

Modern and American
255, Topics in Modern European Art
258, Topics in American Art
263, Photography since 1945
291, Topics in Contemporary Art

Non-European
208, Topics in Asian Art
215, Topics in Tribal Art

Two of these 200-level courses should cross-cut periods and regions, with choices to be made from the following courses:

206, Advanced Issues and Ideas in Art History
274, Philosophy of Art
275, The Art of the Print
276, Women and the Visual Arts
294, Art Criticism
295, The Artist and the City
296, The Nude in Art
297, Landscape Perspectives in Art

Take one course in studio art (photography, drawing, painting, design), although as many as nine hours may be applied toward the required hours for the B.A. in Art History. Advisers will help students select studio art electives.

Take electives in art history to complete the 36-45 hours of course work for the major. These can be chosen from the courses previously listed, as well as:

65, Photography and Society
105, Issues and Ideas in Art History

265, Topics in Photographic Studies
290/390, Special Study
283, Art Gallery Management

French or German is recommended for the foreign language requirement.

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 adviser for details.

After fulfilling the general education and specific major degree requirements, students are to take the remaining 48 hours required to complete the Art History degree from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary.

Minors

Minor in Art History A minor in art history requires the completion of a program of courses, at least 15 hours and normally not more than 18, with a grade point average of 2.0 or better. This program can consist of an historical survey of the basic periods in world Art History. Alternatively, it can be a group of courses which are coherent in theme, methodology, or art-historical scope, which has been specified in advance with an adviser from the art department, and which has the approval of the department chairperson.

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:

Art 40, Basic Drawing I
Art 140, Basic Drawing II
Art 50, Basic Design I

and two consecutive courses (six 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.
Art

Pre-Professional Graduation

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

Students in art history have found career opportunities in museums, galleries, sales and auction houses, libraries as art conservators, on art journal and editorial staffs, and even as travel guides. In addition, the undergraduate degree in the field prepares one for further study in art history or related areas and for teaching. 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.

Students of studio art begin a preparation for careers in fine and applied arts. Some foundation courses in the field are available. It is usually possible to transfer credit for these courses to other colleges and universities which offer a B.A. or B.F.A. degree.
Biology

Faculty

Lon A. Wilkens, Chairperson; Professor
Ph.D., Florida State University

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

Arnold B. Grobman, Professor Emeritus
Ph.D., University of Rochester

Martin Sage, Professor
Ph.D., University of California, Berkeley

Douglas Wartok, Professor
Ph.D., Johns Hopkins University

Albert Derby, Associate Professor
Ph.D., City University of New York

Harvey P. Friedman, Associate Professor
Ph.D., University of Kansas

Lawrence D. Friedman, Associate Professor
Ph.D., University of Wisconsin

Donald E. Grogan, Associate Professor
Ph.D., University of Missouri-Columbia

Zuleymla T. Halpin, Associate Professor
Ph.D., University of California-Berkeley

James H. Hunt, Associate Professor
Ph.D., University of California-Berkeley

Victoria Sork, Associate Professor
Ph.D., Case Western Reserve University

Shirley T. Bissen, Assistant Professor
Ph.D., University of California-Berkeley

Jerry L. Bryant, Jr., Assistant Professor
Ph.D., Massachusetts Institute of Technology

Sandra S. Gottfried, Assistant Professor
Ph.D., University of Connecticut

Bette A. Loiselle, Assistant Professor
Ph.D., University of Wisconsin

Amy F. MacRae, Assistant Professor
Ph.D., University of Georgia

Robert J. Marquis, Assistant Professor
Ph.D., University of Iowa

Stephen S. Mulkey, Assistant Professor
Ph.D., University of Pennsylvania

William J. Reser, Assistant Professor
Ph.D., Duke University

Carl L. Thurman, Visiting Assistant Professor
Ph.D., University of Minnesota

Edwin W. Joern, Lecturer
M.S., University of Missouri-Columbia

Ann D. Wilke, Lecturer, Director of Undergraduate Laboratories
M.S., University of Illinois

Thomas B. Croot, Adjunct Professor
Ph.D., University of Kansas

Marshall R. Crosby, Adjunct Professor
Ph.D., Duke University

Enrique Forero, Adjunct Professor
Ph.D., City University of New York

Kenneth D. Leary, Adjunct Professor
Ph.D., State University of New York

Peter H. Raven, Adjunct Professor
Ph.D., University of California, Los Angeles

William Tai, Adjunct Professor
Ph.D., University of Utah

William G. D'Arcy, Adjunct Associate Professor
Ph.D., Washington University

Paul E. Berry, Adjunct Associate Professor
Ph.D., Washington University

Alwyn H. Gentry, Adjunct Associate Professor
Ph.D., Washington University

Peter Goldblatt, Adjunct Associate Professor
Ph.D., University of Cape Town

Ihsan A. Al-Shehbaz, Adjunct Assistant Professor
Ph.D., University of Virginia

Cheryl S. Asa, Adjunct Assistant Professor
Ph.D., University of Michigan

John G. Blake, Adjunct Assistant Professor
Ph.D., University of Illinois

Judith E. Bramble, Adjunct Assistant Professor
Ph.D., University of North Carolina

Stanton H. Braude, Adjunct Assistant Professor
Ph.D., University of Michigan

Larry E. Mandell, Adjunct Assistant Professor
Ph.D., Duke University

Peter C. Hoch, Adjunct Assistant Professor
Ph.D., Washington University

Nancy R. Morin, Adjunct Assistant Professor
Ph.D., University of California-Berkeley

John J. Pipoly III, Adjunct Assistant Professor
Ph.D., City University of New York

Peter M. Richardson, Adjunct Assistant Professor
Ph.D., University of London

Hendrik H. van der Werff, Adjunct Assistant Professor
Ph.D., State University of Utrecht, The Netherlands

James B. Whitfield, Adjunct Assistant Professor
Ph.D., University of California-Berkeley

*member of Graduate Faculty

General Information

Degrees and Areas of Concentration The Department of Biology provides academic programs leading to the B.A. or B.S. in biology. In cooperation with the School of Education, the biology department offers the B.S. in secondary education with a major in biology and the B.A. or B.S. in biology with teacher certification; in cooperation with the Evening College, the department offers courses in medical technology. The Department of Biology also offers graduate work leading to the Master of Science and the Doctor of Philosophy degrees in Biology. The graduate program includes a cooperative program with the Missouri Botanical Garden for students who concentrate in Evolutionary Biology with emphasis areas of Plant Systematics and Environmental Studies.

Biology faculty members are engaged in teaching and research in areas ranging from molecular biology to population studies. Majors have the chance to take courses which help them develop both theoretical and experimental backgrounds necessary for further work in some of the most rapidly expanding fields of biological science or to pursue in-depth studies in specific areas through advanced courses, seminars, and individualized research programs.

Departmental Honors Candidates for the B.A. or B.S. degree are eligible for Departmental Honors if they: 1) have a minimum of a 3.2 overall GPA and a minimum 3.2 average in
Biology courses used to complete the major; 2) complete a minimum of 2 credit hours of Biology 390, Research; and 3) complete an honors thesis based on Biology 390 research work. The academic record and thesis will be evaluated by the Honors Committee and those students who qualify will be recommended for honors.

Minor in Biology Students majoring in another discipline may earn a minor in biology by completing a prescribed course of study. Unique programs can be developed to coordinate with special career objectives. Students should consult their adviser and the chairperson of the biology department.

Graduate Studies The Department of Biology offers graduate work leading to the M.S. and Ph.D. degrees in Biology. Graduate students may work toward an M.S. degree in three broad areas of biology: (a) Cellular, Molecular, and Developmental Biology, (b) Physiology and Organismal Biology, and (c) Ecology, Evolution, and Systematics.

Graduate students in the Ph.D. program will receive training in several areas of Evolutionary Biology. Students in the M.S. and Ph.D. programs also have the opportunity to do their graduate work in collaboration with scientists at the Missouri Botanical Garden through a cooperative graduate program.

Objectives of the Master's Degree program are to provide the research-oriented training necessary for students to enter doctoral programs in biology; to develop professional biologists qualified to function in responsible technical positions; and to train secondary school and junior college biology teachers.

The objectives of the Ph.D. program are to train biologists for academic and professional positions in research and teaching. Ph.D. students in the areas of Plant Systematics and Environmental Studies have the opportunity for specialized training in tropical biology and conservation biology. This training is intended to prepare students for research careers and for leadership and scientific positions involving the conservation and management of tropical ecosystems.

Graduate Assistantships Stipends for teaching and research assistantships are awarded on a competitive basis to qualified graduate students in Master’s or Ph.D. programs. Out-of-state educational fees are waived for graduate assistants. Applications for assistantships must be sent to the Director of Graduate Studies in the Department of Biology and be received by February 1.

Facilities Department facilities include research and teaching laboratories, environmental chambers, greenhouses, animal care rooms, and a large array of supporting modern research instrumentation. Also available are wildlife facilities at Weldon Springs Experimental Farm and Tyson Tract, both within 30 to 45 minutes of the campus.

Cooperative Programs The department also participates in a cooperative consortium program in biology with Washington University, St. Louis University, Southern Illinois University-Edwardsville, and the Missouri Botanical Garden.

Undergraduate Studies

General Education Requirements Students must satisfy the University and College general education requirements. Biology courses may be used to meet the science and mathematics requirement of the University.

The foreign language requirement of the College of Arts and Sciences fulfills the departmental requirements for the B.A. degree. There is no foreign language requirement for the B.S. degree.

Satisfactory/Unsatisfactory Option Up to 24 credit hours may be taken on a satisfactory/unsatisfactory basis. Excluded from this option are required courses in chemistry, physics, mathematics, or psychology, and biology courses other than Biology 389, Seminar, and Biology 390, Research.

Degree Requirements

Bachelor of Arts in Biology The B.A. degree provides maximum flexibility for biology majors to pursue an undergraduate liberal arts course of study that can lead to professional careers in medicine, allied health, public and environmental health, law, and graduate studies in the life sciences. All biology majors must take at least 37 credit hours in biology including the following biology foundation courses: (19 hours)

Foundation Courses
10, Introductory Biology
210, Cell Structure and Function
224, Genetics
246, Introduction to Evolution
276, Biological Chemistry
389, Seminar or 285, Methods of Teaching Biology in Secondary Schools (for those seeking teacher certification)

Breadth Requirements Flexibility is available in choosing the remaining biology courses, but some restrictions are placed on both the lectures and laboratories that can be taken to make up the 37-hour requirement. At least one lecture course must be taken in each of the following areas:

Area A
213, Vertebrate Physiology
235, Development
264, General Plant Physiology and Development

Area B
220, General Ecology
280, Animal Behavior
342, Population Biology

Area C
250, Biology of Plants
260, Vertebrate Biology
264, Invertebrate Biology
Biology

Laboratory Course Requirements In addition to the lecture course requirements, three laboratory courses of two credit hours each will be required. To ensure diversity in laboratory experience, the three laboratories must be distributed so that at least one laboratory is taken in any two of the following four groups.

Group 1
212, Histology and Microtechniques
218, Microbiology Lab
278, Biological Chemistry Lab
319, Immunology Lab
336, Virology Lab
378, Topics in Biological Chemistry Lab

Group 2
216, Vertebrate Physiology Lab
226, Genetics Lab
237, Development Lab
315, Comparative and Environmental Physiology Lab
322, Neurophysiology Lab
332, Advanced Development Lab
352, Plant Physiology Lab
372, General and Comparative Endocrinology Lab

Group 3
222, General Ecology Lab
282, Animal Behavior Lab
344, Population Biology Lab
382, Ecological and Evolutionary Behavior Laboratory
383, Experimental Bio-Systematics

Group 4
262, Biology of Plants Lab
262, Vertebrate Biology Lab
266, Invertebrate Biology Lab
307, Nonvascular Plant Lab
308, Vascular Plant Lab
366, Adaptive Radiation of the Vertebrates Lab

The remaining three hours required to complete the 37-hour requirement are elective hours and can consist of any biology course that is numbered 200 or above. Off-campus transfer students must satisfactorily complete at least 12 credit hours of UM-St. Louis biology course work (including two laboratories) at the 200 level or above before receiving a B.A. degree from the College of Arts and Sciences with a major in biology.

Related Area Requirements
The following courses in chemistry are required:
11, Introductory Chemistry I (or 1, General Chemistry I plus 9, General Chemistry II)
12, Introductory Chemistry II
261, Structural Organic Chemistry.

and one of the following chemistry courses:
122, Quantitative Analysis
262, Organic Reactions
263, Techniques of Organic Chemistry

Also required:
Mathematics 30, College Algebra and Mathematics 35, Trigonometry
Mathematics 31, Elementary Statistical Methods or Mathematics 132, Applied Statistics I or Education 320, Educational Statistics or Psychology 201, Psychological Statistics or Biology 389, Biometry
Mathematics 101, Survey Calculus or Mathematics 80, Analytical Geometry and Calculus
Physics 11, Basic Physics
Physics 12, Basic Physics

Bachelor of Science in Biology The B.S. degree in biology is designed to prepare students for basic technical positions and graduate studies in the life sciences. Candidates for the degree have the same foundation courses, breadth, and General Education requirements as those seeking the Bachelor of Arts degree. In addition certain minimal requirements in depth of study, laboratory experience, research, data processing, communication skills, and background in associated science areas are required.

There is no foreign language requirement for the B.S. degree. However, students should realize that the literature for biological studies is in many different languages and the ability to extract information from this literature is an important skill.

In order to fulfill the requirements for the B.S. degree a minimum of 44 hours but not more than 50 hours must be completed in appropriate biology course work. A minimum of 23 hours in biology must be completed at UM-St. Louis. Candidates must have a cumulative grade point average of 2.0 or better in biology courses.

Foundation Courses
All candidates for the B.S. degree must successfully complete the same basic courses as those for the B.A. degree.

Breadth Requirements To ensure a minimum of breadth, candidates for the B.S. degree must take at least one course in each of the following areas:

Area A
213, Vertebrate Physiology
216, Microbiology
235, Development
254, General Plant Physiology and Development

Area B
220, Ecology
280, Animal Behavior
342, Population Biology
395, Field Biology
396, Marine Biology

Area C
250, Biology of Plants
260, Vertebrate Biology
264, Invertebrate Biology
Biology

Depth Requirement  Students must take at least two 300-level lecture courses. Selection should reflect the career interest of the student and at least one of the courses should be in a topic area that could lead to an independent research project (Biology 390).

Laboratory Experience  A minimum of five laboratory courses must be taken to satisfy the Bachelor of Science requirements. It is strongly suggested that at least one laboratory experience be at the 300 level. Introductory and General Biology laboratories do not count toward this requirement.

Basic Skills Requirement  There are certain skills outside the biology subject matter that are needed to function adequately in a research environment. The Basic Skills Requirement is designed to provide the student with a background in data processing and communication and knowledge in associated science areas.

1) Data Processing  Students must show a basic understanding of mechanisms for handling data by successfully completing one course in each of the following sets:

Set A. Statistics
Mathematics 31, Elementary Statistical Methods or
Mathematics 122, Applied Statistics I or Education 320, Educational Statistics or Psychology 201, Psychological Statistics or Biology 388, Biometry

Set B. Computer Science
Mathematics 22, Introduction to Computing or Mathematics 122, Computers and Programming or Business Administration 103, Computers and Information Systems

2) Communication Skills  Courses in formal speaking and technical writing are required to develop the minimal communication skills needed to transmit scientific information. The following two courses satisfy this requirement:

Communication
Communication 40, Introduction to Public Speaking

Writing
English 213, Technical Writing

3) Associated Science Area  The following courses or their equivalents must be successfully completed in science areas related to biology:

Physics I, Basic Physics
Physics 12, Basic Physics
Chemistry 11, Introductory Chemistry I or Chemistry 1, General Chemistry I plus Chemistry 9, General Chemistry II
Chemistry 12, Introductory Chemistry II
Chemistry 261, Structural Organic Chemistry
Chemistry 262, Organic Reactions
Chemistry 263, Techniques of Organic Chemistry or Chemistry 122, Quantitative Analysis
Philosophy 280, Philosophy of Science or Philosophy 156, Medical Ethics

Mathematics 30, College Algebra and Mathematics 35, Trigonometry
Mathematics 101, Survey Calculus or Mathematics 80, Analytical Geometry and Calculus I

Research Requirement  All students acquiring a Bachelor of Science degree are strongly encouraged to complete a minimum of two credit hours of undergraduate research, Biology 390. The privilege of doing undergraduate research provides students with a firsthand opportunity to experience the research process under the supervision of a faculty member or off-campus scientist. The project normally includes a library search of pertinent literature, laboratory or field experience, and a summary paper.

Biology majors may take any of the following 100-level biology courses:

101, Human Biology
115, Human Heredity and Evolution
116, General Microbiology
120, Environmental Biology
150, Plants and Civilization

Those courses do not count toward the credit hours required for a major, but they will be included in the credit-hour maximum that a student can take in the major.

Bachelor of Science in Education with Emphasis in Biology  The B.S.Ed. is a professional degree designed for those individuals who wish to pursue a teaching career in biology in the secondary schools. The biology requirements are the same as for the B.A. degree with the exception that Biology 285, Methods of Teaching Biology in Secondary Schools, and Biology 286, Laboratory in Teaching Life Science are substituted for Biology 389, Seminar. Students must also fulfill the requirements for the B.S.Ed. degree as prescribed by the School of Education.

Bachelor of Arts in Biology with Teacher Certification  Biology majors interested in teaching biology in secondary schools may obtain teacher certification in cooperation with the School of Education by fulfilling the B.A. or B.S. requirements in biology, with the exception of Biology 389, Seminar and, in addition, completing the following courses (36 hours):

Psychology 2, General Psychology
Psychology 271, Adolescent Psychology
ED FND 111, The School in Contemporary Society
ED PSY 312, The Psychology of Teaching and Learning
Communication 40, Introduction to Public Speaking
SEC ED 213, Techniques of Secondary School Teaching
SPC ED 313, The Psychology and Education of Exceptional Individuals
SEC ED 386, Problems of Teaching Reading in Secondary Schools
SEC ED 290, Secondary School Student Teaching
Biology 285, Methods of Teaching Biology in Secondary Schools
Biology 286, Laboratory in Teaching the Life Sciences

Contact the Department of Biology and the School of Education for special advising regarding teacher certification.
Minor in Biology

Students may minor in biology by fulfilling the requirements, consisting of a minimum of 17 credit hours, of which at least 9 hours of the biology course credits for the minor must be taken in residence at UM-St. Louis.

Requirements are:
1) Biology 10, Introductory Biology
2) At least 9 credit hours should be at the 200 level or above. These may include either lecture or laboratory courses.
3) One of the following courses:
   - Biology 115, Human Heredity and Evolution
   - Biology 246, Introduction to Evolution or Biology 224, Genetics

All students must consult with an adviser to plan an appropriate course of study. This program must be approved by the chairperson of the Department of Biology.

Under certain circumstances, a student may deviate from the prescribed course of study and substitute as his or her program a group of courses that exhibits a coherent area of specialization to coordinate with a unique career objective. Such a candidate must receive prior approval by the biology department in order to pursue this program.

Candidates must have a cumulative grade point average of 2.0 or better in the minor and none of the courses may be taken on a satisfactory/unsatisfactory basis.

Biochemistry Certificate

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

- Biology 10, Introductory Biology
- Biology 210, Cell Structure and Function
- Biology 224, Genetics
- Chemistry 11, Introductory Chemistry I
- Chemistry 12, Introductory Chemistry II
- Chemistry 222, Quantitative Analysis
- Chemistry 261, Structural Organic Chemistry
- Chemistry 262, Organic Reactions
- Chemistry 263, Techniques of Organic Chemistry

and one of the following biology courses:
- 216, Microbiology
- 235, Development
- 310, Cell Physiology
- 326, Molecular Biology

Biotechnology Certificate

The University offers a certificate program for science majors who are interested in careers in biotechnology. A student may receive the Certificate in Biotechnology by completing a total of 18 hours taken from the following requirements:

Students must take:
- Biology 326, Molecular Biology
- Biology 328, Methods in Biotechnology
- Biology 338, Microbial Genetics
- Chemistry 230, Physical Chemistry for the Life Sciences

The remaining hours can be taken from the following:
- Biology 310, Cell Physiology
- Biology 334, Virology
- Biology 376, Topics in Biological Chemistry
- Biology 378, Topics in Biological Chemistry Laboratory
- Biology 417, Advanced Immunology
- Biology 452, Topics in Molecular Biology/Genetics

Preprofessional Graduation

The Department of Biology sponsors a 3+4 Program for the UM-St. Louis School of Optometry.

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

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

Bachelor of General Studies with Emphasis in Medical Technology
Courses in Medical Technology are offered through the biology department for students who are pursuing a career in that field. Students develop a program of studies through the Bachelor of General Studies degree. Refer to the Evening College section of this Bulletin concerning the degree.

The following courses are offered in this area through the biology department:
312 Hematology and Coagulation
318 Transfusion Services-Immunohematology
337 Clinical Microbiology and Serology
377 Clinical Biochemistry
391 Special Topics

Graduate Studies

Master of Science in Biology The Department of Biology offers two ways of achieving the Master of Science degree. The first is a traditional apprenticeship in research leading to a written thesis. The second is a nonthesis option suitable for those who may already have extensive research experience or for educators who seek to upgrade their academic skills but do not require research experience. Starting with a common core, either option may be developed into a final degree program in one of the following areas: animal behavior, biochemistry, biotechnology development, ecology, evolution, genetics, molecular and cellular biology, microbiology, plant and animal physiology, plant systematics, population biology, and tropical biology.

Admission Requirements
Applicants to the M.S. program must submit completed application and personal data forms, three letters of recommendation from undergraduate faculty, and transcripts of all previous work. Submission of GRE scores is highly recommended and will be helpful for positive consideration of admittance. Admission as a regular graduate student requires graduation from an accredited college with an overall grade point average of 3.0 and minimum grade point average of 3.0 in the applicant's undergraduate major.

All foreign applicants, except those from countries where English is the primary language, must take the TOEFL (Test of English as a Foreign Language), Ordinarily, a score of 550 or better is required.

In addition to the Graduate School admission requirements, applicants should have completed undergraduate biology courses in genetics, biochemistry, and one course in each of the following areas: cellular-molecular, organismal, and population biology-ecology. Courses in organic chemistry, college physics, and calculus are also required, and a course in statistics is highly recommended. Students admitted to the degree program who have not met all the prerequisites may be asked to pass appropriate courses before receiving the Master's degree. Courses taken to make up deficiencies will not count for graduate credit toward the degree.

Degree Requirements

General Requirements All students are required to take Biology 401, Current Topics in Biology, and at least four but not more than eight hours of Biology 489, Graduate Seminar. Biology 401 should be taken during the first year of graduate study.

Thesis Option Including the general requirements, students must take at least 30 graduate credit hours of which at least half must be at the 400 level. No more than 10 hours of Biology 490, Graduate Research, may be counted toward the degree. Students must complete a laboratory or field-oriented research project and defend it in an oral examination before the thesis committee.

Nonthesis Option Including the general requirements, students must take at least 36 credit hours of which at least half must be at the 400 level. An approved computer course is required together with either a laboratory course (300 or 400 level) or two credit hours of Biology 490, Graduate Research. Only 2-5 credit hours of Biology 490 will be counted toward 36-credit-hour total. Research may be conducted in the laboratory, field, or library.

Advisers The Director of Graduate Studies in Biology will advise new master's students. Students are responsible for finding permanent advisers. This should be done as soon as students decide upon their area of specialization. Students, with their advisers, then recommend an appropriate advisory committee of three or more faculty members for approval by the graduate committee. This group then plans a suitable program of research and course work and submits it to the graduate dean for approval. Advisory committees are also responsible for approving the Master's thesis.

Ph.D. in Biology The doctoral program emphasizes empirical and theoretical approaches to biological research. Students are required to integrate basic skills in biology with focal studies in an emphasis area. The program is designed to provide research experience and training appropriate for advanced positions in academic research and teaching, government and public agencies, and in industry.

Admission Requirements
Applicants to the Ph.D. program must submit formal application to the Graduate Admissions Office. In addition, the applicant should arrange to have sent: three letters of recommendation from faculty members at previously attended colleges or universities, Graduate Record Examination (GRE) scores (Verbal, Quantitative, and Analytical), and transcripts of all post-secondary academic work. Admission to the Ph.D. program normally requires a minimum grade point average overall and in biology courses of 3.0 (where A = 4.0).
Biology

Applicants from countries where English is not a primary language are required to take the TOEFL examination (Test of English as a Foreign Language). Scores must be submitted before admission can be decided. Ordinarily, a score of 550 or better is required. Applicants should have a bachelor’s or M.S. degree from an accredited United States college or university or evidence of equivalent training at an institution outside the United States.

Applicants should have the appropriate background for graduate work in biology including courses in genetics, biochemistry, and at least one course each in the areas of cellular and molecular biology, organismal biology, and population biology/ecology. Courses in organic chemistry, college physics, and calculus are required. A course in statistics is recommended. Students admitted to the Ph.D. program who have not met all the prerequisites will be required to make up deficiencies before admission to candidacy.

Degree Requirements

In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree in Biology include sixty (60) credit hours of course work which must be taken beyond the bachelor's degree. At least 30 of the 60 hours must be taken at the 400 level. With the explicit consent of the advisory committee, students may take for graduate credit up to 3 credit hours of 200 level courses in allied departments. Courses at the 200 level and below in Biology are not available for graduate credit. At least 31 of the 60 hours must be taken while in residency at the University of Missouri-St. Louis. Graduate credit for course work transferred from another program is subject to approval by the graduate committee and by the Graduate School.

Specific courses shall be completed as follows:

a) Biology 401 (1 hour), Current Topics in Biology
b) Biology 403 (1 hour), Biology Colloquium. A required course during the first two semesters of the program.
c) Biology 489 (2 hours), Graduate Seminar. Four semesters required (total 8 hours).
d) Biology 388 (3 hours), Biometry, or equivalent course in statistics.
e) 12 hours of formal course work as identified by the emphasis area at the time a student is admitted to the Ph.D. program.

The maximum number of credit hours that may be applied toward the 60-hour requirement for the following courses is:

- Biology 403, 405, and 407: 8 hours total in combination
- Biology 489: 10 hours
- Biology 490: 20 hours

Foreign Language Students shall demonstrate a reading knowledge of a foreign language pertinent to the student’s field of research. There are two ways in which a student may demonstrate a reading knowledge: by satisfactory completion of a designated course within the previous 5 years, or by passing an examination.

Teaching At least one semester of supervised teaching is required of all doctoral students.

Qualifying Examination and Dissertation Students must earn a passing score on a written qualifying examination based on fundamental principles presented in formal courses and in papers of special importance in the field. The exam will be given in January of each year, prior to the beginning of the winter semester. Students beginning studies in the fall semester would normally take the qualifying examination prior to their fourth semester of full-time study. Questions for the exam will be submitted by three faculty members in the emphasis area. Students who receive a conditional pass will be tested orally after additional study. Students who fail may be allowed to retake the qualifying examination the following year. Students who fail twice will not be admitted to candidacy.

A dissertation embodying the results of original research shall be submitted to and approved by the Department of Biology and the Graduate School. The general regulations of the Graduate School concerning the preparation of the dissertation must be met. Dissertations are to be presented in a style appropriate for one or more publications in scientific journals.

Program Structure During the week of registration prior to the beginning of classes, students newly admitted to the doctoral program shall meet with at least 3 members of the faculty representing the area of emphasis of the student. These meetings are designed to introduce each student to the faculty in his/her area of study and to provide early orientation in the department and degree program. In addition, this informal process will help to identify particular strengths and/or possible deficiencies in the background of the student and therefore to assist in the organization of a program of studies. It is expected that students will complete the major portion of their formal course requirements in the lecture/laboratory format during the first 2-3 semesters of their graduate studies.

As soon as practical a student should choose a faculty adviser, select members of an advisory committee, and present to the committee for approval, a prospectus of the experimental work which has been designed in consultation with the student's adviser. Students also will be expected at this time to submit a research proposal to outside agencies seeking support for their dissertation research, although successful completion of the study program does not depend on receipt of financial support.

A student is admitted to candidacy for the degree when the research prospectus has been approved by the advisory committee and the Director of Graduate Studies in Biology. The student must defend the dissertation in an oral presentation open to the public followed by an oral examination by his/her advisory committee. A preliminary draft of the dissertation must be made available to committee members two months prior to the scheduled date of the defense; a revised, penultimate draft should be in the committee's hands two weeks before the defense.
Career Outlook

The biology degree programs, at the baccalaureate and Master's degree levels, are designed to prepare the student for further training. The undergraduate degree is designed to prepare the student for professional training in areas such as medicine, teaching, dentistry, veterinary medicine, optometry, and related areas, or for further graduate training in research. The Master of Science program is an extension of the undergraduate program and has as its goals three main objectives: 1) provide research-oriented training and education; 2) provide qualified graduates for doctoral programs; and 3) provide secondary school and junior college biology teachers with training necessary to maintain and improve their teaching effectiveness.

The Ph.D. program prepares students as research professionals in fields such as biological conservation, ecology, and biomedical science. Employment opportunities are available in college or university research and teaching, in government and public institutions such as museums and botanical gardens, and in industry.
Chemistry

Faculty

Lawrence Barton, Chairperson; Professor
Ph.D., University of Liverpool

James S. Chickos, Professor
Ph.D., Cornell University

Joyce Y. Corey, Professor
Ph.D., University of Wisconsin

M. Thomas Jones, Professor; Deputy to the Chancellor
Ph.D., Washington University

David W. Larsen, Professor
Ph.D., Northwestern University

Robert W. Murray, Curators' Professor
Ph.D., Yale University

James P. Riehl, Professor
Ph.D., Purdue University

Gordon K. Anderson, Associate Professor; Director of Graduate Studies
Ph.D., University of Glasgow

Charles W. Armbuster, Associate Professor
Ph.D., Washington University

Joseph Dence, Adjunct Associate Professor
Ph.D., California Institute of Technology

David L. Garin, Associate Professor, Interim Director, Center for Science and Technology
Ph.D., Iowa State University

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

Wesley R. Harris, Associate Professor
Ph.D., Texas A. and M. University

Jane A. Miller, Associate Professor
Ph.D., Tulane University

Robert G. Orth, Adjunct Associate Professor
Ph.D., Case Western Reserve University

William P. Ridley, Adjunct Associate Professor
Ph.D., University of Minnesota

William J. Welsh, Associate Professor
Ph.D., University of Pennsylvania

Rudolph E.K. Winter, Associate Professor; Director of Master's Degree Program
Ph.D., The Johns Hopkins University

Lee Brammer, Assistant Professor
Ph.D., University of Bristol

Daniel T. Connolly, Assistant Professor
Ph.D., The Johns Hopkins University

William L. Neumann, Adjunct Assistant Professor
Ph.D., University of Missouri-St. Louis

James J. O'Brien, Assistant Professor
Ph.D., Australian National University

Nigam P. Rath, Research Assistant Professor
Ph.D., Oklahoma State University

Wang Kan Lin, Research Associate
Ph.D., Pennsylvania State University

Robert Cabaniss, Glassblower

Joseph Kramer, Electronics Technician I

David Herod, Electronics Technician

Norman Windsor, Senior Electronics Technician

Anne Mondry, Research Associate
Ph.D., University of Liverpool

Dileep Srivastava, Research Associate
Ph.D., University of Chicago

Kimberly J. Kilgore, Research Associate
Ph.D., Pennsylvania State University

Wei Kong, Research Associate
Ph.D., University of Notre Dame

Leonard O. Rosik
Ph.D., Washington University

Magh Singh, Research Associate
Ph.D., University of Jodhpur

Tony Weida, Research Associate
Ph.D., Fudan University

Jack Uang, Research Associate
Ph.D., University of Missouri-Rolla

Rudolph E.K. Winter, Associate Professor; Director of Master's Degree Program
Ph.D., The Ohio State University

Ashraful Islam, Research Associate
Ph.D., Southern Illinois University-Carbondale

*members of Graduate Faculty

Degrees and Areas of Concentration

The chemistry department offers courses leading to the B.A. in chemistry, the B.S. in chemistry, in cooperation with the School of Education, the B.S. in education with emphasis in chemistry and the B.A. in chemistry with teacher certification; and, in cooperation with the School of Business Administration, the B.A. in chemistry with a business option.

The chemistry department is accredited by the American Chemical Society. Students completing the B.S. degree in chemistry are certified to the American Chemical Society and are well prepared for graduate study in chemistry or a career in the chemical industry.

The chemistry department also offers work leading to the M.S. degree in chemistry, with or without a thesis. The Ph.D. degree in chemistry is offered in the emphasis areas: inorganic, organic, and physical chemistry.

In addition to a balanced program of basic graduate courses, the department offers special topics courses and seminars in current research areas. Research is being carried on in inorganic, organic, and physical chemistry areas by postdoctoral associates, faculty members, and graduate and undergraduate students.

The department provides students with opportunities for strong interaction with faculty representing the various areas. Students and faculty working in one area consult freely with
Chemistry

members in other areas. In addition, there are joint research projects involving faculty and students from two or more areas. The department currently includes twenty full-time and nine part-time faculty members.

Fellowships and Scholarships

The Brunngraber Undergraduate Research Fellowship is given annually to a chemistry major and is based on GPA, statement of research interests, and performance in completed course work. It carries a stipend of $1,200.

Aid to Education Scholarships are given to approximately 10 junior or senior chemistry majors annually. The awardees are selected by the faculty on the basis of merit, and the scholarships consist of a stipend for books, educational materials, and Student Affiliate membership dues to the American Chemical Society.

The Mallinkrodt Fellowship is given annually to an outstanding chemistry graduate student who has completed the teaching and course work component of the program. It consists of a stipend of no less than $9,000 for the academic year.

Alumni Graduate Research Fellowships are available for summer study for selected chemistry graduate students. The selections are based on merit and the stipend is 20 percent of the academic year GTA stipend.

A series of undergraduate awards are given each year to the outstanding students. The Chemical Rubber Company Freshman Chemistry Award is given to the outstanding student in freshman chemistry, the American Chemical Society Division of Analytical Chemistry Award is given to the outstanding student in analytical chemistry, the American Chemical Society-St. Louis Section, Outstanding Junior Chemistry Major Award is given to the outstanding junior chemistry major, and the outstanding senior receives the Alan F. Berndt Award and the American Institute of Chemists Award.

Departmental Honors The chemistry department will award Departmental Honors to those B.A. and B.S. degree candidates in chemistry with an overall grade point average of 3.2. They must also successfully complete Chemistry 290, Chemical Research, and have presented an acceptable thesis.

Minor in Chemistry A minor in chemistry is available to students majoring in related areas.

Undergraduate Studies

General Education Requirements Students must satisfy the University and College General Education requirements. Courses in chemistry may be used to meet the University's science and mathematics area requirement. The College's foreign language requirement fulfills the departmental requirements for B.A. candidates. It is recommended that candidates for the B.S. degree fulfill the language requirement in German or French, but any language which meets the College requirement for the B.A. degree is acceptable.

Satisfactory/Unsatisfactory Restrictions Chemistry majors may not take required chemistry, mathematics, or physics courses on a satisfactory/unsatisfactory basis. Nor may B.S. degree candidates take the six elective hours in science on this option.

Degree Requirements

Bachelor of Arts in Chemistry This degree is intended primarily for preprofessional students in the health sciences and related areas, as well as prelaw students interested in patent law. Candidates must complete the following chemistry courses:

11, Introductory Chemistry I
12, Introductory Chemistry II
122, Quantitative Analysis
202, Introduction to Chemical Literature
231, Physical Chemistry I
232, Physical Chemistry II
233, Laboratory in Physical Chemistry I
261, Structural Organic Chemistry
262, Organic Reactions
263, Techniques of Organic Chemistry
289, Seminar (2 credit hours)

In addition, candidates must complete one laboratory course chosen from Chemistry 234, 264, and 324.

No more than 45 hours in chemistry may be applied toward the degree. Each chemistry major must present a seminar and pass a comprehensive examination during the senior year.

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

Bachelor of Science in Chemistry This is the first professional degree in chemistry. It may be taken as a terminal degree by students intending to become professional chemists or for preparation for graduate work in chemistry or
Chemistry

Candidates must complete the requirements for the B.A. degree in chemistry. In addition, the following chemistry courses are required:

234, Laboratory in Physical Chemistry II
264, Synthetic and Analytical Methods of Organic Chemistry
324, Instrumental Analysis
341, Inorganic Chemistry I
343, Inorganic Reactions

Students must also take six elective hours of advanced work in science at the 200 level or above. It is preferred that these hours be in chemistry; however, three of these hours may be taken in biology, computer science, mathematics, or physics.

Students are encouraged to take Chemistry 290, Chemical Research, to fulfill at least a portion of the advanced elective requirement.

At least 47, but no more than 50, hours of chemistry courses may be applied toward the degree. Each candidate must present a seminar and pass a comprehensive examination during the senior year.

Related Area Requirements

Bachelor of Arts and Bachelor of Science in Chemistry
Candidates for both degrees must also complete:
Mathematics 80, Analytic Geometry and Calculus I
Mathematics 174, Analytic Geometry and Calculus II
Mathematics 180, Analytic Geometry and Calculus III
*Physics 111, Physics: Mechanics and Heat
*Physics 112, Physics: Electricity, Magnetism, and Optics

*Bachelor of Science in Secondary Education with an Emphasis in Chemistry
In addition to the general requirements for the B.S. degree in secondary education, students must complete the 34 required hours for the B.A. degree in chemistry with the following exceptions: Chemistry 280, Methods of Teaching Chemistry in Secondary Schools, is required instead of Chemistry 202, Introduction to Chemical Literature, and Chemistry 289, Seminar. In addition, a computer science course (Mathematics 125 recommended) is required.

Bachelor of Arts in Chemistry with Teacher Certification
Students must complete the B.A. in chemistry requirements, as well as the requirements for teacher certification. (See the School of Education section of this Bulletin.)

Bachelor of Arts in Chemistry for Students with an Interest in Business
The following courses are suggested for students seeking careers in chemical sales, market research, and so forth. In addition to the B.A. in chemistry requirements, the following core courses are suggested:
Economics 51, Principles of Microeconomics
Business Administration 131, Elementary Statistics
Business Administration 140, Fundamentals of Financial Accounting

Students may then choose to complete one of the following three sets of courses:
1) Marketing Management
Business Administration 206, Basic Marketing
Business Administration 275, Marketing Intelligence
Business Administration 303, Industrial Marketing

2) Financial Management
Business Administration 204, Financial Management
Business Administration 334, Investments
Business Administration 350, Financial Policies

3) Accounting
Business Administration 146, Managerial Accounting
Business Administration 340, Intermediate Accounting
Business Administration 346, Cost Accounting

Requirements for the Minor

Students may complete a minor in chemistry as described below:

The three required courses are:
Chemistry 11, Introductory Chemistry I
Chemistry 12, Introductory Chemistry II
Chemistry 261, Structural Organic Chemistry

Electives
At least one course is required from each of the following two groupings:
Lecture Courses
Chemistry 231, Physical Chemistry I
Chemistry 262, Organic Reactions
Chemistry 371, Biochemistry

Laboratory Courses
Chemistry 122, Quantitative Analysis
Chemistry 263, Techniques of Organic Chemistry

Courses which are prerequisites to subsequent courses in the minor may not be taken on a satisfactory/unsatisfactory basis. A GPA of at least 2.0 is required for the courses presented for the minor.

Biochemistry Certificate

The University offers a certificate program for science majors who are interested in careers in biochemistry. The Biochemistry Certificate is an interdisciplinary specialization which may be earned by completing the core requirements and either a chemistry track or a biology track. All students complete the following core requirements:
Biology 10, Introductory Biology
Biology 210, Cell Structure and Function
Biology 224, Genetics
Chemistry 11, Introductory Chemistry I
Chemistry 12, Introductory Chemistry II
Chemistry 122, Quantitative Analysis
Chemistry 261, Structural Organic Chemistry
Chemistry 262, Organic Reactions
Chemistry 263, Techniques of Organic Chemistry
Chemistry

and one of the following biology courses:

- 216, Microbiology
- 235, Development
- 310, Cell Physiology
- 326, Molecular Biology

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

- Biology 376, Advanced Biological Chemistry
- Biology 378, Advanced Biological Chemistry Laboratory
- Biology 389, Senior Seminar
- Chemistry 230, Physical Chemistry for the Life Sciences

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

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

Graduate Studies

Admission Requirements

Individuals with at least the equivalent of the B.A. degree in chemistry may be admitted to the Graduate School as candidates for the M.S. degree or as applicants for the Ph.D. degree in chemistry. Students with bachelor’s degrees in fields other than chemistry may be admitted to pursue graduate chemistry studies under the following conditions: they must make up background deficiencies, usually by taking undergraduate course work, and will not be considered applicants for the Ph.D. degree until such deficiencies have been removed. M.S. candidates must remove deficiencies within two years, and Ph.D. candidates must complete all remedial work during the first calendar year of enrollment.

The ultimate choice of whether students may enroll in the M.S. or Ph.D. degree programs resides with the chemistry faculty. Decisions are based on performance on the placement examinations and in course work at UM-St. Louis, as well as considerations of students' backgrounds.

The department admissions committee, which makes admission recommendations to the chairperson, usually considers applicants’ grade point averages and normally requires above-average performance in all areas of chemistry (general, analytical, organic, physical, and inorganic) as well as physics and mathematics or other evidence of high aptitude for graduate work in chemistry. Applicants’ GRE scores, letters of recommendation, and academic programs are also considered.

Financial Support

Teaching assistantships are available to qualified applicants for the academic year, and a limited number are also available during the summer. Research assistantships and fellowships are available for advanced students. For further information, contact the Graduate Admission Committee, Department of Chemistry.

Preliminary Advisement

Incoming students are given comprehensive placement examinations, and, on the basis of the examination scores and student needs and interests, the departmental Director of Graduate Studies prescribes a tentative plan of study in consultation with students. Students may be required to repeat undergraduate course work for no credit. Students must take chemistry courses for graduate credit at the 300 and 400 level, including one each in inorganic, organic and physical chemistry, and courses outside the discipline as recommended by the department. (Chemistry 341, Inorganic Chemistry I, may not be used to satisfy the core requirement in inorganic chemistry.)

Master's Degree Requirements

Master of Science in Chemistry

Candidates for the M.S. degree in chemistry must take the placement examinations and, if necessary, repeat undergraduate courses for no credit. The director of graduate studies will advise students of their programs before registration.

Students selected for the M.S. program and others enrolling by personal choice are usually required to complete the M.S. degree before their admission to the Ph.D. degree program can be considered.

A minimum of 30 hours is required, including three hours in Chemistry 489, Chemistry Colloquium. No more than three hours in Chemistry 489 may be applied toward the program. Students are not required to take the cumulative examinations or foreign language study.

Master of Science in Chemistry with Thesis

Students selecting this option must be enrolled full-time in the day division for at least two consecutive semesters. During this time, students are expected to enroll in Chemistry 490, Graduate Research in Chemistry, and work on their theses.

A maximum of 12 hours of Chemistry 490 may be applied toward the required 30 hours. At least nine hours must be at the 400 level, excluding Chemistry 490. A maximum of nine hours in 200-level or above courses outside the department may be accepted if students receive prior approval of their advisers and the department.

Students are expected to follow all other general requirements of the Graduate School regarding master's degree and thesis requirements.
Chemistry

Master of Science without Thesis  Unlike the thesis option, students need not be enrolled full-time. Of the required 30 hours, 15 credits must be at the 400 level, a maximum of six credits of Chemistry 490, Graduate Research in Chemistry, may be included in place of 300-level courses. A maximum of 12 hours taken in 200-level or above courses outside the department may be accepted with prior approval of the graduate studies director.

Doctoral Degree Requirements

In addition to the Ph.D. requirements set forth by the Graduate School, students seeking the Ph.D. in chemistry must take a series of cumulative examinations given nine times a year. Students must pass three of the examinations by the end of the third year and a total of eight examinations before completing the program. At least six of these examinations should be in the student’s specialization area. Students are encouraged to begin the examination sequence during the first year of graduate study, but must start no later than the second year in the Ph.D. program. The examinations are usually given the second Saturday of each month, September through May. The mechanism for designing and deciding on passing and failing grades for each examination resides with faculty members in each specialization area.

Seminar Requirement  Students must present a seminar in their third year and during each subsequent year. One of the seminars is for the purpose of describing dissertation research. Students must enroll in Chemistry 489, Chemistry Colloquium, each semester they are in residence.

Advancement to Precandidacy  Students will be advanced to precandidate status after completing 20 hours of graduate work, including research hours, passing three cumulative examinations, maintaining good standing, and selecting their research advisers.

Advancement to Candidacy  In addition to general Graduate School requirements for advancement to candidacy, students must complete the following:

1) Sixty hours, of which 21 should be in nondissertation work. The 21 hours may not include:
   Chemistry 324, Instrumental Analysis
   Chemistry 341, Inorganic Chemistry I
   Chemistry 343, Inorganic Reactions
   Chemistry 360, Teaching of College Chemistry
   Chemistry 419, Advanced Reading in Chemistry
   Chemistry 448, Inorganic Problem Seminar
   Chemistry 468, Organic Problem Seminar
   Chemistry 489, Chemistry Colloquium
   but should include one from each area: organic, inorganic, and physical chemistry.

2) Pass eight cumulative examinations.
3) Demonstrate satisfactory proficiency in the library use of French and German scientific chemical literature.
4) Present at least one seminar to the department on the dissertation research.
5) Participate in the undergraduate academic program as laboratory assistant for at least one semester.
6) Be in good standing.

Dissertation

Six copies of the dissertation must be submitted upon completion of the graduate research problem.

Probation and Dismissal

Students are dismissed from the program if they fail to pass at least three cumulative examinations before the end of the second year as applicants for the Ph.D. or otherwise fail to meet the standards set forth by the Graduate School.

Career Outlook

The B.S. degree in chemistry is the usual foundation for graduate study in chemistry, while any bachelor's degree in chemistry provides students with professional competence to enter the chemical industry. The St. Louis Metropolitan Area is a major center for industrial chemistry, and the demand for graduates consistently exceeds the supply.

A major in chemistry provides students excellent preprofessional training in the health sciences. A double major in chemistry and biology is often chosen by premedical and predental students and those interested in graduate work in biochemistry and biology. A minor in chemistry provides the minimum qualifications and training for a position as laboratory technician in industry, hospital laboratories, etc.
Communication

Faculty
Thomas McPhail, Chairperson, Professor*
Ph.D., Purdue University
Gary Burns, Associate Professor*
Ph.D., Northwestern University
James Fey, Associate Professor*
M.F.A., Tulane University
Elizabeth Kizer, Associate Professor*
Ph.D., Purdue University
Michael Murray, Associate Professor*
Ph.D., University of Missouri-Columbia
Donald Shields, Associate Professor*
Ph.D., University of Minnesota
Delores McGee Wanguri, Associate Professor
Ph.D., University of Texas at Austin
Rita Caspo-Sweet, Assistant Professor
Ed.D., Harvard
Patricia Holmes, Assistant Professor*
Ph.D., University of Missouri-Columbia
Larry Potter, Adjunct Assistant Professor
Ph.D., Southern Illinois-Carbondale
Larry Grisvard, Lecturer
Ph.D., The Ohio State University
Scott Jensen, Lecturer, Co-Director of Forensics Activities
M.A., Central Missouri State University
Clark McMillion, Lecturer
M.A., State University College of New York at Brockport
Sid Savan, Lecturer
B.S., Washington University
Larry Williams, Lecturer
M.A., Webster University
*members of Graduate Faculty

Each member of the faculty of the Department of Communication represents a requisite balance between practitioner and scholar and teacher. The department’s curricula and activities demand a faculty with practical expertise in such disciplines as communication, radio/television/film, and public policy. Each faculty member has demonstrated repeatedly an excellence as a practitioner through varied endeavors in workshops and lectures as well as communication, radio/television/film, and video programs and productions. Concomitantly, the faculty acknowledges the need for scholarly research as a contribution to the continued growth of academic study, publishing the results of their scholarly pursuits in a wide spectrum of scholarly journals and presenting papers at regional, national, and international professional conferences. Additionally, faculty members contribute to the University’s mission through active public service and a commitment to high standards of academic achievement. Annual student evaluations rate the department’s teaching as excellent.

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 or mass communication) or tailor a specific concentration (through the general communication option) to meet the student’s individual needs and interests. An emphasis in communication or mass communication is recommended for students with clear career goals in one of these areas. The general communication option 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 arts administration, and marketing communication. The faculty encourages all students to meet early and often with their advisor to select a meaningful group of courses for a coherent career-oriented academic program.

Minors and Certificates for Communication Majors
The department actively supports the following minors and certificate programs open to students majoring in communication: Minor in Public Affairs Journalism, Minor in Photographic Studies, Minor in Legal Studies, the Certificate in Writing, and the Certificate in Secondary Education. For more information, see Certificate Programs and Interdisciplinary Studies in this Bulletin.

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.

After fulfilling the general education and specific major degree requirements, students are to take the remaining 62 hours required to complete the B.A. degree in communication from courses, which the respective department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary. The communication department will accept a maximum of 12 hours transfer credit in the major and 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.
Communication

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. Interpersonal Communication I
- 40. Introduction to Public Speaking
- 130. Interpersonal Communication II
- 135. Communication Theory
- 140. Advanced Public Speaking
- 141. Business and Professional Speaking
- 143. Parliamentary Procedure
- 230. Small Group Communication
- 231. Communication in the Organization
- 237. Male/Female Communication
- 240. Persuasive Communication
- 241. Argumentation and Debate
- 242. Theory and Practice of Interviewing
- 243. Communication in American Politics
- 331. Research Methods in Speech Communication
- 332. Intercultural Communication
- 334. Communication in Advertising
- 335. Seminar in Applied Communication Research
- 340. Rhetorical Criticism
- 341. Classical Rhetoric and Public Address
- 342. Modern Rhetoric and Public Address
- 343. The Rhetoric of Protest

Mass Communication Area Courses
- 50. Introduction to Mass Media
- 70. Introduction to Cinema
- 110. Introduction to Radio and Television Broadcasting
- 114. Radio Production I
- 118. Radio and Television Announcing
- 210. Television Production I
- 212. Broadcast Writing and Reporting
- 214. News Writing
- 215. Radio Production II
- 216. Radio News
- 217. Script Writing for Business and Industry
- 219. Promotion, Publicity, and Advertising in Broadcasting
- 271. History of Film to World War II
- 272. History of Film Since World War II
- 273. Basic Film Production
- 310. Television Production II
- 311. Broadcast Management
- 316. Television News
- 317. Radio and the Recording Industry
- 350. Mass Communication History and Criticism
- 365. Media Law and Regulation
- 370. Documentary Film

Degree Requirements
Bachelor of Arts in Communication Majors must complete a minimum of 36, but not more than 45, hours in communication courses. At least 24 of these hours must be taken at UM-St. Louis. Each major must take at least six hours of communication courses numbered 200-299 and at least six hours of communication courses numbered 300-399. Every major must complete the requirements for an emphasis area as described below.

Emphasis Areas
Three emphasis areas are available: General Communication, Communication Theory and Rhetoric, and Mass Communication.

Required Courses for All Majors
Communication 40. Introduction to Public Speaking
Communication 135. Communication Theory
Communication 194, 196, 197, 198. (at least three hours of Practicum 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 General Communication
In addition to the required courses for all majors, students must take the following:

a Three additional hours in Communication Theory and Rhetoric

b One of the following Mass Communication courses:
   - 50. Introduction to Mass Media
   - 70. Introduction to Cinema
   - 110. Introduction to Radio and Television Broadcasting

c Three additional hours in Mass Communication

d One of the following Theatre courses:
   - 21. Fundamentals of Acting
   - 23. Production Aesthetics
   - 80. Introduction to the Theatre

e Three additional hours in Theatre

f Plus 12-21 hours from any area or areas in the communication department.

II Communication Theory and Rhetoric
In addition to the required courses for all majors, students must take the following:

a Communication 230. Small Group Communication

b Twelve additional hours in Communication Theory and Rhetoric

c One of the following Mass Communication courses:
   - 50. Introduction to Mass Media
   - 70. Introduction to Cinema
   - 110. Introduction to Radio and Television Broadcasting

d One of the following Theatre courses:
   - 21. Fundamentals of Acting
   - 23. Production Aesthetics
   - 80. Introduction to the Theatre

e Plus 6-15 hours from any area or areas in the communication department.

III Mass Communication
In addition to the required courses for all majors, students must take the following:

a Communication 50. Introduction to Mass Media
Communication 70. Introduction to Cinema
Communication 110. Introduction to Radio and Television Broadcasting

b Nine additional hours in Mass Communication
Communication

One of the following Theatre courses:
21. Fundamentals of Acting
23. Production Aesthetics
80. Introduction to the Theatre

Plus 6-15 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 School of Education, students must meet the state requirements for certification.

The department suggests students satisfy the General Communication emphasis area requirements.

The General Communication emphasis is recommended for students interested in certification. With this emphasis, students can complete the minimum requirements for the B.A. and certification for grades 7-12 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 School of Education include courses in professional education and English 262, The Curriculum and Methods of Teaching English (same as SEC ED 232).

Departmental Activities, Laboratories, and Internships
Cocurricular projects and activities relevant to student interests and vocational plans are sponsored and advised by the department (debate and forensic, radio club, television/film club).

The department sponsors a summer high school institute and both a high school and college forensics tournament on the University of Missouri-St. Louis campus.

In addition to the traditional classroom experience, students receive practical training in the department’s laboratory facility: the Lucas Hall Radio/Television/Video Laboratories.

Internships at radio and television stations, community agencies, newspapers, public relations and advertising firms, and in a variety of business organizations provide unique opportunities for majors to apply their communication studies.

Minors in Communication

Students with majors other than communication may select from three minors to complement their academic and career goals.

The following conditions apply to all minors:

Credit hours in Communication 195, and/or Communication 395, may be substituted for credit hours listed below with written permission of the communication department chairperson.

At least nine 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.

1) Requirements for the minor in General Communication are as follows:

a Communication 40, Introduction to Public Speaking
b One of the following Mass Communication courses:
50, Introduction to Mass Media
70, Introduction to Cinema
110, Introduction to Radio and Television Broadcasting
c One of the following Theatre courses:
21, Fundamentals of Acting
23, Production Aesthetics
80, Introduction to the Theatre
d Plus three hours from communication courses at the 100 level and six additional hours in communication at the 200 level or above.

2) Requirements for a minor in Communication Theory and Rhetoric are as follows:

a Communication 40, Introduction to Public Speaking
Communication 135, Communication Theory
b One of the following Communication Theory and Rhetoric courses:
30, Interpersonal Communication I
140, Advanced Public Speaking
141, Business and Professional Speaking
c Plus nine hours from courses in Communication Theory and Rhetoric at the 200 level or above.

3) Requirements for a minor in Mass Communication are as follows:

a Communication 50, Introduction to Mass Media
Communication 110, Introduction to Radio and Television Broadcasting
b One of the following Mass Communication courses:
70, Introduction to Cinema
350, Mass Communication History and Criticism
c Plus nine hours in Mass Communication courses at the 200 level or above.

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, administration, directing, announcing, production, and sports journalism; management and production; public relations, advertising, marketing, market research, corporate media, sales, training, speech writing, print editing, journalism, teaching, and research. Other students have pursued graduate education in communication programs offering the M.A., M.F.A., and Ph.D. degrees.
Criminology and Criminal Justice
(Formerly Administration of Justice)

Faculty
Scott H. Decker, Chairperson; Professor*
Ph.D., Florida State University
Robert Bing, III, Assistant Professor*
Ph.D., Florida State University
John Cosgrove, Adjunct Lecturer
M.A., University of Missouri-St. Louis
Timothy J. Hope, Assistant Professor
Ph.D., University of London
Kimberly Kampf, Assistant Professor*
Ph.D., The Wharton School, University of Pennsylvania
Janet L. Lauritsen, Assistant Professor
Ph.D., University of Illinois-Urbana
William Oliver, Assistant Professor
A.B.D., SUNY-Albany
Honorable Theodore McMillian, Adjunct Professor
J.D., St. Louis University
Richard B. Rosenfeld, Assistant Professor*
Ph.D., University of Oregon
Ronald Sherod, Adjunct Associate Professor
J.D., Washington University
James Smith, Adjunct Lecturer
M.A., Washington University
Deborah Stockhausen, Lecturer
J.D., St. Louis University
Edward Tripp, Adjunct Lecturer
M.S.W., St. Louis University
Barrik Van Winkle, Visiting Lecturer
A.B.D., University of Chicago
Allen E. Wagner, Associate Professor*
Ph.D., Washington University
Richard Wright, Associate Professor*
Ph.D., Cambridge University

*Members of Graduate Faculty

Criminology and criminal justice faculty represent several academic disciplines. By integrating practice with theory, faculty are able to present a comprehensive picture of the crime and the justice system. An emphasis on understanding the theoretical foundations which underlie human behavior and the institutions of justice characterizes the departmental orientation. Faculty research and publications also reflect this concern with understanding both the underlying theoretical foundations and their application. This nexus of theory and application is found most directly in the department’s emphasis on understanding policy in criminology and criminal justice. All components of crime and justice are represented in the curriculum including criminal behavior, delinquency, crime prevention, arrest, prosecution, defense, court processing, probation, prison, and parole. A special feature of the program is the cadre of local professionals who supplement the regular faculty. A federal appeals-court judge, local prosecutor, correctional supervisor, and probation supervisor are among this group. Merging theory with practice is a daily routine for supplemental faculty members. Full-time faculty members provide course work that forms the sound basis of a liberal arts education.

General Information

Degrees and Areas of Concentration
The department offers courses leading to both the bachelor of science degree in administration of justice and the M.A. in administration of justice. The undergraduate degree program consists of a core curriculum and four areas of concentration: 1) American Policing System, 2) Treatment of Offenders, 3) Etiology and Prevention, and 4) Planning and the Administration of Justice.

Cooperative Programs
Faculty of the criminology and criminal justice department hold appointments as Fellows in the Center for Metropolitan Studies, Women’s Center, and Missouri Youth Initiative. Workshops, projects, credit courses, and other special services are brought to the criminal justice community.

Internships
Majors are strongly encouraged to participate in Administration of Justice 395, Internship in Administration of Justice, during their junior or senior year. The internship affords students the opportunity to gain experience in a criminal justice agency under the joint supervision of agency personnel and criminology and criminal justice faculty.

Minor in Administration of Justice
The minor is designed to offer flexibility; students are given a choice of four individualized sequences in the discipline. The minor also gives formal recognition to those students from other major areas who find that administration of justice courses fit their academic or professional needs and/or interests.

Undergraduate Studies

General Education Requirements
Majors must satisfy the University and College general education requirements. Foreign language proficiency is not required, though students are encouraged to take foreign language courses. Majors may not take the following courses on a satisfactory/unsatisfactory basis: administration of justice courses; Sociology 220, Quantitative Techniques in Sociology; or Sociology 230, Research Methods, courses required for the major. Additionally, substitutions which have been approved by departmental advisers for these courses may not be taken on a satisfactory/unsatisfactory basis.

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

work, sociology, business, education, engineering, and inter-disciplinary. The criminology and criminal justice 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.

Degree Requirements

**Bachelor of Science in Administration of Justice**

Candidates must complete the core curriculum listed below and one of the following areas of concentration: 1) American Policing System; 2) Treatment of Offenders; 3) Etiology and Prevention; or 4) Planning and the Administration of Justice.

The core curriculum and the chosen option must include a minimum of 35 credit hours in administration of justice courses.

**Core Curriculum** The following courses in administration of justice are required:

- **AOJ 60**, Criminal Justice Processes and Institutions
- **AOJ 164**, Criminological Theory
- **AOJ 170**, Principles of Criminal Law
- **AOJ 201**, The Criminal Justice System: Conflicting Perspectives in the Administration of Justice
- **AOJ 215**, Criminal Justice Data
- **AOJ 380**, Seminar in Administration of Justice
- **AOJ 399**, Independent Study and Research

Also required are:

- **Interdisciplinary 96**, The City
- **Sociology 10**, Introduction to Sociology
- **Sociology 230**, Research Methods
- **Sociology 326**, Criminology
- **Psychology 3**, General Psychology

**American Policing System.** This option is designed for those students who desire a career in law enforcement or investigative jobs. Roles in municipal, county, and state police are available to those who choose this option. In addition, this option is designed to prepare those interested in federal employment in enforcement or investigative roles. The required courses are the following:

- **AOJ 171**, Evidence
- **AOJ 250**, Police Administration
- **AOJ 260**, Police in the Urban Community
- **AOJ 310**, Crime Prevention
- **AOJ 325**, Constitutional Rights of the Accused

**Political Science 140**, Public Administration

**Psychology 226**, Community Psychology

**Sociology 200**, Deviant Behavior

Two courses from the following four:

- **AOJ 180**, Alcohol, Drugs, and Society
- **SO0 202**, Urban Sociology
- **AOJ 205**, The Juvenile Justice System
- **PSY 232**, Psychology of Victims

**Etiology and Prevention.** This option is designed for those students who are interested in working in a variety of institutional settings. Students in this option will be prepared to assume a variety of counseling and investigative roles. The required courses are the following:

- **AOJ 330**, Institutional Corrections
- **AOJ 340**, Probation, Parole, and Community Corrections
- **Psychology 235**, Community Psychology
- **Sociology 200**, Deviant Behavior

Also required is one course from the following:

- **Psychology 225**, Behavior Modification
- **Psychology 346**, Introduction to Clinical Psychology
- **Psychology 365**, Psychological Tests and Measurements
- **Social Work 100**, Introduction to Social Services

In addition, the candidate must complete three courses from the following six:

- **AOJ 180**, Alcohol, Drugs, and Society
- **AOJ 205**, The Juvenile Justice System
- **AOJ 225**, The Juvenile and the Law
- **AOJ 227**, Urban Law: Poverty and the Justice System
- **AOJ 310**, Crime Prevention
- **AOJ 325**, Constitutional Rights of the Accused

**Planning and the Administration of Justice.** This option is designed for students who have an interest in obtaining a broad perspective on the administration of justice. It combines a solid core of knowledge in criminal justice with courses in policy and management. The required courses are the following:

- **AOJ 205**, The Juvenile Justice System
- **AOJ 250**, Police Administration
- **AOJ 310**, Crime Prevention
- **AOJ 330**, Institutional Corrections
- **Political Science 140**, Public Administration
- **Political Science 242**, Introduction to Public Policy

Two courses from the following four:

- **AOJ 180**, Alcohol, Drugs, and Society
- **SOC 202**, Urban Sociology
- **AOJ 205**, The Juvenile Justice System
- **PSY 232**, Psychology of Victims
Criminology and Criminal Justice

and two courses from the following three:
Political Science 342, Public Personnel Management
Political Science 344, Public Budgeting
SOC 336, Bureaucracy and Social Order

Requirements for the Minor

The minors have been designed to ground students in the basics of administration of justice.

All minor candidates must take:
AOJ 60, Criminal Justice Processes and Institutions
AOJ 170, Basic Principles of Criminal Law

The candidate must then select from one of the following areas of concentration:

Policing (6 hours)
AOJ 250, Police Administration
AOJ 260, Police in the Urban Community

Corrections (6 hours)
AOJ 330, Institutional Corrections
AOJ 340, Probation, Parole, and Community Corrections

Juvenile (6 hours)
AOJ 205, The Juvenile Justice System
AOJ 225, The Juvenile and the Law

Law and Judicial Process (6 hours)
AOJ 225, The Juvenile and the Law
AOJ 325, Constitutional Rights of the Accused

Candidates must have a cumulative grade point average of 2.0 or better in the minor. None of the courses may be taken on a satisfactory/unsatisfactory basis.

Graduate Studies

Master of Arts in Administration of Justice

The department offers a Master of Arts degree in Administration of Justice, which provides students with advanced theoretical and methodological training for research and management careers in criminal justice.

Admission Requirements: The minimum G.P.A. for regular admission to graduate study is 2.75 on a 4-point scale. However, students may be admitted under restricted status with a G.P.A. of 2.5. Completion of the Graduate Record Exam is required for admission, but students may be admitted conditionally typically for not more than one semester prior to taking the exam.

Degree Requirements

The M.A. in Administration of Justice requires the completion of 33 credit hours, at least 18 of which are in Administration of Justice. All students must satisfy a 15-hour core course requirement. Additionally, M.A. candidates must take at least two of four graduate "option" courses offered by the department. Students may choose between a thesis and nonthesis course of study.

Core Curriculum
AOJ 400, Proseminar: The Administration of Justice
AOJ 410, Criminal Justice Organization
AOJ 464, Seminar in Criminological Theories
AOJ 476, Introduction to Evaluation Research Methods
Political Science 401, Introduction to Policy Research or Sociology 404, Advanced Methodology

"Option" Courses
AOJ 402, Correctional Theory and Practice
AOJ 403, Urban Police Function
AOJ 404, The Adjudication Process
AOJ 405, Juvenile Justice

Transfer Courses

Transfer courses are evaluated for acceptance on a case-by-case basis subject to the rules and regulations of the Graduate School.

Career Outlook

The orientation of the criminology and criminal justice faculty and of the degree program prepares the graduate to work professionally for local, state, and federal agencies concerned with maintaining public safety by the prevention of crime, apprehension and rehabilitation of offenders. The B.S. in administration of justice is also advantageous for careers with various social agencies, especially those connected with the juvenile court system, probation and parole, and local police. Many students use the B.S. in Administration of Justice as preparation for law school.

The interdisciplinary curricula unify a body of knowledge from criminology, social science, law, public administration and corrections, giving a unique preparation for and providing the student with an understanding of the assumptions, values, and processes of the system of justice. Many prelaw students choose criminology and criminal justice as an undergraduate major because of the excellent preparation offered for law school. An internship program is offered for college credit. The liaison, supervision, and experience with public agencies that form an integral part of this program help the student arrive at a career decision.
Economics

Faculty
Sharon G. Levin, Professor*; Chairperson
Ph.D., University of Michigan
Robert Loring Allen, Professor Emeritus*
Ph.D., Harvard University
Elizabeth M. Clayton, Professor*; Associate Vice Chancellor for Research
Ph.D., University of Washington
Joseph P. McKeena, Professor Emeritus*
Ph.D., Harvard University
William E. Mitchell, Professor*; Graduate Coordinator
Ph.D., Duke University
Donald Phares, Professor*; Vice Chancellor, Budgeting, Planning and Institutional Research
Ph.D., Syracuse University
Susan K. Feigenbaum, Associate Professor*
Ph.D., University of Wisconsin
Thomas R. Ireland, Associate Professor*
Ph.D., University of Virginia
Robert L. Sorensen, Associate Professor*; Undergraduate Coordinator
Ph.D., Virginia Polytechnic Institute
Herbert D. Werner, Associate Professor*
Ph.D., University of California-Berkeley
J. Ray Bowen II, Assistant Professor
Ph.D., University of Michigan
Edward Gamber, Assistant Professor*
Ph.D., Virginia Polytechnic Institute
David R. Hakes, Assistant Professor*
Ph.D., Iowa State University
Sarapage McCorkle, Assistant Professor*; Director, Center for Economic Education; Associate Dean, Continuing Education-Extension
Ed.D., University of Missouri-St. Louis
David C. Rose, Assistant Professor*
Ph.D., University of Virginia
Mark E. Stover, Assistant Professor*
Ph.D., Washington University
Anne Winkler, Assistant Professor*
Ph.D., University of Illinois at Urbana-Champaign
Carol Bumb, Lecturer
M.A., University of Missouri-St. Louis
Kathleen Phares, Lecturer
M.A., University of Missouri-St. Louis
Mary Suiter, Associate Director; Lecturer, Center for Economic Education
MIEE, University of Delaware

*members of Graduate Faculty

The economics department is actively engaged in teaching, research, publishing, and community service. Members have received numerous grants for basic and applied research projects. In addition to published research, members regularly present papers and serve as moderators and discussants at professional meetings. They have been honored with teaching and research fellowships and as visiting scholars at leading universities throughout the United States. Faculty members actively participate in community service, they address local citizen and business groups on topics of current interest, and frequently act as consultants for public service groups and local governmental units.

General Information

Degrees and Areas of Concentration Several degree programs are offered by the economics department. The B.A. in economics provides a flexible liberal arts orientation for students. The B.S. in economics places more emphasis upon developing the analytical and quantitative skills used in analysis. Both degrees can be tailored to meet the career interests of the student.

The economics faculty considers research an integral part of good teaching. Research projects in recent years have dealt with housing, productivity, employment, taxation, zoning, technology diffusion, the Soviet Union, international trade flows, agriculture, energy, monetary economics, conglomerates, and public choice.

The economics department also offers courses at the undergraduate level in geography.

A graduate program offers work leading to the M.A. degree in economics in preparation for careers in teaching, research, government, and industry. The program includes course work in macroeconomic theory, urban, international, industrial, and quantitative economics; and research methodology. The program can accommodate prospective full-time students as well as those who wish to study part time solely in the evening. Classes are small, and student-faculty interaction is encouraged.

The economics department cooperates with the School of Business Administration and the Department of Political Science in offering a master's degree program in public policy administration.

Departmental Honors The economics department has established the following requirements for departmental honors:
1) A minimum GPA of 3.5 overall and in the major.
2) Satisfactory completion of Economics 403, Seminar in Economic Research. This course will automatically serve as an honors thesis or project.

Minor in Economics A minor in economics is also available. See the section below for requirements.

Undergraduate Studies

General Education Requirements

All undergraduate economics majors must meet the University and College of Arts and Sciences general education requirements. Candidates for the B.S. degree, however, do not need to fulfill the College's foreign language requirement. Candidates for the B.A. degree may take any foreign language to meet this requirement. Courses in economics may be used to meet the University social sciences requirement.
Economics

Education majors specializing in economics must fulfill the requirements for the bachelor of arts degree. These majors are responsible for obtaining an adviser in the Department of Economics.

All prerequisites for the degree must be completed with a C or better.

Satisfactory/Unsatisfactory (S/U) Option
Courses outside the major field and Economics 51, Principles of Microeconomics, and Economics 52, Principles of Macroeconomics, may be taken on a satisfactory/unsatisfactory (S/U) basis.

Degree Requirements

Bachelor of Arts in Economics: Candidates for the B.A. degree must take at least 33, but no more than 45, hours in economics. At least 27 hours must be above the 100 level. All required economics courses must be completed with a grade of C or better. The following courses are required:

- Economics 51, Principles of Microeconomics
- Economics 52, Principles of Macroeconomics
- Economics 220, Money, Banking, and Monetary Theory
- Economics 250, Intermediate Economic Theory: Macroeconomics
- Economics 251, Intermediate Economic Theory: Microeconomics
- Economics 265, Economic Statistics
- Economics 380, History of Economic Thought

Since many theories in economics make use of calculus, it is also recommended that students take:

- Mathematics 80, Analytic Geometry and Calculus I or
- Mathematics 101, Survey Calculus

After fulfilling the general education and specific major degree requirements, students are to take the remaining 66 hours required to complete the B.A. degree from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary.

Requirements outside the economics department should be completed by the end of the sophomore year.

Bachelor of Science in Economics
Candidates for the B.S. degree must complete at least 36, but no more than 45, hours in economics. At least 27 hours must be above the 100 level. All required economics courses must be completed with a grade of C or better. The following courses are required:

- Economics 51, Principles of Microeconomics
- Economics 52, Principles of Macroeconomics
- Economics 220, Money, Banking, and Monetary Theory
- Economics 250, Intermediate Economic Theory: Macroeconomics
- Economics 251, Intermediate Economic Theory: Microeconomics
- Economics 265, Economic Statistics
- Economics 380, History of Economic Thought

Also required are two of the following:

- Economics 351, Quantitative Methods for Economics and Business Analysis
- Economics 366, Applied Econometrics
- Economics 368, Analysis of Business Cycles
- or any mathematics course numbered 175 or above (with consent of adviser)

After fulfilling the general education and specific major degree requirements, students are to take the remaining 66 hours required to complete the B.S. degree from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary.

Requirements outside the economics department should be completed by the end of the sophomore year.

Complementary Areas of Study

The department encourages all majors to develop breadth in related disciplines. Course work and minors are available in a number of areas such as business administration, computer science, statistics, and political science. Students should check with their advisers for recommendations concerning courses in these areas. The department suggests the following supplemental course work for students interested in pursuing doctoral-level graduate work in economics or careers in general business.

Graduate School Preparation:
It is recommended that students considering doctoral-level graduate work in economics also take:

- Mathematics 80, Analytical Geometry and Calculus I
- Mathematics 175, Analytical Geometry and Calculus II
- Mathematics 180, Analytical Geometry and Calculus III
- or
- Mathematics 245, Linear Algebra
Economics

General Business Preparation:
It is recommended that students interested in pursuing careers in business also take:
- Business Administration 140. Fundamentals of Financial Accounting
- Business Administration 145. Managerial Accounting
- Business Administration 156. Legal Environment of Business
- Business Administration 204. Financial Management
- Business Administration 206. Basic Marketing

Requirements for the Minor
Candidates for a minor in economics must take a minimum of 18 hours in economics. At least 12 hours must be above the 100 level. Economics 265, Economic Statistics, cannot be counted towards the economics minor if the student has also taken Mathematics 31, Mathematics 132, Business Administration 131, or the equivalent. The following courses are required:
- Economics 51. Principles of Microeconomics
- Economics 52. Principles of Macroeconomics
- Economics 251. Intermediate Economic Theory: Microeconomics

It is also recommended that students take:
- Economics 250. Intermediate Economic Theory: Macroeconomics

Also required is a GPA of 2.0 or better for courses presented for the minor. The satisfactory/unsatisfactory option may be applied to Economics 51 and Economics 52 only.

Graduate Studies

Master of Arts in Economics
The Department of Economics offers a Master of Arts in Economics with two options: general economics and business economics.

Admission Requirements
An undergraduate major in economics is not required for acceptance into the program. Application for admission may be submitted at any time, although class work formally begins in late August, mid-January, and mid-June. Candidates must meet the general admission requirements of the Graduate School, submit GRE scores (Advanced Economics optional), and submit two letters of recommendation from persons qualified to judge the candidates’ potential for success in the program.

The admissions decision is based on the applicant’s academic transcript, GRE scores, letters of recommendation, and a personal narrative on the application form.

Degree Requirements
Candidates for the M.A. in Economics must complete a core curriculum that provides training in the fundamental areas of economic theory, quantitative methods, and communication skills. Students then select either the general economics or business economics option.

Required Core Courses
The following courses or their equivalents are required for both the general economics and business economics option. Students with previous education in economics or business may waive some of these courses:
- Economics 351. Quantitative Methods for Economics and Business Decision
- Business Administration 410, Managerial Economic Analysis
- Business Administration 411, Analysis of National Economic Environment
- Business Administration 481, Statistical Analysis for Management Decisions
- Economics 401, Microeconomic Analysis
- Economics 402, Macroeconomic Analysis
- Economics 403, Seminar in Economic Research
- Economics 465, Econometric Theory and Methods

Students must also complete the equivalent of Economics 220, Money, Banking, and Monetary Theory, with a grade of C or better by the end of their first year. Graduate credit is not given for this course.

General Economics
The general economics option is designed for students interested in a broad-based background in the traditional fields of economics. It is intended for those who wish to teach basic economics or pursue further graduate study in economics. A recommended study program is available for students who plan to pursue a Ph.D. at another university after completing the M.A. in economics at UM-St. Louis.

The general economics option requires 42 credit hours. Students with previous education in economics or business may waive up to 12 hours of the 42 hours required. Regardless of the number of required courses waived, at least 30 hours of graduate work must be completed within a six-year period to earn the degree. And a minimum of 21 hours must be completed while enrolled in the M.A. in Economics program at UM-St. Louis.

Required Courses
Candidates must complete the required core courses.

Electives
Candidates must complete at least 18 hours of electives. A maximum of six hours of economics electives may be taken at the 300 level. With the approval of the graduate coordinator, students may take up to nine hours of graduate courses outside the Department of Economics.

Business Economics
The business economics option prepares students for careers in business, government, and other organizations. This option combines the applied economic analysis and quantitative skills necessary for decision-making in business and government with an appreciation for the function areas of these institutions.
Economics

The business economics option requires 60 credit hours. Students with previous education in economics or business may waive up to 24 hours of the 60 hours required. Regardless of the number of required courses waived, at least 36 hours of graduate work must be completed within a six-year period to earn the degree. A minimum of 24 hours must be completed while enrolled in the M.A. in Economics program at UM-St. Louis. More than 50 percent of the credit hours completed in the business economics option must be taken in the Department of Economics.

Required Courses
In addition to the required core courses, students must complete the following courses:

- **Business Administration 412**, Public Policies Toward Business
- **Business Administration 440**, Financial Accounting: Theory and Practice
- **Business Administration 450**, Financial Management
- **Business Administration 460**, Organization Behavior and Administrative Processes
- **Business Administration 470**, Contemporary Marketing Concepts
- **Business Administration 480**, Introduction to Computer Programming with Managerial Applications
- **Economics 366**, Applied Econometrics
- **Economics 440**, Business and Economic Forecasting
- **Economics 450**, Topics in Managerial Economic Analysis

Electives
Candidates must complete at least nine hours of electives in 400-level economics courses. With the approval of the graduate coordinator, students may take additional graduate courses outside the Department of Economics.

Graduate Certificate in Managerial Economics
A Graduate Certificate in Managerial Economics is a program of study designed for individuals who wish to supplement previous graduate studies with advanced training in economic analysis. The entrance requirement is a master's degree in such areas as business administration, finance, or public policy administration. Individuals admitted to this certificate program will be nonmatriculating graduate students.

Requirements
The Certificate requires a minimum of 18 hours of course work in economics. Students must complete:

- **Economics 401**, Macroeconomic Analysis
- **Economics 402**, Microeconomic Analysis
- **Economics 465**, Econometric Theory and Methods

and two of the following:

- **Economics 366**, Applied Econometrics
- **Economics 440**, Business and Economic Forecasting
- **Economics 450**, Topics in Managerial Economic Analysis

The remaining 3 credit hours may be chosen from any economics elective numbered above 403.

Students also must complete the equivalent of Economics 220, Money, Banking, and Monetary Theory, with a grade of C or better within their first year of study. This course may be satisfied by independent study and a proficiency test. Graduate credit is not given for this course.

Career Outlook
Economics is a language that provides the individual with a concise and logical way to study a wide range of problems and issues. It provides the flexibility for adapting to our ever-changing society, and it is also useful in everyday life. Thus, the economics major is excellent preparation for launching many careers. Economics graduates with a B.A. or B.S. degree pursue careers in banking, industry, and government. They use their training in economics as a foundation for a variety of jobs in management, personnel, sales, and marketing. Others continue their study of economics in graduate schools, earning M.A. and Ph.D. degrees. An undergraduate major in economics also provides a strong background for work on an M.B.A. or law degree. Economics is also important for careers in politics, journalism, and public and private service in foreign countries. Career planning materials are available in the Economics Resource Center, 455 SSB. For additional information, call the graduate coordinator at 553-5351.
English

Faculty
Charles Larson, Professor*; Chairperson
Ph.D., Indiana University
David Carkeet, Professor*
Ph.D., Indiana University
Joseph Carroll, Professor*
Ph.D., University of California-Berkeley
B. Bernard Cohen, Professor Emeritus
Ph.D., Indiana University
Charles Dougherty, Professor Emeritus
Ph.D., University of Toronto
William C. Hamlin, Professor*;
Associate Chairperson, Graduate Coordinator
Ph.D., University of Missouri-Columbia
Eugene B. Murray, Professor Emeritus
Ph.D., Columbia University
Howard Schwartz, Professor*
M.A., Washington University
James E. Tierney, Professor*
Ph.D., New York University
Peter Wolfe, Professor*
Ph.D., University of Wisconsin
Richard M. Cook, Associate Professor*
Ph.D., University of Michigan
Sylvia J. Cook, Associate Professor*
Ph.D., University of Michigan
Bruce L. Liles, Associate Professor*
Ph.D., Stanford University
John T. Onuska, Jr., Associate Professor*;
Director, Pierre Laclede Honors College
Ph.D., Harvard University
Jane Williamson, Associate Professor*
Ph.D., Bryn Mawr College
Sally Fitzgerald, Assistant Professor*; Director, Center
for Academic Development:
Ed.D., University of Missouri-St. Louis
Kathy Gentile, Assistant Professor*
Ph.D., University of Oregon
Francis Grady, Visiting Assistant Professor
Ph.D., University of California-Berkeley
Barbara Kachur, Assistant Professor*
Ph.D., The Ohio State University
Deborah A. Larson, Assistant Professor*; Associate Dean,
College of Arts and Sciences
Ph.D., Columbia University
Sally Reagan, Assistant Professor*
Ph.D., Indiana University
Steven Schreiner, Assistant Professor*
Ph.D., Wayne State University
Jane Zeni, Assistant Professor*
Ed.D., University of Missouri-St. Louis
Dennis Bohnenkamp, Senior Lecturer
M.A., University of Missouri-Columbia
Ellie Chapman, Senior Lecturer
M.A., Murray State University
Bill Foster, Lecturer
M.A., University of Missouri-Columbia
Judy Gurley, Lecturer
M.A., University of Arkansas
Linda Kick, Lecturer
M.A., University of Toronto
William Klein, Lecturer
M.A., University of Tulsa
Judith Linville, Lecturer
M.A., University of Arkansas
Terence Martin, Lecturer
Ph.D., Southern Illinois University-Carbondale
David Rota, Lecturer
M.A., Southern Illinois University-Edwardsville
Nanora Sweet, Senior Lecturer
M.A., University of Missouri-Columbia
Susan Tierney, Senior Lecturer
M.A., Southern Illinois University-Edwardsville
Charles Wartts, Lecturer
B.A., Lincoln University
Harry Weber, Lecturer
M.A., University of Minnesota
*members of Graduate Faculty

General Information

Degrees and Areas of Concentration The English
department offers or participates in the offering of the B.A. in
English, the B.A. in English with certification for secondary
teaching, and the B.S. in secondary education with a major
in English. The department also offers a minor in English.
Additionally, students with any major in the University may
earn a Certificate in Writing so that they may demonstrate
evidence of training in creative, journalistic, or technical
writing.

The department also has a graduate program leading to the
Master of Arts degree. Students may pursue either a
literature track where they acquire a broad coverage in British
and American writers or a writing track where the majority of
their course work deals with composition and writing theory.

Departmental Honors Candidates for departmental honors
in English must achieve a 3.2 average in English at graduation
and complete an undergraduate or graduate seminar in
English, the final paper for which must be acceptable to the
instructor as an honors thesis.

Undergraduate Studies

General Education Requirements
Majors must meet the University general education
requirements and the requirements of the School or College
from which they expect to receive their degree. After fulfilling
the general education and specific major degree requirements,
students are to take the remaining 70 hours required to
complete the B.A. in English from courses, which the
appropriate department has evaluated as being of university-
level quality, from one or more of the following areas or their
university-quality equivalents at other institutions:
anthropology/archaeology, art (appreciation, history, studio),
biology, chemistry, communication, criminology and criminal
English

justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and inter-disciplinary. English courses may be used to meet the University’s humanities requirement, except the following:

09. Basic Writing
10. Freshman Composition
11. Freshman Composition for International Students
22. Traditional Grammar
112. Topics in Writing
209. Practical Criticism: Writing About Literature
210. Advanced Expository Writing
211. Advanced Expository Writing for International Students
212. Business Writing
213. Technical Writing
214. News Writing
215. Feature Writing
218. Reporting
262. The Curriculum and Methods of Teaching English
300. Writing in the Professions
305. Writing for Teachers
313. Advanced Business and Technical Writing
316. Gateway Writing Project
319. Editing

The College’s foreign language requirement may be met in any language.

Satisfactory/Unsatisfactory Option
English majors may take any English course on a satisfactory/unsatisfactory basis except the following:

09. Basic Writing
10. Freshman Composition
11. Freshman Composition for International Students
209. Practical Criticism: Writing About Literature
210. Advanced Expository Writing
211. Advanced Expository Writing for International Students
212. Business Writing
213. Technical Writing
262. The Curriculum and Methods of Teaching English

Degree Requirements

Bachelor of Arts in English English majors must complete at least 36, but no more than 45, hours in English exclusive of English 09, Basic Writing; English 10, Freshman Composition; English 11, Freshman Composition for International Students; and English 209, Practical Criticism: Writing About Literature.

1) Students majoring in English must take:

131. English Literature I
132. English Literature II
171. American Literature I
172. American Literature II

(Students who are candidates for teacher certification may substitute a 300-level American literature course for one of the required 100-level American literature courses.)

2) English 209, Practical Criticism: Writing About Literature. (For English majors, this course is a prerequisite or corequisite for 300-level courses in English.)

3) Students must also complete one course from five of the following seven areas:

Area 1 Medieval English
324. Chaucer
325. Medieval English Literature

Area 2 Shakespeare
337. Shakespeare: Tragedies and Romances
338. Shakespeare: Comedies and Histories

Area 3 The Renaissance
332. Elizabethan Poetry and Prose
339. Tudor and Stuart Drama
342. Early Seventeenth-Century Poetry and Prose
345. Milton

Area 4 Restoration and Eighteenth-Century English
346. Restoration and Eighteenth-Century Drama
352. Age of Dryden and Pope
353. Age of Johnson
364. The Eighteenth-Century English Novel

Area 5 Nineteenth-Century English
365. The Nineteenth-Century English Novel
368. Early Romantic Poetry and Prose
369. Later Romantic Poetry and Prose
371. Prose and Poetry of the Victorian Period
372. The Later Nineteenth Century

Area 6 Nineteenth-Century American
373. Selected Major American Writers I
374. Selected Major American Writers II
375. American Fiction to World War I

Area 7 Twentieth-Century English/American
376. Modern American Fiction
383. Modern British Fiction
384. Modern Poetry
385. Modern Drama
386. Poetry Since World War II

A maximum of six satisfactory/unsatisfactory hours may be taken in the department. Majors must complete at least 18 graded (i.e., not satisfactory/unsatisfactory) hours in English courses at the 200 level or above with a grade point average of 2.0 or better in these courses.
Transfer students majoring in English must complete a minimum of 12 graded hours in English courses at the 200 level or above with a grade point average of 2.0 or better in these courses.

Work in 100-level courses provides a background in literary history and forms, as well as the means for discussing literary issues, on paper and orally. Thus, the department requires English 131 as a prerequisite for English majors for English 324, 325, 332, 337, 338, 339, 342, 345, 346, 352, 353, and 364; similarly, it requires English 132 as a prerequisite for majors for English 365, 366, 369, 371, 372, 383, 384, and 385. Both English 131 and English 132 must be taken before the major has completed 90 hours toward a degree.

Students should consult with faculty advisers to determine which upper-level courses best satisfy their major needs and interests.

Bachelor of Arts in English with Certification for Secondary Education In addition to the requirements for the B.A. in English, students must meet the following requirements for secondary certification:

1) Two courses in American literature. This requirement may be met by courses counted for the major.
   a American literature must include a unit or course in the literature of ethnic groups.
   b American literature must include a unit or course in literature for adolescents. Alternatively, this requirement may be met by an adolescent literature unit within a children’s literature course.

2) Twelve hours in composition and rhetoric:
   English 10, Freshman Composition, may be counted.
   English 209, Practical Criticism: Writing About Literature, is required.
   English 305/SEC ED 305, Writing For Teachers, is required. Recommended courses include creative writing, journalism, and business writing.

3) Six hours in linguistics:
   a Must include two of the following courses:
   English 220, Development of the English Language
   English 221, American Dialects
   English 322, Modern English Grammar
   b Candidates must pass the English Educational Studies Test in Basic Grammar.
   c English 22, Traditional Grammar, is recommended preparation for the above test; English 22 does not, however, count toward the 8 hours of required linguistics.


5) English 270, English Teaching Intern Seminar, must be taken concurrently with SEC ED 290, Secondary School Student Teaching.

6) Candidates for certification in Missouri must have a 2.5 cumulative G.P.A., computed from the beginning of freshman year and including all colleges attended.

Courses in professional education listed as requirements under the secondary education department are also required for secondary certification. Note that SEC ED 385, Problems of Teaching Reading in Secondary Schools, is required for prospective English teachers.

Bachelor of Science in Secondary Education with a Major in English The required courses in English and professional education are the same as those for the B.A. with certification for secondary education. However, students fulfill the general education requirements of the School of Education rather than those of the College of Arts and Sciences.

Minor in English A student may minor in English by taking at least 18 hours of English courses, exclusive of English 09, Basic Writing, English 10, Freshman Composition, and English 11, Freshman Composition for International Students. Also, 12 of the 18 hours must be in literature courses, and 9 of these 12 literature hours must be in courses at the 200 or 300 level. Every student taking a minor in English must consult with an adviser in the English department in order to ensure a coherent program of studies. The GPA in courses for the minor must be 2.0 or better.

No more than three hours taken on a satisfactory/insatisfactory basis may be counted toward the 18-hour minimum.

Certificate Program in Writing A student may receive the Certificate in Writing by completing a total of 18 hours in writing courses chosen from the following:

Communication 212, Broadcast Writing and Reporting
Communication 217, Script Writing for Business and Industry
English 103, Poetry Writing
English 104, Short Story Writing
English 105, Play Writing
English 112, Topics in Writing
English 209, Practical Criticism: Writing About Literature
English 210, Advanced Expository Writing
English 211, Advanced Expository Writing for International Students
English 212, Business Writing
English 213, Technical Writing
English 214, News Writing or Communication 214, News Writing
English 215, Feature Writing
English 215, Reporting
English 300, Writing in the Professions
English 302, Writing Literary Criticism
English 303, Advanced Poetry Writing
English 304, Advanced Fiction Writing
English 305, Writing for Teachers
English

English 313, Advanced Business and Technical Writing
English 316, Gateway Writing Project
English 319, Editing
English 320, Independent Writing Project (This course is required. It is to be taken as the last course a student will take in his/her program, and it is to be used to generate an extensive final project.)

Note: English 313, Advanced Business and Technical Writing, may be substituted for English 320 as the required final course for students who wish to do their final projects in business or technical writing.

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

Graduate Studies

Admission Requirements
To enter the graduate program in English, a candidate must satisfy the requirements both of the Graduate School and of the Department of English. A candidate should have a bachelor's degree, with at least 24 hours in English courses. Normally only students with a grade point average of at least 3.0 in undergraduate English courses and with an overall undergraduate average of 2.75 will be considered. In addition, the English department requires letters of recommendation from two of the applicant's former English teachers. The graduate committee will use the letters, the undergraduate record, and the Graduate Record Examination scores as the basis for its decision. Applications should be submitted according to the following schedule: May 1 for the Fall semester; May 1 for the Summer session; and December 1 for the Winter semester. Late applications will be considered for the upcoming semester only if all spaces for that semester have not been filled.

Teaching Assistantships A number of teaching assistantships are available for qualified applicants. Applications should be submitted to the graduate coordinator of the English department no later than March 15 preceding the academic year for which the appointment is desired.

Degree Requirements

Master of Arts in English In addition to the Graduate School requirements, students must complete at least 24 of the required 30 hours for graduation in 400-level courses, all of which must be approved by the department and Graduate School.

At the outset of the program, students must take English 400, Introduction to Graduate Study in English, which focuses upon bibliography, research methods, and literary criticism. Students must receive graduate credit for English 400. At the conclusion of the program, students may elect English 499, Master's Essay. While not required, this course is strongly recommended because of the unique opportunity it provides to conduct research and to write a substantial essay under the personal direction of a member of the Graduate Faculty.

Further details regarding the program may be found in The Master of Arts in English, available from the English department.

Career Outlook

In addition to traditional employment as teachers at the primary, secondary, and community-college levels, recent UM-St. Louis graduates in English are working in journalism, editing, advertising, public relations, and other fields that place a premium upon creation and interpretation of the written word. Numerous recent English majors have successfully entered law school.
History

Faculty
William S. Maltby, Chairperson; Professor*
Ph.D., Duke University
Mark A. Burkholder, Professor*; Associate Vice President
for Academic Affairs
Ph.D., Duke University
Jerry M. Cooper, Professor*
Ph.D., University of Wisconsin
Walter Ehrlich, Professor*
Ph.D., Washington University
Louis Garteis, Professor*; Graduate Coordinator
Ph.D., University of Wisconsin
John R. Gillingham, Professor*
Ph.D., University of California-Berkeley
Steven C. Hause, Professor*
Ph.D., Washington University
Charles P. Korr, Professor*
Ph.D., University of California-Los Angeles
Howard S. Miller, Professor*
Ph.D., University of Wisconsin
Richard H. Mitchell, Professor*
Ph.D., University of Wisconsin
James Neal Primm, Curators' Professor Emeritus of History*
Ph.D., University of Missouri-Columbia
Steven W. Rowan, Professor*
Ph.D., Harvard University
Arthur H. Shaffer, Professor*
Ph.D., University of California-Los Angeles
Blanche M. Touchill, Professor*; Chancellor
Ph.D., St. Louis University
Robert Archibald, Associate Professor*; Director, Missouri
Historical Society
Ph.D., University of New Mexico
Paul Corby Finney, Associate Professor*
Ph.D., Harvard University
Winston Hsieh, Associate Professor*
Ph.D., Harvard University
Richard W. Resh, Associate Professor*
Ph.D., University of Wisconsin
John A. Works, Jr., Associate Professor*; Undergraduate
Coordinator
Ph.D., University of Wisconsin
Fanny E. Bryan, Assistant Professor
Ph.D., University of Illinois
Andrew J. Hurley, Assistant Professor
Ph.D., Northwestern University
Cynthia Radding, Assistant Professor*
Ph.D., University of California-San Diego
Gerda W. Ray, Assistant Professor
Ph.D., University of California-Berkeley
Priscilla Dowden, Lecturer
M.A., Cornell University
Louise B. Robbert, Adjunct Associate Professor
Ph.D., University of Wisconsin
*members of Graduate Faculty

General Information

The study of history, in addition to providing background for
other subjects and disciplines, is an essential part of a liberal
arts education. It encourages students to develop self-
knowledge and helps them to understand people of widely
disparate backgrounds and periods. The history department
offers instruction in a wide variety of fields and formats at all
levels, and the program is organized to serve as an
introduction to the discipline of history.

Cicero said, "To be ignorant of the past is to remain a child," Santayana reminded nations that those who did not know
history were doomed to repeat it, and Demosthenes told
Athenians that "the time for extracting a lesson from history
is ever at hand." Fortunately, the past does not die; we
cannot let bygones be bygones. We remember, and we
bolster that memory with the written and artificial record to
make it more accurate and lasting. This extension of memory
allows us to establish a common pool of wisdom. One of the
early acts of the tyrant is to burn the books. Knowledge of
what has been said and done is essential to freedom.

Degrees and Areas of Concentration The department
offers work in Asian, African, European, Latin American,
Middle Eastern, and United States history from ancient to
modern times. At the bachelor's level, the department offers
the B.A. in history, and, in cooperation with the School of
Education, the B.A. in history with teacher certification and
the B.S. in education with an emphasis in social studies.
At the graduate level, the department offers an M.A. in
history with work in Latin American, European, East Asian,
and United States history.

Departmental Honors
Students majoring in history may be awarded departmental
honors upon graduation if they have achieved the following:
a) at least a 3.2 overall GPA; b) at least a 3.5 GPA for all
hours attempted in history courses; and c) completed an
outstanding research paper in the Senior Seminar as certified
by the faculty member responsible for directing it.

Undergraduate Studies

General Education Requirements
History majors must meet the University and College general
education requirements. History courses that will satisfy the
University's state requirement are:

History 3, American Civilization
History 4, American Civilization
History 107, The History of Missouri
History 302, United States History: Revolution and the New Nation
1763 to 1815
History 311, Topics in American Constitutional History
History

Students may take any language to fulfill the College's foreign language requirement. Majors may not take required history courses on a satisfactory/unsatisfactory basis. Students enrolled in variable credit reading courses for five credit hours must complete a seminar paper.

Degree Requirements

Bachelor of Arts in History Students are encouraged to take programs which combine breadth of coverage with intensity. The following courses are required:

Courses 1 to 199.
History 3, American Civilization
History 4, American Civilization
History 31, Topics in European Civilization: The Emergence of Western Europe to 1715
History 32, Topics in European Civilization: 1715 to the Present
History 192, Historiography and Historical Method (to be taken as soon as possible after the major is declared)
Non-Euro/American survey: One three-hour course

Courses 201 to 399.
One course in United States history, pre-1865
One course in United States history, post-1865
One course in European history, pre-1715
One course in European history, post-1715
One course in Non-Euro-American history
History 393, Senior Seminar (May be counted as one of the 300-level courses in United States, European, or Non-Euro-American history, depending upon the topic of the seminar.)
One additional course

Other
39-hour minimum/45 maximum; • No grade below C in major; • Course 255 does not count toward major; • Courses 200 and 204 are optional electives only. After fulfilling the general education and specific major degree requirements, students are to take the remaining 31 hours required to complete the B.A. or B.S. degrees from courses, which the appropriate department has evaluated as being of university-quality, from one or more of the following areas or their university-quality equivalents at other institutions:
anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literature, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and inter-disciplinary.

Minor in History
Students may minor in history by taking 18 hours of history courses as follows:

1) One course numbered 1-199 in each of the following areas: United States history, European history, and Non-Euro-American history

2) One course numbered 201-399, except 204 and 255, in each of the following areas: United States history, European history, and Non-Euro-American history

No course in which a grade below a "C" is received shall count toward a minor.

Related Areas
Since history is a broad discipline, it can be combined with serious work in any other discipline. Courses in the humanities, social sciences, languages, and the natural sciences may complement the history program. Students should consult with faculty advisers to select courses suited to their individual interests.

Bachelor of Arts with Teacher Certification For information, refer to the School of Education section in this Bulletin.

Bachelor of Science in Education: Emphasis in Social Studies The History requirements are the same as for the B.A. degree except students fulfill the School of Education general education requirements rather than those of the College of Arts and Sciences. For information, refer to the School of Education section in this Bulletin.

Graduate Studies

Degree Requirements

Master of Arts in History

The Department of History offers students two ways of completing the Master of Arts degree: one path of study emphasizes depth of knowledge and research competence acquired through writing a substantial master's thesis; the second emphasizes breadth of historical knowledge acquired through graduate course work and the writing of research papers. Both paths include a core of substantive courses in history (see "Core" below) to which the student adds either a thesis (see "Thesis") or additional research papers and seminars (see "Research Papers").

The M.A. program offers all students intermediate training preparatory to doctoral programs, advanced training leading to teaching and other careers, and disciplined advanced work for students with avocational interests in history.

The department offers study in European history (including Britain and Russia), United States history, East Asian history, Latin American history, and African and Middle Eastern history. Within these general areas of study, students may specialize in the following fields:

Europe to 1715
Europe since 1715
United States to 1865
United States since 1865
Latin America
China and Japan since 1800
Africa and the Middle East
Admission Requirements
Applicants must meet several departmental admission requirements in addition to the general criteria of the Graduate School. The applicant’s undergraduate studies need not have been in history, but they must demonstrate high academic potential. Normally, only students with a 3.2 grade point average in their undergraduate major are admitted; most successful applicants have higher grades. Applicants must submit three letters of recommendation, preferably from former teachers, and a sample of their written work. The sample may or may not be academic work, and length is not a consideration. Applicants must take the Graduate Record Examination (GRE) Aptitude Test; the Advanced Test is optional. The departmental Graduate Committee bases its admission decisions upon the undergraduate transcript, the letters of recommendation, the sample of written work, and the GRE scores.

Core
All candidates for the M.A. degree in history must complete a core of 26 hours of course work (excluding Thesis credit), with no more than nine hours of history and related fields at the 300 level (except History 393). This 26-hour core must include seven courses at three credit hours each (21 hours in all), and one five-credit-hour writing seminar (consisting of a two-credit-hour research paper supplement to a three-credit-hour, 400-level history readings course).

To earn the 26-hour core, candidates select three fields of study, the first with a minimum of four courses (each at three credit hours or more), the second and third with a minimum of two courses each (at three credit hours or more). Each field must include at least one 400-level course.

In addition to this core, each candidate must select one of the two following degree options:

1) Thesis Option—32 hours total
In addition to the Core, the candidate choosing this option must enroll for six hours of thesis credit and submit an acceptable thesis. The thesis is based on original research in primary sources. Normally, theses do not exceed 100 pages of text. Candidates receive a grade for the thesis upon its approval by an advisory committee. The committee consists of a major professor, who directs the thesis, and two other professors selected by the candidate after consultation with the major professor. One member of the committee must be outside the candidate’s general area of study, and one may be outside the history department.

The advisory committee conducts an oral examination on the thesis during the candidate’s last semester of residence. The committee decides whether the candidate shall pass, fail, or fail with the option to repeat the oral examination at a later date. Students may not take the oral examination more than twice. The second examination must be held no less than one and no more than two semesters following the date of the first examination. Summer session may be counted as a semester under this procedure, but students should be aware of the difficulties involved in assembling faculty committees during the summer.

Thesis candidates must demonstrate competence in one foreign language or in quantitative methods as applied to historical study. Candidates may demonstrate foreign language competence by satisfactory performance on a GSFLT examination or by other means approved by the department Graduate Committee. Candidates may demonstrate quantitative methods competence by satisfactory performance in History 300, Selected Topics in History: Quantitative Methods in Historical Research, or by other means approved by the Graduate Committee.

2) Research Paper Option—36 hours total
To complete this option, the candidate must complete two five-credit-hour seminars (each consisting of a 400-level reading seminar plus two credit hours of supplementary work on a substantial research paper), in addition to the core. The candidate may choose a fourth field in addition to the three already represented in the core to complete this option.

Career Outlook
An important rationale for the discipline of history is its centrality to the university curriculum and to the life experience. The ability to put events or developments into the context of the past is useful as well as pleasurable. Responses to a questionnaire to our graduates have indicated that alumni in a wide variety of fields are as conscious of and appreciative of their training in history as those who have chosen it as a profession. Men and women in business, lawyers, bankers, librarians, and foreign service officers have all found it relevant to their careers. Study and research in history sharpens organizational and writing skills that are important to success in business and the legal profession. A growing interest in local history has created employment opportunities in museum, archival, and preservation work, broadening the historian’s traditional options of teaching, civil service, and social service.

Writing history accurately is a public service. To break off a significant fragment of the human past and examine it closely is an act of social importance; historical research contributes to society’s store of useful memory. Writing a history essay or monograph carries with it the stirring experience of first-hand knowledge. One who paints, writes poetry, or carves in stone understands the problems of the masters better than any armchair critic. The writer of history gains an astuteness in understanding it. In facing social, political, or moral questions, a keenness for historical truth is valuable mental equipment.
Mathematics and Computer Science

Faculty
Edward Z. Andalafte, Chairman, Professor
Ph.D., University of Missouri-Columbia
Raymond Balbas, Professor
Ph.D., University of California-Los Angeles
Deborah Tepper Haimo, Professor Emeritus
Ph.D., Harvard University
Wayne L. McDaniel, Professor
Ph.D., St. Louis University
Jerrold Siegel, Professor
Ph.D., Cornell University
William Connett, Professor
Ph.D., Purdue University
Grant V. Welland, Professor
Ph.D., University of Wisconsin-Madison
Chal Benson, Associate Professor
Ph.D., Yale University
William Connell, Associate Professor
Ph.D., University of Chicago
Ronald Dotzel, Associate Professor
Ph.D., Rutgers University
Richard Friedlander, Associate Professor
Ph.D., University of California-Los Angeles
Lloyd Richardson, Associate Professor
Ph.D., Peabody College of Vanderbilt University
A. Prabhakar Rao, Associate Professor
Ph.D., University of California, Berkeley
Gail Retcliff, Associate Professor
Ph.D., Yale University
Stephen Selesnick, Associate Professor
Ph.D., University of London
Alan L. Schwartz, Associate Professor
Ph.D., University of Wisconsin-Madison
Frederick Wilke, Associate Professor*, Associate Chairman
Ph.D., University of Missouri-Columbia
Sanjiv K. Bhatia, Assistant Professor
Ph.D., University of Nebraska-Lincoln
Haiyan Cai, Assistant Professor
Ph.D., University of Maryland
W.L. Guik, Assistant Professor
Ph.D., New Mexico State University
Cezary Janikow, Assistant Professor
Ph.D., University of North Carolina at Chapel Hill
Peter E. Maher, Assistant Professor
Ph.D., University College of Wales, Aberystwyth
Kyungho Oh, Visiting Assistant Professor
Ph.D., Purdue University
Xiaodong Luo, Visiting Assistant Professor
Ph.D., Cornell University
Shivering Zhao, Assistant Professor
Ph.D., University of South Carolina
David Welch, Specialist in Computer Science
Ph.D., University of Notre Dame
John Antognoli, Senior Lecturer, Coordinator of Evening Mathematics
M.A., University of Missouri-St. Louis
Dorothy Gotway, Lecturer
M.A., University of Kansas-Lawrence
Marlene Gustafson, Lecturer
M.A., Western Reserve University
Mark Nugent, Lecturer
M.S., St. Louis University
Shahla Peterman, Lecturer
M.S., University of Wisconsin-Madison
Gillian Raw, Senior Lecturer
M.A., Washington University

Paul Schneider, Senior Lecturer
M.A., St. Louis University
Cynthia Siegel, Senior Lecturer
M.S., University of Chicago
David Stevens, Visiting Lecturer
M.A., University of Missouri-Columbia

* members of Graduate Faculty

General Information

Degrees and Areas of Concentration
The mathematics and computer science department offers work leading to the B.A. in mathematics, the B.S. in applied mathematics, the B.S. in computer science, and in cooperation with the School of Education, the B.S. in secondary education with a major in mathematics. The applied mathematics program has three emphasis areas: statistics, classical applied mathematics, and computational mathematics.

The department also offers minors in computer science, mathematics, and statistics.

The program leading to the B.A. in mathematics is flexible, providing a broad introduction to the important branches of mathematics, but giving students the depth necessary to pursue graduate study successfully. The B.S. in applied mathematics and the B.S. in computer science provide a solid foundation for the student interested in applications of mathematics, including computer-related mathematics. The B.S. in secondary education introduces students to those branches of mathematics most relevant to teaching secondary-school mathematics.

The mathematics and computer science department also offers work leading to the M.A. in mathematics. The program is designed to ensure that students will obtain a strong background in the areas of analysis and algebra. Through appropriate choice of electives, students may build upon this background a degree program well suited to preparation for teaching at the high school, junior college, or four-year liberal arts college level; a program directed toward application of mathematics in industry or business; or a program designed to serve as a basis upon which students may continue toward a Ph.D. in mathematics.

Mathematical Sciences Alumni Scholarship
The Mathematical Sciences Alumni Scholarship is a monetary award for an outstanding junior or senior, majoring in mathematical sciences, as evidenced by a grade point average of 3.5 or higher in at least 24 graded hours of course work at the University of Missouri-St. Louis, and superior achievement in courses in mathematical sciences. Application forms may be obtained from the Department of Mathematics and Computer Science. The deadline for application is March 15.
80. Analytic Geometry and Calculus I
175. Analytic Geometry and Calculus II
180. Analytic Geometry and Calculus III
202. Introduction to Differential Equations
245. Elementary Linear Algebra
250. Introduction to Modern Mathematics
303. Applied Mathematics I
320. Mathematical Statistics I
321. Mathematical Statistics II
323. Numerical Analysis I
324. Numerical Analysis II
327. The Calculus of Variations
335. Theory of Numbers
340. Introduction to Abstract Algebra I
341. Introduction to Abstract Algebra II
345. Linear Algebra
350. Probability
355. Discrete Mathematics
366. Foundations of Geometry
367. Introduction to Non-Euclidean Geometry

Mathematics and Computer Science

Also required are two additional courses in mathematical sciences, numbered above 250, as well as Physics 111, Physics: Mechanics and Heat, and Physics 112, Physics: Electricity, Magnetism, and Optics.

b) Probability and Statistics Option The following courses in probability and statistics are required:

232, Applied Statistics II
320, Mathematical Statistics I
321, Mathematical Statistics II
330, Multivariate Analysis
333, Nonparametric Methods in Statistics

Also required are the following computer science courses:

125, Programming Methods I
225, Programming Methods II

Two related area courses should be chosen with the approval of the adviser.

c) Computational Mathematics Option The following courses in mathematics and computer science are required:

125, Programming Methods I
225, Programming Methods II
258, Data Structures and Analysis of Algorithms
323, Numerical Analysis I
324, Numerical Analysis II
355, Discrete Mathematics

Also required are three additional courses numbered above 250, one of which must be in computer science, and two in mathematics.

Bachelor of Science in Computer Science The following course work is required:

1) Mathematics

80, Analytic Geometry and Calculus I
175, Analytic Geometry and Calculus II
180, Analytic Geometry and Calculus III
202, Introduction to Differential Equations
245, Elementary Linear Algebra
250, Introduction to Modern Mathematics

Also required is one of the following:

320, Mathematical Statistics I
323, Numerical Analysis I
355, Discrete Mathematics

2) Computer Science

125, Programming Methods I
225, Programming Methods II
240, Computer Hardware and Small Computer Systems I
241, Computer Hardware and Small Computer Systems II
258, Data Structures and Analysis of Algorithms
328, Programming Languages and Compilers

Also required is one of the following:

376, Operating Systems or
377, Operating Systems Programming

3) Probability and Statistics

132, Applied Statistics I

4) Three further courses in mathematical sciences, numbered above 250, at least one of which must be in computer science. Computer Science 272, Programming Languages Laboratory, may be counted as one of these three courses only if three or more hours of credit are obtained in the course.

Related Area Requirements

In order to broaden student understanding of the sources and uses of mathematics, the department requires all candidates for the B.A. in mathematics, B.S. in education, B.S. in applied mathematics, and B.S. in computer science to complete all courses in any two of the groups below with a grade of C or better.

Restrictions Students are reminded that related area requirements may not be taken on a satisfactory/unsatisfactory basis. Students in either the computer science degree program or the statistics or computational mathematics emphasis areas for the applied mathematics degree program may not choose group 6; students in the classical applied math emphasis area may not choose group 9. Candidates for the B.S. in applied mathematics and the B.S. in computer science who choose group 9 must satisfy group 9 requirements with Physics 221, Mechanics, and Physics 223, Electricity and Magnetism. Students in the computational mathematics emphasis area for the applied mathematics degree are strongly encouraged to choose group 8 as one of their related areas.

Related Area Courses

1) Biology:

Biology 224, Genetics
Biology 226, Genetics Laboratory

2) Biology:

Biology 342, Population Biology
Biology 344, Population Biology Laboratory

and one additional course at the 200 level, or above, excluding Biology 224 and 226. The department recommends Biology 348, Animal Societies and Aggregations, or Biology 380, Advanced Animal Behavior.

3) Chemistry:

Chemistry 11, Introductory Chemistry I
Chemistry 12, Introductory Chemistry II

4) Chemistry:

Chemistry 231, Physical Chemistry I

and another 200-level, or above, chemistry course.

5) Two of the following computer science courses:

Computer Science 225, Programming Methods II, and one of either
240, Computer Hardware and Small Computer Systems I or
258, Data Structures and Analysis of Algorithms

6) Economics:

Economics 365, Introduction to Econometrics
Economics 366, Applied Econometrics
Mathematics and Computer Science

7) Philosophy:
   Philosophy 160, Formal Logic
   Philosophy 260, Advanced Formal Logic
   Philosophy 280, Philosophy of Science

8) Physics:
   Physics 111, Physics: Mechanics and Heat
   Physics 112, Physics: Electricity, Magnetism, and Optics
   Physics 221, Mechanics
   and another 200-level, or above, physics course

9) Business Administration
   Business Administration 375, Operations Research
   Business Administration 385, Operations Research II, or 487,
   Advanced Operations Research Applications, or 483, Production
   and Operations Management

Many students are qualified, as a result of having studied
   calculus in high school, to begin their major with
   Mathematics 175, Analytic Geometry and Calculus II, or
   Mathematics 180, Analytic Geometry and Calculus III. These
   students are urged to consult with a faculty member before
   planning their programs. Credit for Mathematics 80, Analytic
   Geometry and Calculus I, will be granted to those students
   who complete Mathematics 175 with a grade of C or better.

   Students preparing for graduate study should take eight or
   nine mathematics courses at the junior-senior level. The
   department recommends the following mathematics
   courses:
   310, Advanced Calculus I
   311, Advanced Calculus II
   316, Functions of a Complex Variable
   340, Introduction to Abstract Algebra I
   341, Introduction to Abstract Algebra II
   380, Introduction to Topology

Minor Requirements

The department offers minors in computer science,
   mathematics, and statistics. All courses presented for any
   of these minors must be completed with a grade of C or
   better.

Minor in Computer Science The requirements for the minor are:
   125, Programming Methods I
   225, Programming Methods II
   240, Computer Hardware and Small Computer Systems I
   Two additional courses in Computer Science numbered
   above 240. At least one of these must be either Computer
   Science 241, Computer Hardware and Small Computer
   Systems II, or Computer Science 258, Data Structures and
   Analysis of Algorithms. Computer Science 272, Programming
   Languages Laboratory, may be counted as one of these
   courses only if three or more hours of credit are obtained in
   this course. A minimum of two computer science courses
   numbered above 240 must be taken in residence in the
   Department of Mathematics and Computer Science at
   UM-St. Louis.

Minor in Mathematics The requirements for the minor are:
   80, Analytic Geometry and Calculus I
   175, Analytic Geometry and Calculus II
   180, Analytic Geometry and Calculus III

and one additional three-hour mathematics course
   numbered above 180. A minimum of two mathematics
   courses numbered 180 or above must be taken in residence in
   the Department of Mathematics and Computer Science at
   UM-St. Louis.

Minor in Statistics The requirements for the minor are:
   132, Applied Statistics I
   232, Applied Statistics II
   320, Mathematical Statistics I
   321, Mathematical Statistics II

A minimum of two statistics courses numbered above 200
   must be taken in residence in the Department of Mathematics
   and Computer Science at UM-St. Louis.

Graduate Studies

Preliminary Advisement

Incoming students are assigned advisers with whom they
   should consult before each registration period. First-year
   students will meet with their advisers to determine proper
   placement. If necessary, students may have to repeat
   undergraduate course work for no credit.

Degree Requirements

Master of Arts in Mathematics Candidates for the M.A.
   degree must complete 30 hours of work including:

a) The following mathematics courses:
   310, Advanced Calculus I
   340, Introduction to Abstract Algebra I
   345, Linear Algebra

b) Fifteen hours of mathematical sciences courses numbered
   above 400, chosen with prior approval of the graduate
   director.

Note: Requirement a can be waived, but no credit obtained,
   if the student passes an appropriate examination.

Thesis Option The student may elect to work on a thesis in
   which case he or she must enroll in at most six hours of
   Mathematics 490, Master's Thesis.

Up to six hours in courses outside of mathematical sciences,
   numbered 200 or above, may be taken with prior approval of
   the graduate director.
Mathematics and Computer Science

Examination  Candidates for the degree must take an examination which will be oral or written or both at the option of the department. Candidates failing the examination may repeat it after six months. Candidates are not allowed to take the examination more than twice. Students electing to write a thesis will, as part of their examination, present and defend that thesis. The thesis option will be available in various areas but primarily in computing.

Financial Assistance  Financial support is available to full-time graduate students in the form of teaching assistantships. For further information, contact the graduate director.

Career Outlook

Graduates from the Department of Mathematics and Computer Science have little difficulty in finding positions in industry, government, and education. The demand for individuals well trained in statistics, in computer science, and in applied mathematics is greater than the available supply. In addition, a number of graduates in mathematics have elected careers in business and other related fields where they have found their logical and analytical skills to be well rewarded.
Modern Foreign Languages and Literatures

Faculty
Lorna V. Williams, Chairperson, Associate Professor*, Spanish
Ph.D., Indiana University
Francisco Caranas, Professor*, Spanish
Ph.D., University of Valencia
Roland A. Champagne, Professor*, French
Ph.D., The Ohio State University
Marcus Allen, Associate Professor Emeritus*, French
Ph.D., University of Pittsburgh
Alfred F. Goessl, Associate Professor Emeritus*, German
Ph.D., Tulane University
Sonja G. Stey, Associate Professor*, French
Ph.D., University of Cincinnati
Jeanne Morgan Zerrucchi, Associate Professor*, French
Ph.D., Harvard University
Albert J. Camigliano, Assistant Professor*, German
Ph.D., University of Wisconsin
Ingeborg M. Goessl, Assistant Professor*, German
Ph.D., University of Kansas
Paul R. Hoffman, Assistant Professor, German
M.A.
Rolf R. Mueller, Assistant Professor, German, Director, Language Laboratory
Ph.D., University of Kansas
Alcibiades Policarpo, Visiting Assistant Professor, Spanish
Ph.D., Saint Louis University
Deborah Baldini, Lecturer, Spanish
M.A.
Rita Bergoudian, Lecturer, Spanish and French
M.A.
Ludmila Bronstein, Lecturer, Russian
M.A.
Julianne Dueber, Lecturer, Spanish
M.A.
Fernande Gontier, Lecturer, French
Ph.D., University of Virginia
Geremie Hoff, Lecturer, Italian and Spanish
M.A.
Fernando Ojeda, Lecturer, French
M.A.
Martha Peterka, Lecturer, Spanish
Ph.D., University of Missouri-Columbia
Alicia Ramos, Lecturer, Spanish
Ph.D., Northwestern University
Rita C. White, Lecturer, French
M.A.
Phyllis Wright, Lecturer, Latin and Ancient Greek
Ph.D., University of Toronto
*members of Graduate Faculty

The department is proud of the quality of its faculty, foreign language instruction, and the performance of its graduates. To achieve and maintain this quality, the department has a faculty whose members have either native or near-native ability in the foreign languages taught. Each year the department arranges to provide the services of native-speaking assistants to enrich the students' language experience on an informal basis.

General Information

Degrees and Areas of Concentration The Department of Modern Foreign Languages and Literatures offers course work in French, German, and Spanish, leading to the B.A. degree, and a field of concentration in each of these languages for those students seeking the B.S. degree in education. In addition, the department offers lower-level courses in Italian, Latin, Ancient Greek, and Russian. A minor in French, German, or Spanish may also be earned in the department. For details, see "Specific Requirements for the Minor" which appears later in this section.

Each of the languages offering a major has an active foreign language club which enables students to meet with each other and their instructors to practice the language in a casual setting. A resource center is maintained where books, journals, magazines, records, and other foreign language realia are available to students. The language laboratory is a cassette-oriented center, housing a cassette library with holdings in the seven languages taught by the department. In addition, a computer-assisted instruction program is available in the language laboratory.

Cooperative Study Courses in Chinese, Hebrew, and Japanese are available to UM-St. Louis students through Washington University. Portuguese is available through St. Louis University. For information, consult the UM-St. Louis registrar's office.

Study Abroad Language students who have been at the University of Missouri-St. Louis at least one semester and have studied the language at least one year may receive 3-6 credits for formal study abroad during the summer. Prior consent of the department must be obtained for summer courses abroad, and the student must present a transcript for evaluation.

Alumni Scholarship Qualified junior and senior language majors may apply for the Modern Foreign Language Alumni Scholarship that is renewable each semester on a competitive basis. For information, contact the department.

German Majors Students of German may apply for UM-St. Louis Strassenfest Summer scholarships that will partially finance their summer studies abroad. Qualified German majors with junior or senior standing may apply for Strassenfest-funded educational fee waivers. For information, contact the department.

Departmental Honors Candidates for departmental honors in French, German, or Spanish must meet the following requirements:
1) achieve a GPA of 3.5 in the major for all hours attempted beyond the first two semesters (Language Courses 1 and 2)
2) maintain an overall GPA of 3.2
3) successfully complete an honors thesis and project.
Modern Foreign Languages and Literatures

Undergraduate Studies

General Education Requirements
Each language major must satisfy the general education requirements of the University and the general education requirements of the College of Arts and Sciences. Any literature or civilization course offered by the department may be used to meet the humanities requirement.

Satisfactory/Unsatisfactory Option
Any course offered by the department may be taken on a satisfactory/unsatisfactory basis by nonmajors except Language 1, 2, and 101 (or equivalents), Elementary and Intermediate French, German, Ancient Greek, Italian, Latin, Russian, or Spanish; and Language 115a, b, and c, Intensive Language. Courses taken as a part of the major may not be taken on a satisfactory/unsatisfactory basis.

Students who have fulfilled the language requirement (thirteen hours: Language Courses 1, 2, and 101) may enroll in a second language on a satisfactory/unsatisfactory basis.

Specific Requirements or Restrictions
Students entering with no high school language units must enroll in Language 1 or may enroll in Language 115. Language 115 (a, b, and c) is the intensive study of a language and will satisfy the foreign language requirement.

Effective Fall 1987
Students with a degree of proficiency equivalent to 13 hours of college-level work may obtain exemption and/or credit 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.

Students who receive two D's in Intensive Language must complete Language 2 and 101. Students who receive three D's must complete Language 1, 2, and 101. Students wishing to major or minor in the language must pass all three sections with a grade of C or better. (Business students choosing Intensive Language as their language option should consult with the School of Business Administration regarding specific requirements.)

A D in a Language 1 course is a passing grade but not an entrance grade for a Language 2 course. A D in a Language 2 course is a passing grade but not an entrance grade for a Language 101 course or its equivalent.

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

Scientific Language 100
Scientific Language 100 or Commercial Language 105 is the equivalent of Language 101 and may be substituted for Language 101.

Degree Requirements
Students electing to major in the department must have completed Course Number 2 in the language selected with a grade of C or better. Any major who receives a grade of D in any course required for the major must repeat that course.

No course required for the major may be taken on a satisfactory/unsatisfactory basis.

Bachelor of Arts
All students seeking a B.A. in a foreign language must meet the departmental requirement of a minimum of 33 hours (excluding Language 1 and 2). The maximum number of hours that may be taken in the major is 45 (including Language 1 and 2). In addition, students seeking the B.A. in a foreign language who desire a teaching certificate must also take Course 264 (same as SEC ED 274), Curriculum and Methods of Teaching Foreign Languages, and fulfill the professional secondary education requirements of the School of Education.

Bachelor of Science in Education
Those students seeking the B.S.Ed. degree, with a concentration in a foreign language, are required to complete 30 hours of work (excluding credit for Language 1 and 2), of which 12 hours must be on the 300 level. Students working toward a degree in elementary education, with related work in a foreign language, should consult the School of Education concerning their program.

Demonstration of a high level of proficiency may reduce the number of hours required for the major. Native speakers of a foreign language should consult with the college concerning appropriate placement.

Note
Courses that are prerequisites for higher-level courses may not be taken for credit or quality points if the higher level course has been successfully completed.

Students who have not yet received college-level credit in French, German, and Spanish may receive up to 13 hours advanced standing in that language, provided that they take the Department Placement Exam to qualify for enrollment in an upper-level language course, and complete that course with a grade of C or better. In Italian and Russian, ten hours advanced standing may be earned.

Transfer Students
Transfer students majoring in one of the modern foreign languages must complete, at UM-St. Louis, a minimum of 12 graded hours in language courses at the 200 level or above with a grade point average of 2.0 or better in these courses.
Modern Foreign Languages and Literatures

Specific Requirements for the Major

French: Each major in French must complete the following courses:
- 101, Intermediate French, or 105, Commercial French, or the equivalent
- 171, French Conversation and Pronunciation; or 172, French Composition
- 180, Readings in French
- 200, Advanced Grammar
- 211, Contemporary French Civilization
- 280, French Literature I: Middle Ages to Eighteenth Century
- 281, French Literature II: Nineteenth and Twentieth Centuries

and four courses at the 300 level.

After fulfilling the general education and specific major degree requirements, each French major must complete 15 hours of "Additional Requirements" from two or more of the following areas (listings of approved courses may be obtained in the department office): art, English, history, music, philosophy, or political science. Students who major in two foreign languages need to take the 15-hour "Additional Requirements" in only one language. The remaining hours should be selected from university-level courses at UM-St. Louis in one or more of the areas listed below or their university-quality equivalents at other institutions:
- anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and inter-disciplinary.

The following courses are also strongly recommended:
- English 120, Classical Literature in Translation
- English 337, Shakespeare: Tragedies and Romances
- French 110, Modern French Literature in Translation, or 150, European Literature in Translation: Special Topics
- Spanish 110, Spanish Literature in Translation, or 150, European Literature in Translation: Special Topics
- History 333b, Germany in the Modern Age
- Philosophy 105, Twentieth-Century Philosophy

Spanish: Each major in Spanish must complete the following courses:
- 101, Intermediate Spanish, or 105, Commercial Spanish, or the equivalent
- 171, Spanish Conversation and Pronunciation; or 172, Spanish Composition; or 180, Readings in Spanish
- 200, Syntax of the Spanish Language
- 210, Hispanic Culture and Civilization: Spain, or 211, Hispanic Culture and Civilization: Spanish America
- 280, Introduction to Hispanic Literature: Spain
- 281, Introduction to Hispanic Literature: Spanish America

and four courses at the 300 level, one of which must be:
- 399, Seminar on Hispanic Literature

After fulfilling the general education and specific major degree requirements, each Spanish major must complete 15 hours of "Additional Requirements" from two or more of the following areas (listings of approved courses may be obtained in the department office): art, English, history, music, philosophy, or political science. Students who major in two foreign languages need to take the 15-hour "Additional Requirements" in only one language. The remaining hours should be selected from university-level courses at UM-St. Louis in one or more of the areas listed below or their university-quality equivalents at other institutions:
- anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and inter-disciplinary.

German: Each major in German must complete the following courses:
- 101, Intermediate German
- 171, German Conversation and Pronunciation; or 172, German Composition
- 180, Readings in German
- 200, Intermediate Grammar
- 201, German Culture and Civilization
- 202, The German Novel and Tradition
- 203, Intermediate Composition and Conversation

and four courses at the 300 level.

After fulfilling the general education and specific major degree requirements, each German major must complete 15 hours of "Additional Requirements" from two or more of the following areas (listings of approved courses may be obtained in the department office): art, English, history, music, philosophy, or political science. Students who major in two foreign languages need to take the 15-hour "Additional Requirements" in only one language. The remaining hours should be selected from university-level courses at UM-St. Louis in one or more of the areas listed below or their university-quality equivalents at other institutions:
- anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and inter-disciplinary.
Modern Foreign Languages and Literatures

The following courses are also strongly recommended:

French 110, Modern French Literature in Translation, or 150, European Literature in Translation: Special Topics
German 110, Masterpieces of German Literature in Translation
History 332a, History of Spain
History 371, History of Latin America: to 1808
History 372, History of Latin America: Since 1808
Political Science 253, Political Systems of South America
Political Science 254, Political Systems of Mexico, Central America, and the Caribbean

Specific Requirements for the Minor
A minor in French, German, or Spanish may be earned by completing six courses in the language beginning with Language 101 or its equivalent. These courses must be completed with a grade of C or better. Transfer students must complete at least two courses for the minor at UM-St. Louis. After Language 101, students must complete the following courses in the language of their chosen minor:

French
French 160, French Phonetics, French 171, Conversation and Pronunciation, or French 172, Composition
French 180, Readings in French
French 280, French Literature I, or French 281, French Literature II
Plus any two additional courses on the 200 level or above.

German
German 171, Conversation and Pronunciation, or German 172, Composition
German 180, Readings in German
German 201, Masterpieces of German Literature, or German 202, The German Novelle and Drama
Plus any two additional courses on the 200 level or above.

Spanish
Spanish 171, Conversation and Pronunciation, or Spanish 172, Composition, or Spanish 180, Readings in Spanish
Spanish 200, Syntax of the Spanish Language, or Spanish 271, Advanced Spanish Conversation
Spanish 280, Introduction to Hispanic Literature: Spain, or Spanish 281, Introduction to Hispanic Literature: Spanish America
Plus any two additional courses on the 200 level or above.

Native Speakers
For all languages, native speakers must complete five courses on the 200 level or above.

Career Outlook
Graduates with a foreign language degree may elect to enter the fields of teaching, business, journalism, communications, or government, or to pursue advanced degrees in their specialty. It is especially recommended that students consider a double major or another discipline and a language. A language then becomes an asset that makes graduates more adaptable to the demands of international communication in their second major discipline and hence more competitive and marketable upon completion of the B.A. degree.
Music

Faculty
Leonard Ott, Chairperson, Assistant Professor*
Ph.D., Michigan State University

Warren T. Bellis, Associate Professor Emeritus
D.M.A., University of Michigan

John Hylton, Associate Professor*
D.Ed., Penn State University

Kenneth E. Miller, Professor*
Ph.D., Northwestern University

Evelyn Mitchell, Professor*
Arnold Perris, Professor Emeritus
Ph.D., Northwestern University

James Richards, Associate Professor*
Ph.D., University of Rochester, Eastman School of Music

Diane Touliatos-Banker, Professor*
Ph.D., Ohio State University

Bruce VanNess, Associate Professor*
D.M.A., University of Illinois at Urbana-Champaign

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

Gregory Fox, Assistant Professor*
Ed.D., University of Illinois at Urbana-Champaign

Mark Madsen, Assistant Professor*
D.M.A., University of Arizona

Jan Parker, Lecturer (Voice)
M.M., University of Nebraska

Carolee Coombs-Stacy, Lecturer (Voice)
Hubert Dury, Lecturer (Piano)
M.M.

Jan Gippo, Lecturer (Flute)†
M.M.

Henry Loew, Lecturer (String Bass)†

James Martin, Lecturer (Euphonium)†
B.A.

James Meyer, Lecturer (Clarinet)†
M.A.

Robert Mottl, Lecturer (Bassoon)†
M.M.

Roland Pandolfi, Lecturer (Horn)†
Jan Parker, Lecturer (Voice)
M.M.

Alan Rosenkotter, Lecturer (Guitar)
B.S.

Janis Smith, Lecturer (Flute)†
B.M.E.

Sue Stubbins, Lecturer (String Bass)
B.M.

Robert Tobler, Lecturer (Trombone)
M.M.

Yuan Tung, Lecturer (Cello)

Haruka Watanabe, Lecturer (Violin)†
M.M.

Carolyn White, Lecturer (Double Bass)†
B.M.

*members of Graduate Faculty
†member, Saint 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.

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 whom are members of the Saint 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 Thirteen performing ensembles are open to all by audition with credit optional:
40. University Chorus
41. The University Singers
50. University Orchestra
52. University Band
53. University Wind Ensemble
54. Chamber Ensemble: a, brass; b, jazz combo; c, percussion; d, strings; e, voice; f, woodwinds
55. Jazz Ensemble
56. 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.

Students may complete any number of hours of applied music (private lessons) toward a degree. Nonmusic majors may complete no more than eight hours in music-performing organizations (Music 40, University Chorus; 41, University Singers; 50, University Orchestra; 52, University Band, et seq.) toward graduation, including credit transferred. Courses in applied music (private lessons and performing organizations) do not fulfill the humanities general education requirement. Department courses which meet the non-Euro-American study requirement are Music 9, Non-Western Music I, and Music 10, Non-Western Music II.
Music

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. Auditions are scheduled from January to May for the fall semester, a limited number are held in December for the winter semester. APPLICANTS MUST BE ADMITTED TO THE UNIVERSITY BEFORE REQUESTING AN AUDITION. All students in Applied Music must pass an examination to confirm their level of performance skills before faculty approval for enrollment in Music 244 is granted. This examination usually will be taken in lieu of the Applied Music jury for Music 145.

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 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 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 areas, are required:

- wind and percussion students— Band;
- string students— Orchestra;
- voice students— University Singers or Chorus;
- 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.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. Nonkeyboard players are required to pass an exam in piano proficiency: Music 118, Intermediate Piano Proficiency, or equivalent for instrumentalists, or Music 120, Intermediate Piano Proficiency, or equivalent for vocalists.

In addition to fulfilling the general education and specific major degree requirements, students are to take the remaining hours required to complete the Bachelor of Arts in Music and Bachelor of Music degrees from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary. 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, Theory of Music I
- 31A, Theory of Music II
- 31B, Aural Training II
- 130A, Theory of Music III
- 131A, Theory of Music IV
- 131B, Aural Training IV
- 141, Orchestration

**Music History and Literature**
- 101, History of Western Music I
- 102, History of Western Music II
- and at least one 300-level course.

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, Conducting I
- 192, Senior Research
- **Applied Area** 12 credit hours of private lessons
- **Ensemble** Four hours maximum credit

**Bachelor of Music in Music Education**
In addition to the required Core Curriculum, candidates must complete the following:
- **Applied Area** 10 credit hours of private lessons
- **Practicum**
  - 151, Conducting I
  - 152, Conducting II
  - 161, Junior-Senior High School Materials Laboratory
  - 162, Elementary School Materials—Conducting Laboratory
- **Instrumental Certification** 10 credit hours
  - 25, 26, 27, and 28, Instrumental Techniques
  - 123, Intermediate Vocal Techniques, or 44T, Applied Music—Voice
  - 124, Intermediate Vocal Techniques, or 45T, Applied Music—Voice

**Vocal Certification**
- 125, Singer's Diction: French and Italian
- 126, Singer's Diction: English and German
- 25, 26, 27, or 28, Instrumental Techniques (2 credit hours required)
Music

For students whose applied area is not Voice, the following courses are also required:

- **123. Intermediate Vocal Techniques**
- **124. Intermediate Vocal Techniques**

**Ensemble** Four hours maximum credit

**Curriculum and Methods of Teaching** The following courses are required:

- **257. Curriculum and Methods of Teaching Elementary School Music**
- **267. 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. The School in Contemporary Society**
- **ED PSY 312. The Psychology of Teaching and Learning**
- **ELE ED 210. Elementary School Organization, Management, and Techniques of Teaching**
- **SEC ED 213. Techniques of Secondary School Teaching**
- **SEC ED 293. Student Teaching in Music Education, K-6**
- **SEC ED 294. Student Teaching in Music Education, 7-12**
- **SPC ED 313. The Psychology and Education of Exceptional Individuals**

**Bachelor of Music with an Emphasis in Performance**

In addition to the required Core Curriculum, candidates must complete the following:

- **311. Analysis of Twentieth-Century Techniques**
- **312. Tonal Counterpoint**
- **151. Conducting I**
- **152. Conducting II**
- **192. Senior Research**

**Music History and Literature** An additional 300-level course is required.

**Applied Area** 24 credit hours of private lessons (junior and senior recitals required).

**Ensemble** Participation required as follows:

- **Large Group** Four hours maximum credit
- **Chamber Ensemble/Accompanying** Six hours
- **156. Piano Pedagogy** (Keyboard students only)

**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 1 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** Twelve hours of private lessons

**Music History and Literature:** An additional 300-level course is required.

- **09. Non-Western Music I**
- **10. Non-Western Music II**

**Practicum**

- **151. Conducting I**
- **161. Junior-Senior High School Materials Laboratory**

**Ensemble** Four hours maximum credit

**Internship**

- **292. Internship** (replaces Music 192 in Core Curriculum)

**English** One of the following English courses is required:

- **210. Advanced Expository Writing**
- **212. Business Writing**
- **213. Technical Writing**

**Business Administration** The following courses in business administration are required:

- **140. Fundamentals of Financial Accounting**
- **145. Managerial Accounting**
- **206. Basic Marketing**
- **210. Management as a Behavioral Science I**

Two courses selected from the following list must also be taken:

- **103. Introduction to Business Data Processing**
- **156. Legal Environment of Business**
- **256. Business Law**
- **270. Management of Promotion**
- **301. Buyer Behavior**
- **309. Personnel Management**
- **311. Management as a Behavioral Science II**
- **312. Industrial and Labor Relations**
- **347. Income Taxes**

**Note:** The following courses fulfill general education requirements and are prerequisites to the required business administration courses:

- **Psychology 3. General Psychology, or Sociology 10. Introduction to Sociology**
- **Economics 51. Principles of Microeconomics**

**Curricula for Minors**

**Minor in Music** Candidates must complete the following courses (24 hours):

**Music Theory**

- **30A. Theory of Music I**
- **31A. Theory of Music II**
- **30B. Aural Training I**
- **31B. Aural Training II**

**Music History and Literature**

- **101. History of Western Music I**
- **102. History of Western Music II**

**Applied Area** Four credit hours of private lessons

**Ensemble** Two credit hours (four hours maximum credit)

Six additional credit hours to be chosen from courses such as the following:

- **130A. Theory of Music III**
- **130B. Aural Training III**
- **131A. Theory of Music IV**
- **131B. Aural Training IV**
- **141. Orchestration**
- **116. Intermediate Piano Proficiency** (Prerequisite: Music 15)
- **118. Intermediate Piano Proficiency**
- **Any 300-level Music History and Literature course**
- **Applied Music courses in sequence**
- **Any Ensemble course**
Music

Music education methods courses and instrumental techniques courses may not be taken to complete this minor.

Nonkeyboard players are required to pass an exam of piano proficiency (Music 15 or equivalent).

A GPA of 2.5 for all music hours is required to complete this minor.

Minor in Music Education (Choral/Vocal, Grades K-9)
The minor in music education is designed to provide a second classification area for students enrolled in other education programs that lead to initial teaching certification.

Candidates must complete the following courses (41 hours):

**Music Theory**
- 30A, Theory of Music I
- 31A, Theory of Music II
- 30B, Aural Training I
- 31B, Aural Training II

**Music History and Literature**
- 101, History of Western Music I
- 102, History of Western Music II

**Music Education**
- *257, Curriculum and Methods of Teaching Elementary School Music
- *267, Curriculum and Methods of Teaching Middle School/ Junior High School General Music

**Practicum**
- 151, Conducting I
- 161, Elementary School Materials: Conducting Laboratory
- 162, Junior-Senior High School Materials Laboratory

**Ensemble**
- 14/15, Piano Proficiency
- 40/41, Chorus or University Singers
- 116/118, Intermediate Piano Proficiency

**Applied Music, Voice** (at least two hours must be private rather than class voice)

*Elementary education majors will omit Music 177 from their regular elementary program to take these courses.

Also required, as applicable, is SEC ED 393, Student Teaching.

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 29 credit hours from the following:

**Music Theory**
- 30A, Theory of Music I
- 31A, Theory of Music II
- 32, Theory of Jazz

**Piano Proficiency**
- 14/15, Piano Proficiency
- 116, Intermediate Piano Proficiency
- 117, Jazz Keyboard Harmony

**Ensemble**
- Two credit hours minimum, to be selected from:
  - 54b, Jazz Combo
  - 54c, Voice
  - 55, Jazz Ensemble

**Jazz Improvisation**
- 20, Jazz Improvisation Laboratory (two credit hours/Music 20 repeated

**Applied Area**
- Four credit hours of private lessons

**Career Outlook**

A music degree is the basis for a career in professional performance, in music education as a school or private studio teacher, or as a church music director. Opportunities also exist in the music industry in recording, publishing, radio programming, manufacturing, and retail business. A trained artistic mind also can be an advantage in the fields of advertising, public relations, and consumer services.

A number of UM-St. Louis music graduates have been readily accepted into leading graduate schools. Many are pursuing successful careers in music education, in business and industry, or as professional musicians.
Faculty
Lawrence H. Davis, Chairperson; Associate Professor*
Ph.D., University of Michigan
James F. Doyle, Professor*
Ph.D., Yale University
Peter Fuss, Professor*
Ph.D., Harvard University
Robert M. Gordon, Professor*
Ph.D., Columbia University
Ronald Munson, Professor*
Ph.D., Columbia University
David A. Conway, Associate Professor*
Ph.D., Princeton University
John E. Parks-Clifford, Associate Professor*
Ph.D., University of California-Los Angeles
Stephanie A. Ross, Associate Professor*
Ph.D., Harvard University
Paul A. Roth, Associate Professor*
Ph.D., University of Chicago
Piers Rawling, Assistant Professor
Ph.D., University of California-Berkeley
Henry L. Shapiro, Assistant Professor*
Ph.D., Columbia University
David J. Griesedieck, Lecturer
M.A., Princeton University

*members of Graduate Faculty

Philosophy continues to keep alive the tradition begun by Socrates, Plato, and Aristotle of critically examining one's most cherished assumptions. Moreover, it deals with questions that are common to several areas of inquiry, such as art, ethics, the social sciences, the natural sciences, and the various professions. The study of philosophy also encourages logical precision, a heightened awareness of assumptions used in any discussion, and an attitude of both open-mindedness and responsible criticism toward new and unusual ideas. These skills are particularly useful for students planning careers in law, business, computer science, writing, or other fields requiring such disciplines of mind. For these reasons many students have found it useful to combine a major in another field with a major in philosophy. To accommodate such students, the department has a special program for double majors.

The philosophy faculty has an unusually wide range of research interests. Faculty members have written books and articles addressing not only the classical and traditional concerns of philosophy, but contemporary controversies in the fields of law, psychology, sociology, political theory, biology, medical ethics, theology, logic, and philosophy of history as well. For their research in some of these areas, members have been awarded a number of national research grants, including fellowships from the American Council of Learned Societies and the National Endowment for the Humanities.

In keeping with this emphasis on diversity, the department is represented by scholars trained in widely different approaches to philosophy, such as the analytic tradition, Continental idealism and existentialism, Marxist dialectic, and Oriental modes of thought.

General Information

Degrees and Areas of Concentration The philosophy department offers three options leading to the B.A. degree in philosophy: one for students intending to enter graduate school in philosophy; another for students seeking a general liberal arts education as their ultimate academic objective or as preparation for professional degrees such as law; and the third for students taking a double major in philosophy and another discipline. Each option offers a balance between training in the techniques of logical analysis, study of philosophical classics, and examination of selected problems in philosophy. The department also offers a minor in philosophy for students wishing to pursue a particular interest in philosophy in an organized way.

Undergraduate Studies

General Education Requirements
Majors must meet the University and College general education requirements. Any course in philosophy will satisfy the humanities requirement. Philosophy 120, Asian Philosophy, also satisfies the college non-Euro-American requirement. Majors may not count philosophy courses taken on a satisfactory/unsatisfactory basis toward the degree requirements.

Degree Requirements

Bachelor of Arts in Philosophy
Students must complete one of the following programs. At least 30, but not more than 45, hours are required for a major.

Option One Designed to prepare students for graduate work in philosophy, the program requires:
1) Philosophy 160, Formal Logic
2) History of Philosophy
Choose alternative a or b:
 a. Two courses from Philosophy 101-107 sequence and one course from Philosophy 201-210 sequence.
b. Philosophy 10, Western Philosophy I, and Philosophy 11, Western Philosophy II; one course from Philosophy 101-107 sequence; and one course from Philosophy 201-210 sequence.
3) Normative Philosophy
One course from the following:
Philosophy 230, Social and Political Philosophy
Philosophy 236, Classical Ethical Theories
Philosophy 238, Recent Ethical Theory
Philosophy 269, The Marxist Heritage
4) One of the following courses:
Philosophy 240, Theories of Knowledge
Philosophy 245, Metaphysics
5) Philosophy and Other Disciplines
One course from the Philosophy 270-290 sequence.
Philosophy

When appropriate, Philosophy 250, Special Topics in Philosophy, may be used to satisfy the requirement of number 3, 4, or 5.

Students in this program should take Greek, Latin, French, or German to satisfy the foreign language requirement.

Option Two Less restrictive, this option is intended for general liberal arts students or students whose special interests, such as prelaw preparation, do not fall clearly into any one traditional academic department. Requirements include:

1) Philosophy 160, Formal Logic

2) History of Philosophy
Choose alternative a or b:
   a. two courses from the following:
      Philosophy 101-107 sequence
      Philosophy 201-210 sequence
   b. Philosophy 10, Western Philosophy I, and Philosophy 11, Western Philosophy II, and one course from the following:
      Philosophy 101-107 sequence
      Philosophy 201-210 sequence
   c. Twelve hours at the 200 level.

Option Three  Open only to students seeking a double major, the option requires:

1) Philosophy 60, Logic and Language, or Philosophy 160, Formal Logic

2) History of Philosophy
Choose alternative a or b:
   a. two courses from the following:
      Philosophy 101-107 sequence
      Philosophy 201-210 sequence
   b. Philosophy 10, Western Philosophy I, and Philosophy 11, Western Philosophy II, and one course from the following:
      Philosophy 101-107 sequence
      Philosophy 201-210 sequence
   c. Nine hours at the 200 level.

Departmental Honors  Majors with a 3.2 grade point average or higher in philosophy and overall may, with the department's consent, earn departmental honors by:

1) completing at least six hours, but not more than nine, of Philosophy 291, Senior Thesis;
2) submitting an acceptable thesis before the end of the senior year; and
3) passing an oral examination.

In such cases, the 30 hours required for the major will include the credit earned in Philosophy 291, Senior Thesis.

Related Area Requirements  Majors are urged to acquire a familiarity with some other field above the introductory level.

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

Requirements for the Minor  Fifteen hours of course work in philosophy are required: Philosophy 60 or Philosophy 160, and four other courses numbered above 100, including two numbered above 200.

All courses presented for the minor must be completed with a grade of C or better.

Prospective minors are encouraged to consult with members of the department for advice in planning an appropriate sequence of courses.

Related Area Requirements  Majors are urged to acquire a familiarity with some other field above the introductory level.

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

Requirements for the Minor  Fifteen hours of course work in philosophy are required: Philosophy 60 or Philosophy 160, and four other courses numbered above 100, including two numbered above 200.

All courses presented for the minor must be completed with a grade of C or better.

Prospective minors are encouraged to consult with members of the department for advice in planning an appropriate sequence of courses.
Physics and Astronomy
(Formerly Physics)

Faculty
Bernard J. Feldman, Chairperson; Professor
Ph.D., Harvard University
Donald P. Ames, Adjunct Professor
Ph.D., University of Wisconsin
Ta-Pei Cheng, Professor
Ph.D., Rockefeller University
Peter Hänggi, Adjunct Professor
Ph.D., University of Basel
Peter H. Handel, Professor
Ph.D., University of Bucharest
Bob L. Henson, Professor
Ph.D., Washington University
Mary Leopold, Visiting Assistant Professor
Ph.D., Washington University
Jacob J. Leventhal, Curators' Professor
Ph.D., University of Florida
Frank E. Moss, Professor
Ph.D., University of Virginia
Richard D. Schwartz, Professor
Ph.D., University of Arizona
Bruce A. Wilking, Associate Professor
Ph.D., University of Arizona
Ricardo Flores, Assistant Professor
Ph.D., University of California-Santa Cruz
Phil Fraundorf, Assistant Professor
Ph.D., Washington University
Wilfred H. Sorrell, Assistant Professor
Ph.D., University of Wisconsin

*members of Graduate Faculty

General Information

Degrees and Areas of Concentration

The physics department offers course work leading to the B.A. in physics, the B.S. in physics, and in cooperation with the School of Education, the B.A. in physics with teacher certification and the B.S. in education with an emphasis in physics.

The department offers meritorious junior and senior students opportunities to participate in teaching and research to help prepare them for the independent effort required in industry or graduate school. The department's faculty members have a diversity of interests and are active in various experimental and theoretical research areas.

Graduate work leading to the master of science in physics is also offered. The M.S. in physics program combines a sound basis in the fundamental areas of classical and modern physics from both a theoretical and an applied perspective. The program is designed to enable students with undergraduate backgrounds in physics or other technical areas to further their professional development and maintain and improve their technical development. The program is offered almost entirely in the evening to serve students who are employed locally.

The department offers the Ph.D. degree in cooperation with the University of Missouri-Rolla physics department. Students must satisfy the UM-Rolla admission standards, and the UM-Rolla Qualifying Exam in Physics is required of UM-St. Louis Ph.D. students. However, all course work and dissertation research may be completed while the student is in residence at UM-St. Louis.

Undergraduate Studies

General Education Requirements

Majors must complete the University and College general education requirements. Any of the following courses may be used to satisfy the physical science requirement:

Astronomy: 1, 11, 12, 22, 51, 121, 301, 322.
Atmospheric Science: 1.
Geology: 1, 2, 53, 201, 290.

Degree Requirements

All physics majors in all programs must complete the physics core curriculum. In addition to the core courses, each individual program has its own specific requirements.

Core Curriculum

The following physics courses are required:

111, Mechanics and Heat
112, Electricity, Magnetism, and Optics
200, Survey of Theoretical Physics
221, Mechanics
223, Electricity and Magnetism
231, Introduction to Modern Physics I

Also required are:

Mathematics 80, Analytic Geometry and Calculus I
Mathematics 122, Computers and Programming
Mathematics 175, Analytic Geometry and Calculus II
Mathematics 180, Analytic Geometry and Calculus III
Mathematics 202, Introduction to Differential Equations
Chemistry 11, Introductory Chemistry I or equivalent

Note: Students are urged to begin the calculus sequence (Mathematics 80, Analytic Geometry and Calculus I) as soon as possible to avoid delays in graduation.

Students with experience in digital computer programming may be excused from Mathematics 122, Computers and Programming.

Bachelor of Arts in Physics

The B.A. program is tailored to students wishing to preserve the option for specialization in graduate school without sacrificing the advantages of a liberal arts education. In addition to the core curriculum, including the foreign language requirement, at least three electives at the 200 or 300 level must be completed. At least 31 hours of physics courses, but no more than 45 hours, are required.

Bachelor of Science in Physics

The B.S. degree provides students with four options: general physics, astrophysics, engineering physics, or geophysics.
Physics and Astronomy

General Physics Option
This option may be elected by students desiring a greater concentration in physics and mathematics and is recommended for students wishing to enter graduate study in physics. At least 48 hours, but no more than 51, are required. In addition to the core curriculum, the following physics courses are required:

- **201**, Elementary Electronics I
- **311**, Advanced Physics Laboratory I
- **323**, Modern Optics
- **325**, Linear Analysis of Physical Systems
- **331**, Introduction to Quantum Mechanics
- **341**, Thermal and Statistical Physics

and three electives at the 200 or 300 level.

Also required are:

- Mathematics 245, Elementary Linear Algebra
- Mathematics 303, Applied Mathematics I
- Chemistry 12, Introductory Chemistry II, or equivalent

and one elective in math or computer science.

Astrophysics Option
This option may be elected by students who have interests in the aerospace sciences or anticipate graduate studies in astrophysics. At least 47 hours, but not more than 51, must be taken. In addition to the core curriculum, the following courses are required:

- **Physics 323**, Modern Optics
- **Physics 331**, Introduction to Quantum Mechanics
- **Astronomy 50**, Introduction to Astronomy I
- **Astronomy 51**, Introduction to Astronomy II
- **Astronomy 301**, Astrophysics
- **Astronomy 322**, Observational Astronomy

and two Physics electives at the 200 or 300 level. With permission of the astronomy adviser, there may be substitution of Astronomy 11 or 12 for 50 or 51.

Also required are:

- Mathematics 303, Applied Mathematics I

and one additional elective in mathematics or computer science.

Engineering Physics Option
Students interested in careers in the research and development field of industry should consider this option. This program exposes the student to a basic engineering curriculum as well as to areas of physics with industrial applications such as electronics, modern optics, and linear analysis. At least 46 hours, but no more than 51, are required. In addition to the core curriculum, the following courses are required:

- **Engineering 30**, Engineering Graphics
- **Engineering 124**, Circuits I
- **Engineering 144**, Statics
- **Engineering 145**, Dynamics

Physics 201, Elementary Electronics I
- **Physics 323**, Modern Optics
- **Physics 325**, Linear Analysis of Physical Systems
- **Physics 341**, Thermal and Statistical Physics

Also required are two additional courses in computer science or numerical analysis.

Geophysics Option
This option is designed for students who are interested in careers in the geosciences. It provides preparation for careers in industry or for graduate study. At least 46 hours, but no more than 51, are required. In addition to the core curriculum, the following courses are required:

- **Physics 311**, Advanced Physics Laboratory I
- **Physics 325**, Linear Analysis of Physical Systems
- **Physics 333**, Reflection Seismology
- **Geology 1**, General Geology
- **Geology 2**, Historical Geology
- **Geology 201**, Stratigraphy and Sedimentation

and two additional physics electives at the 200 or 300 level.

Also required are:

- Mathematics 245, Elementary Linear Algebra
- Mathematics 303, Applied Mathematics I
- Chemistry 12, Introductory Chemistry II, or equivalent

Bachelor of Science in Education with an Emphasis in Physics
This program is designed for students wishing to teach physics in secondary schools and gives a firm foundation in the history, philosophy, and principles of physics. Students must fulfill the School of Education's general education requirements. For details, consult the physics department and the School of Education.

Minor in Physics
Students may complete a minor in physics with the flexibility of emphasis on classical physics, modern physics, or a combination of the two areas. The following physics courses are required:

- **111**, Mechanics and Heat
- **112**, Electricity, Magnetism, and Optics
- **200**, Survey of Theoretical Physics

and two additional emphasis courses chosen from the following physics courses:

- **201**, Elementary Electronics
- **221**, Mechanics
- **223**, Electricity and Magnetism
- **231**, Introduction to Modern Physics

A GPA of at least 2.0 is required in courses presented for a minor. It is required that a student complete a minimum of six hours of graded work in 100 level or above courses on the UM-St. Louis campus.
Physics and Astronomy

Graduate Studies

Admission Requirements
In addition to meeting the Graduate School general admission requirements, applicants must submit scores from the Graduate Record Exam (GRE) physics test. The department requires applicants to have adequate backgrounds in such areas as mechanics, thermodynamics, electromagnetism, optics, electronics, and modern physics. Students admitted to the program with deficiencies in these areas are required to take appropriate undergraduate courses. If necessary, a remedial program is determined in consultation with the department graduate studies director at the time of application for admission.

Graduate Degree Requirements

Master's: A student must complete 30 credit hours in graduate physics courses with at least 15 of these at the 400 level; of the latter 15, a maximum of three credit hours may be counted for thesis research. The writing of a thesis is optional. A comprehensive examination must be passed, which includes a defense of the thesis if the student has chosen to write one. A grade point average of 3.0 must be maintained during each academic year. The requirements must be fulfilled within six years from the time of admission. Two-thirds of required graduate credit must be taken in residence. No language requirement.

Doctorate: A minimum of 72 hours with satisfactory performance. Residency requirement of three years/six semesters (for those with master's degree, two years/four semesters) at UM-St. Louis and/or cooperating UM-Rolla campus. Ph.D. qualifying exam, dissertation, dissertation exam administered in cooperation with UM-Rolla. Language requirement—pass examination or equivalent of one year collegiate level course work with grade of B or better; overall requirement of B grades or better.

Thesis: Thesis may be written in absentia.

Special Equipment, Facilities, or Programs: The supporting facilities of the University of Missouri-St. Louis include a modern library with holdings in excess of 390,000 bound volumes, a microtext department containing 72,000 titles, and approximately 87,000 titles in the government documents section. A DEC Vax-8600 computer clustered with a network of MicroVax's is shared with the chemistry department. An IBM 4381 is also available. The physics department operates a machine shop and an electronics shop. In addition, the department maintains a library containing some of the most frequently used physics journals.

Typical Program:

First Semester
Physics: 400-level and 300-level course
Total: 6 hours

Second Semester
Physics: 400-level and 300-level course
Total: 6 hours

Third Semester
Physics: 400-level and 300-level course
Physics 490, Thesis Research or Seminar
Total: 9 hours

Fourth Semester
Physics: 400-level and 300-level course
Physics 490 Thesis Research or Seminar
Total: 9 hours

Career Outlook

Many of our students have been successful in subsequent graduate studies in astronomy and meteorology as well as in physics. Our alumni have pursued graduate studies and earned doctorate degrees at institutions such as Cornell University, University of Wisconsin, Washington University, University of Chicago, and others. The many students who elected a career in industry are now working in a variety of settings for such firms as International Business Machines, Emerson Electric, Southwestern Bell, Hewlett-Packard, McDonnell-Douglas, and the National Center for Atmospheric Research. Several former students are currently teaching physics in high schools around the St. Louis area.
Political Science

Faculty

Dennis R. Judd, Chairperson, Professor*  
Ph.D., University of Illinois  
Norton E. Long, Curators' Professor Emeritus  
Ph.D., Harvard University  
Ph.D., University of Chicago  
Edwin H. Fedder, Professor Emeritus*  
Ph.D., American University  
Werner F. Grunbaum, Professor Emeritus*  
Ph.D., University of Chicago  
Kenneth F. Johnson, Professor Emeritus*  
Ph.D., University of California-Los Angeles  
E. Terrence Jones, Professor*, Dean, College of Arts and Sciences  
Ph.D., Georgetown University  
Carol W. Kohfeld, Professor*; Director of MPPA Program  
Ph.D., Washington University  
Lance T. LeLoup, Professor*; Director of Public Policy Research Centers  
Ph.D., Ohio State University  
C. Peter Magrath, Professor*; President, University of Missouri  
Ph.D., Cornell University  
Eugene J. Meehan, Curators' Professor of Political Science*  
Ph.D., London School of Economics  
Frederic S. Pearson, Professor*  
Ph.D., University of Michigan  
Lyman T. Sargent, Professor*  
Ph.D., University of Minnesota  
Andrew Glassberg, Associate Professor*  
Ph.D., Yale University  
Joel N. Glassman, Associate Professor*  
Ph.D., University of Michigan  
Barbara L. Graham, Associate Professor*  
Ph.D., Washington University  
Michele M. Hoyman, Associate Professor*  
Ph.D., University of Michigan  
Michael B. MacKuen, Associate Professor*  
Ph.D., University of Michigan  
Joyce M. Mushaben, Associate Professor*  
Ph.D., Indiana University  
David B. Robertson, Associate Professor*  
Ph.D., Indiana University  
J. Martin Rochester, Associate Professor*  
Ph.D., Syracuse University  
J. Frederick Springer, Associate Professor*  
Ph.D., University of California-Davis  
Lana Stein, Associate Professor*  
Ph.D., Michigan State University  
Linda Kowalcy, Assistant Professor  
Ph.D., The Johns Hopkins University  
Calvin J. Mouw, Assistant Professor*  
Ph.D., Michigan State University  
Michael S. Bailey, Assistant Professor  
Ph.D., The Ohio State University  
Richard L. Paeelle, Jr., Assistant Professor  
Ph.D., The Ohio State University  
Eduardo Silva, Assistant Professor  
Ph.D., University of California-San Diego  
Kenneth P. Thomas, Assistant Professor  
Ph.D., University of Chicago  

*members of Graduate Faculty

Political science faculty are nationally-known scholars in their respective fields, dedicated to high-quality teaching and education. Department faculty members recently have received distinctions such as Brookings and Fulbright fellowships, national, state, and local research grants, AMOCO good teaching awards, and other honors. The faculty has published its research in more than 56 books and 300 articles in scholarly journals and is devoted to using research findings to improve teaching.

In 1987 the Department of Political Science was designated as a Center of Eminence by the Board of Curators. This makes political science one of only two such programs on the St. Louis campus and ten in the entire University of Missouri system to be so designated. The department was selected because of its excellence in research and teaching and the potential for the department to achieve even greater national and international recognition in the 1990s.

General Information

Degrees and Areas of Concentration  
The political science department offers undergraduate work leading to the B.A. degree in political science, B.S. degree in public administration, and, in cooperation with the School of Education, the B.S. in education with an emphasis in social studies. (See School of Education section in this Bulletin for details.) Minors in political science are available to students who are majoring in another discipline with a special interest in law, government, and politics.

Principal areas of concentration include urban politics, American political processes and behavior, international politics, comparative politics, public policy and administration, public law, and political theory. In many courses, emphasis is placed on the ways in which public policies are developed and administered. In addition to formal course work, internships are available in which the student can relate classroom learning to practical field experience.

The political science department also offers graduate courses leading to the M.A. and Ph.D. in political science. The M.A. program in political science offers advanced education for those seeking careers in government, business, community, or not-for-profit agencies. The principal foci of the 33-hour program are public administration and public policy analysis/evaluation in the local, state, national, and international areas. A collaborative program is available for students interested in the administration of justice field, and the flexibility of the general master's degree allows for individualized programs in urban politics, prelegal education, American national government, comparative politics, international relations, and political theory.

The Ph.D. in political science emphasizes theoretical, analytic, and substantive approaches to public policy. Core courses include research methods, normative and empirical theory, and policy processes and institutions. Doctoral candidates, in consultation with the faculty, develop a policy concentration, many of which are interdisciplinary. Internships, when appropriate, may be a component of many programs. As a research-oriented Ph.D., all successful doctoral candidates must complete a dissertation which makes a significant contribution to knowledge in the field.
Political Science

Most graduate classes are scheduled so that those employed outside the University can participate in the programs on a part-time basis.

Special Interdisciplinary Degree The Department of Political Science also cooperates with the Department of Economics in the College of Arts and Sciences and the School of Business Administration in offering a master's degree in public policy administration (MPPA). For information on the MPPA degree program, see that section in this Bulletin.

Cooperative Programs Political science students may also study overseas, or obtain a certificate in international studies, European studies, East Asian studies, Latin American studies, women's studies, or writing, in conjunction with their political science major. See Certificate Programs in this Bulletin and consult with the Center for International Studies.

Research in political science is encouraged for students at all levels. Assistance is available at UM-St. Louis' Center for Metropolitan Studies, the Center for International Studies, and the office of Computing. The department's membership in the Inter-University Consortium for Political and Social Research provides access to a wide range of survey data on local-state-national, comparative, and international politics. In addition, extensive research opportunities are available within the metropolitan St. Louis area. Financial assistance is available for qualified students; details can be obtained from the department office.

Course Designations The department has designated the following instructional areas for the political science student:
- Public Law
- American Politics
- Public Policy and Administration
- Comparative Politics
- Theory and Methodology
- International Relations

In addition to these areas, the department offers several ungrouped courses. All course descriptions are found in a separate Bulletin, titled Description of Courses.

Undergraduate Studies

General Education Requirements
Majors must satisfy the University and College general education requirements. Political science courses may be used to satisfy the social sciences requirement. The foreign language requirement for the B.A. degree may be satisfied in any language. Students may count six hours in political science taken on a satisfactory/unsatisfactory basis toward the major. However, no required departmental course may be taken on a satisfactory/unsatisfactory basis.

Departmental Honors
The department awards honors to students having a grade point average (GPA) of 3.2 in the major, an overall GPA of 3.2 (except in extraordinary circumstances), and successful completion of an honors thesis, project, or report.

Degree Requirements

Bachelor of Arts in Political Science
Students must take at least 36 hours, but no more than 45, of political science including Political Science 11, Introduction to American Politics; Political Science 12, Introduction to Comparative Politics; and Political Science 395, Senior Seminar in Political Science. Students must also take at least one course in the political theory and methodology field, with at least one course in four of the following other fields:
- Public Law
- American Politics
- Public Policy and Administration
- Comparative Politics
- International Relations

Students must take at least 18 hours of their political science course work in courses at the 200 or 300 level.

After fulfilling the general education and specific major degree requirements, students are to take the remaining hours required to complete the B.A. in Political Science from courses which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary. The political science department will require students not satisfying course prerequisites to receive permission of the instructor prior to enrollment.

Note As early as possible, students should determine their educational objectives and consult with advisers regarding a plan of study. Depending on career and other interests, students may wish to concentrate their course work in one or two of the above-mentioned fields. See Political Science Minors which is suggestive of the tracks of courses that majors might wish to pursue in some depth.) The plan of study should include recommended electives in other departments to complement a student's political science course work. Students are encouraged to take at least one course in statistics or accounting.

Bachelor of Science in Public Administration

Majors must take at least 33, but no more than 45, hours in Political Science. The following political science courses are required:
- 11, Introduction to American Politics
- 12, Introduction to Comparative Politics
Political Science

102. Research Methods in Political Science
140. Public Administration
242. Introduction to Public Policy
296. Public Affairs Internship, or 296. State Legislative Internship (when appropriate)
395. Senior Seminar in Political Science

In addition, majors must take four of the following five courses:
340. Organizational Politics
342. Public Personnel Management
344. Public Budgeting
348. Program Evaluation
351. Comparative Public Policy and Administration

The following courses from other departments are required:
Economics 51, Principles of Microeconomics
Economics 52, Principles of Macroeconomics
Business Administration 140, Fundamentals of Financial Accounting

plus one of the following statistics courses:
Mathematics 31, Elementary Statistical Methods
Mathematics 132, Applied Statistics
Business Administration 131, Elementary Statistics
Psychology 201, Psychological Statistics
Sociology 226, Quantitative Techniques in Sociology

and one of the following computer science courses:
Mathematics 22, Introduction to Computing
Mathematics 125, Programming Methods I
Business Administration 103, Computers and Information Systems

Satisfactory/Unsatisfactory Option
Students may take six hours in the required courses on a satisfactory/unsatisfactory basis that count toward the major.

Area of Specialization: 12 hours required
Each major must specialize in some substantive or topical area within public administration. Possible areas of specialization include, but are not limited to, planning, budgeting, personnel, management, and evaluation/analysis. Courses designed to fulfill the specialization requirement must be selected in conjunction with the B.S. in public administration program adviser. These hours may be used in partial satisfaction of the general education requirement in social science.

After fulfilling the general education and specific major degree requirements, students are to take the remaining hours required to complete the B.S. in Public Administration from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art appreciation, history, studio, biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music appreciation, history, performance, philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary. The political science department will require students not satisfying course prerequisites to receive permission of the instructor prior to enrollment.

Note Students considering the B.S. in public administration should see a political science adviser as early as possible to plan their program.

Requirements for the Minors
A general minor in political science can be arranged, as well as specialized minors in eight different subfields of the discipline. Interested students should see a faculty adviser to plan a coherent program of study as a minor field.

Students must achieve a cumulative 2.0 GPA in the political science courses chosen to qualify for the minor.

Minor in Political Science, General
Fifteen hours of political science with a 2.0 grade point average. Students may count no more than three hours in political science taken on a satisfactory/unsatisfactory basis toward the minor.

Minor in American Politics
Fifteen hours, chosen from the following political science courses:
11, Introduction to American Politics
130, State Politics
135, Introduction to Urban Politics
165, American Political Thought
228, The Federal Judicial System: Politics, Process, and Behavior
230, The American Presidency
231, Congressional Politics
232, Black Americans and the Political System
233, Introduction to Political Behavior
234, Politics and the Media
235, Political Parties and Elections
240, Bureaucratic Politics
241, The Politics of Business Regulation
242, Introduction to Public Policy
282, United States Foreign Policy
296, Public Affairs Internship (when appropriate)
296, State Legislative Internship (when appropriate)
331, Legislative Processes
332, Studies in American Politics
351, Mock Constitutional Convention
390, Special Readings (when appropriate)

Minor in Comparative Politics
Political Science 12, Introduction to Comparative Politics
plus 12 hours, from the following political science courses:
156, Asian Comparative Politics
251, Comparative Politics of Europe
252, The Politics of Modernization
253, Political Systems of South America
254, Political Systems of Mexico, Central America, and the Caribbean
256, Soviet Political Systems
351, Comparative Public Policy and Administration
359, Studies in Comparative Politics
390, Special Readings (when appropriate)
Political Science

Minor in International Relations
Fifteen hours, chosen from the following political science courses:
- 200, Global Issues
- 180, World Politics
- 282, United States Foreign Policy
- 284, European International Relations
- 285, International Institutions and Global Problem-Solving
- 286, African Politics
- 287, Middle Eastern Politics
- 288, International Politics
- 289, Comparative Foreign Policy
- 291, International Law
- 298, Studies in War and Peace
- 390, Special Readings (when appropriate)

Minor in Political Theory
Fifteen hours, chosen from the following political science courses:
- 60, Civilization and Politics
- 101, Theory and Policy
- 160, Contemporary Political Ideologies
- 165, American Political Thought
- 261, Ancient and Medieval Political Thought
- 262, Modern Political Thought
- 263, Recent Political Thought
- 265, The Marxist Heritage
- 269, The Marxist Heritage
- 368, Studies in Political Theory
- 390, Special Readings (when appropriate)

Minor in Public Administration
Political Science 140, Public Administration
plus 12 hours, chosen from the following political science courses:
- 240, Bureaucratic Politics
- 241, The Politics of Business Regulation
- 242, Introduction to Public Policy
- 245, Urban Administration
- 286, Public Affairs Internship (when appropriate)
- 340, Organizational Politics
- 342, Public Personnel Management
- 343, Studies in Policy Formation
- 344, Public Budgeting
- 345, Urban Planning and Politics
- 346, Program Evaluation
- 349, Studies in Public Administration
- 351, Comparative Public Policy and Administration
- 390, Special Readings (when appropriate)

Minor in Urban Politics
Political Science 135, Introduction to Urban Politics
plus 12 hours, chosen from the following political science courses:
- 227, Urban Law: Poverty and the Justice System
- 245, Urban Administration
- 246, The Politics of Poverty and Welfare
- 286, Public Affairs Internship (when appropriate)
- 295, State Legislative Internship (when appropriate)
- 344, Public Budgeting
- 346, Urban Planning and Politics
- 348, Program Evaluation
- 349, Studies in Public Administration
- 351, Comparative Public Policy and Administration
- 390, Special Readings (when appropriate)

Graduate Studies

Master of Arts in Political Science

Admission Requirements  For admission, a student should have a baccalaureate degree with a minimum grade point average of 2.75 and an undergraduate background in the social sciences. The Graduate Record Examination is required, and scores should be submitted at the time of application. Two letters of recommendation are also requested for each student applying to the program. Students who do not meet these requirements may be admitted upon approval of the department and the dean of the Graduate School. Application materials may be obtained from and should be returned to the office of the director of admissions. Deadlines are July 1 for the fall semester, December 1 for the winter semester, and May 1 for the summer term.
Political Science

Degree Requirements

Beyond the general requirements of the Graduate School, the department requires a minimum of 27 semester hours of course work of which 18 hours must be at the 400 level, and 12 hours must be in core courses in political science, including:

401, Introduction to Policy Research

and three of the following political science courses:

410, Introduction to Policy Analysis
420, Proseminar in Public Law
430, Proseminar in American Politics
440, Proseminar in Public Policy Administration
450, Proseminar in Comparative Politics
460, Proseminar in Political Theory
470, Proseminar in Urban Politics
480, Proseminar in International Relations

Students can plan their degree program to reflect the following six emphasis areas:

American Politics
Comparative Politics
International Politics
Political Process and Behavior
Public Administration and Public Policy
Urban and Regional Politics

Students must also select one of the following exit projects: a six-hour thesis, a six-hour internship, or six hours of additional course work and an approved paper. Students will have a midprogram review at the end of 12-15 hours of course work at which time they will discuss their academic performance and program with a faculty committee and determine the most appropriate exit project. Each candidate is given a final oral review conducted by a faculty committee and focused on the course work completed and the student's chosen exit project.

Ph.D. in Political Science

The doctoral program emphasizes theoretical, analytic, and substantive approaches to public policy analysis and administration. Students are provided an opportunity to link core skills in policy analysis and political science with substantive emphasis in specific policy areas. The program is designed to prepare precareer and midcareer students for advanced positions in policy research and administration, as well as for academic research and teaching.

Admission Requirements Admission and financial aid decisions are made on the basis of past academic record, intellectual ability, and career commitment and performance. Applications are accepted from students who have baccalaureate or graduate degrees. Past graduate work will be credited toward degree requirements as appropriate. Applicants must submit a) complete academic transcripts, b) three letters of recommendation, c) aptitude tests of the Graduate Record Examination and d) a statement of objectives for the course of study. Application materials may be obtained from and should be returned to the office of the director of admissions. Application deadlines are April 1 for Fall Semester and October 15 for Winter Semester.

Graduate Assistantships Stipends for teaching and research 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 department requires 69-75 credit hours beyond the baccalaureate degree for completion of the Ph.D. To ensure sufficient background for doctoral-level policy courses, students must demonstrate appropriate competence in computing and intermediate economics during their course of study. Course requirements are as follows:

Core courses (21 credit hours)
Twenty-one credit hours will be required in the areas of research methods, normative and empirical theory, and policy process and institutions. Contact the department for specific courses.

Additional Requirements (12 credit hours)
In addition, students will select a minimum of 12 credit hours in public policy, theory, or process.

Policy Concentration (15 credit hours)
Students, in consultation with the Program Director, will develop expertise in a substantive policy area. Policy concentrations (many interdisciplinary) include:

American national policy
urban politics and planning
comparative/international policy
policy analysis and research
public budgeting and finance
labor and employment
criminal justice
social welfare

Internship (6 credit hours)
The Ph.D. intern program offers an opportunity to gain first-hand experience in select research and administrative positions. When appropriate, additional course work approved by the program adviser may be substituted for the internship requirement.

General Examination and Dissertation

Upon completion of course work, students are advanced to candidacy by successfully completing two general examinations, the first covering the fields of public policy institutions, processes, and analysis, and the second covering the student's chosen subfield and area of policy concentration. The degree is awarded upon completion and defense of the Ph.D. dissertation (minimum of 18 dissertation credit hours required).
Political Science

Career Outlook

Bachelor of Arts, Bachelor of Science, and Master of Arts in Political Science
Political science graduates have done well in obtaining appropriate employment and in pursuing graduate education. Majors develop communications and decision-making skills, learn to analyze complex policy issues, both domestic and international in scope, and have a thorough understanding of government and politics. Political science is a particularly good undergraduate major for prelaw students. Many other majors pursue graduate education in business, education, public administration, public policy administration, journalism, and many other fields. Guides to careers in political science are available in the department office.

Ph.D. in Political Science
The Ph.D. in Political Science prepares students for three career areas: 1) government leadership and management positions at the local, state, and federal levels (both for new employees and in-service employees); 2) careers in the private sector, particularly positions in public affairs, policy research, and governmental relations departments of corporations as well as consulting firms and non-profit organizations; and 3) research and teaching careers in academic institutions.

Requests for further information about the M.A. or Ph.D. program should be sent to the Director of Graduate Studies, Department of Political Science, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121-4499.
Psychology

Faculty
Patricia A. Reslick, Chairperson; Professor
Ph.D., University of Georgia
Gary K. Burger, Professor
Ph.D., Loyola University
Edmund S. Howe, Professor*; Director, Doctoral Program in General-Experimental Psychology Emphasis Area and Master of Arts Program in Psychology
Ph.D., University of London
Arthur L. Irion, Professor Emeritus*
Ph.D., University of Iowa
Alan G. Krasnow, Professor Emeritus*
Ph.D., University of Texas
Miles L. Patterson, Professor*
Ph.D., Northwestern University
Jayne E. Stake, Professor*; Director, Doctoral Program in Clinical Psychology Emphasis Area
Ph.D., Arizona State University
Georgie T. Taylor, Professor*
Ph.D., University of New Mexico
Fred J. Thurn, Professor*
Ph.D., Washington University
James T. Walker, Professor Emeritus
Ph.D., University of Colorado
Dominic J. Zerbolio, Jr., Professor*
Ph.D., Michigan State University
James A. Breauhg, Associate Professor*
Ph.D., Ohio State University
Robert J. Calyan, Associate Professor*; Director of Gerontology
Ph.D., Northwestern University
Dennis L. Dossett, Associate Professor*
Ph.D., University of Washington
Samuel J. Marwit, Associate Professor*
Ph.D., State University of New York at Buffalo
Jacob L. Oriofsky, Associate Professor*
Ph.D., State University of New York at Buffalo
Susanne M. Rose, Associate Professor*
Ph.D., University of Pittsburgh
Brian Vandenbergh, Associate Professor*
Ph.D., University of Rochester
John J. Boswell, Assistant Professor*
Ph.D., Tulane University
Ruth M. Davies, Assistant Professor*
Ph.D., Washington University
Peter J. DePaulo, Assistant Professor*
Ph.D., Bryn Mawr College
Michael Harris, Assistant Professor
Ph.D., University of Illinois-Chicago
Donald D. Lisenby, Assistant Professor*; Associate Chairperson
Ph.D., Washington University
Therese M. Macan, Assistant Professor
Ph.D., Rice University
Paul W. Paese, Assistant Professor*
Ph.D., University of Illinois
Vetta L. Thompson, Assistant Professor*
Ph.D., Duke University
Mark E. Tubbs, Assistant Professor*; Director, Doctoral Program in Applied Psychology Emphasis Area
Ph.D., University of Houston
Sharon A. Wilcox, Assistant Professor*
Ph.D., University of Michigan
Kenneth Bohm, Adjunct Professor
Ph.D., Pennsylvania State University
Carl Greenberg, Adjunct Professor
Ph.D., Wayne State University
Joseph A. Gier, Adjunct Associate Professor
Ph.D., University of Nebraska

David E. Smith, Adjunct Associate Professor
Ph.D., Colorado State University
Mareah J. Avdon, Adjunct Assistant Professor
Ph.D., George Washington University
Alene S. Becker, Adjunct Assistant Professor
Ph.D., University of Missouri-St. Louis
Tanya Clemens, Adjunct Assistant Professor
Ph.D., Louisiana State University
Carol J. Dye, Adjunct Assistant Professor
Ph.D., Washington University
Michael J. Haines, Adjunct Assistant Professor
Ph.D., St. Louis University
Timothy J. Jovick, Adjunct Assistant Professor
Ph.D., St. Louis University
Judith A. McGee, Adjunct Assistant Professor
Ph.D., St. Louis University
Lynn J. McLaughlin, Adjunct Assistant Professor
Ph.D., Yale University
Gary A. Moses, Adjunct Assistant Professor
Ph.D., University of Missouri-St. Louis
Dean L. Rosen, Adjunct Assistant Professor
Ph.D., University of Illinois-Champaign-Urbana
Michele B. Ruffy, Adjunct Assistant Professor
Ph.D., University of Geneva
Robert A. Soskin, Adjunct Assistant Professor
Ph.D., Washington University
James H. Wallhermfechtel, Adjunct Assistant Professor
Ph.D., St. Louis University
Seth Zimmer, Adjunct Assistant Professor
Ph.D., Old Dominion University

*members of Graduate Faculty
†Primary appointment in the School of Business Administration

General Information

Degrees and Areas of Concentration The psychology department offers work leading to the B.A. degree in psychology. In conjunction with course work in the department, students have the opportunity to do research in a wide variety of areas, including animal and human learning, physiological, industrial-organizational, cognitive processes, personality-social, developmental, clinical, and community psychology. Students should consult with their adviser in selecting a program of study. However, the department offers a number of focused areas of study as a aid to students in selecting courses. These include child care and development, community mental health, and applied industrial/organizational psychology.

The department also offers a terminal M.A. as well as a Ph.D. in psychology. The emphasis areas within the Ph.D. program are clinical psychology, experimental psychology, and applied psychology.

Facilities Among the department’s physical facilities are an environmental chamber, comparative, social, and human experimental laboratories, and a wide range of research equipment, including portable videotaping systems. The department also has an electronics technician.
Psychology

Minor in Psychology  The department offers a minor in psychology to students with a special interest in this field but who wish to major in another discipline.

Undergraduate Studies

General Education Requirements
Majors must satisfy the University and College general education requirements. Courses in psychology may be used to meet the social sciences requirement. Majors may not take psychology courses on a satisfactory/unsatisfactory basis.

Undergraduate Psychology Office
Advisers in the Undergraduate Psychology Office (Room 108 Stadler Hall) are available to answer questions regarding career options in psychology, as well as provide specific information on degree requirements. The advisers can process all necessary materials for registration and graduation.

Degree Requirements

Bachelor of Arts in Psychology
At least 32, but no more than 45, hours must be completed in courses taught by or cross-listed with the psychology department. Candidates must have a cumulative grade point average of 2.0 or better in the major. Psychology courses taken on a satisfactory/unsatisfactory basis may not be applied to the major. The following core curriculum is required:

Psychology 3, General Psychology
Psychology 201, Psychological Statistics
Psychology 219, Research Methods

Note  Students must take Mathematics 30, College Algebra, or the equivalent, before taking Psychology 201, Psychological Statistics. Psychology 201 is a prerequisite for Psychology 219.

In addition to the core curriculum, at least 22 additional credit hours in psychology must be taken. At least three of these courses totaling a minimum of nine hours must be at the 300 level. Multiple enrollments in Psychology 390, Directed Studies, count as no more than one 300-level course. No more than six hours of independent study courses (Psychology 295, Selected Projects in Field Placement; and Psychology 390, Directed Studies) may be counted toward the 32-hour minimum needed for graduation.

Graduate School Preparation  This program is designed for students planning to pursue doctoral studies in psychology. In addition to the core curriculum, students are advised to take Psychology 361, History and Systems of Psychology, and at least one laboratory course in psychology.

Students intending to pursue graduate programs in clinical psychology should, in addition, take courses from the following group:

160, Social Psychology
211, Psychological Statistics
212, Principles of Learning
216, Personality Theory
245, Abnormal Psychology
270, Child Psychology
271, Adolescent Psychology
272, Adult Development and Aging

Students are also encouraged to become involved in independent research (Psychology 390, Directed Studies).

Child Care and Development  This focus area is ideal for students interested in working with children in a variety of career fields. In addition to the core curriculum, students are advised to take at least five of the following psychology courses with at least two at the 300 level:

150, The Psychology of Individual Differences
216, Personality Theory
269, Infancy
270, Child Psychology
271, Adolescent Psychology
272, Adult Development and Aging
295, Selected Projects in Field Placement
305, Cognitive Development
306, Social Development
340, Clinical Problems of Childhood
349, Human Learning and Memory
358, Thinking and Cognition

Community Mental Health  Designed for students interested in counseling and community programs. This focus area is especially suitable for double majors in another social science, particularly in social work and sociology. In addition to the core curriculum, students are advised to take at least five of the following courses in psychology, with at least two at the 300 level:

160, Social Psychology
161, Helping Relationships
162, Applied Skills
225, Behavior Modification
232, Psychology of Victims
235, Community Psychology
245, Abnormal Psychology
256, Environmental Psychology
295, Selected Projects in Field Placement
340, Clinical Problems of Childhood
346, Introduction to Clinical Psychology
365, Psychological Tests and Measurements
Psychology

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

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

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

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

Requirements for the Minor

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

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

Graduate Studies

Admission Requirements

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

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

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

- Ph.D. in Psychology:
  - Clinical Psychology – February 1
  - Applied Psychology—February 1
  - Experimental Psychology—February 28
- M.A. in General Psychology—July 15

Master of Arts in Psychology

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

There is no thesis or language requirement. Most classes are held in the early evening hours. Part-time or full-time enrollment is permissible. The M.A. degree is a terminal degree, and is entirely separate from the Ph.D. program in psychology.

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

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

**or**

**Set II**
- Psychology 421, Quantitative Methods I, and
- Psychology 422, Quantitative Methods II

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

**Set I**
- Psychology 408, Proseminar in Experimental Psychology I, and
- Psychology 409, Proseminar in Experimental Psychology II

**Set II**
- Psychology 405, Personality
- Psychology 411, Learning and Cognitive Processes
- Psychology 412, Social Psychology
- Psychology 417, Human Factors
- Psychology 481, Learning
- Psychology 467, Conceptual Systems
- Psychology 468, Cognitive Processes

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

Ph.D. in Psychology

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

Emphasis Areas

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

Clinical Psychology

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

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

General Experimental Psychology

The general experimental emphasis area provides opportunities for study and research in the areas of human learning, memory and cognition, personality and social psychology, and psychobiology. Part-time or full-time enrollment is possible.

Applied (Industrial-Organizational) Psychology

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

Career Outlook

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

Faculty
Lois Pierce, Chairperson, Associate Professor*  
Ph.D., Washington University
Norman Fial, Associate Professor*  
Ph.D., St. Louis University
Muriel Pumphrey, Professor Emeritus*  
D.S.W., Columbia University
Joan Hashimi, Associate Professor*  
Ph.D., Washington University
Uma Segal, Assistant Professor*  
Ph.D., Washington University
Margaret Sherraden, Assistant Professor*  
Ph.D., Washington University
Beverly Sporleder, Lecturer  
M.S.W., Washington University

*members of Graduate Faculty

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

General Information

Degrees and Areas of Concentration The Department of Social Work offers courses leading to a Bachelor of Social Work degree (B.S.W.) and a Graduate Certificate in Gerontological Social Work. The social work program is fully accredited by the Council on Social Work Education. The faculty stresses the scientific and applied aspects of social work. Social forces and cultural traditions affecting the individual are studied from a scientific perspective, and first-hand exposure to their effects is stressed through community involvement. Throughout, the contributions of arts and sciences toward a well-rounded liberal arts education are emphasized. A minor in social work is also offered.

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

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

Undergraduate Studies

General Education Requirements
Majors must satisfy the University and College general education requirements, except that proficiency in a foreign language is not required.

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

Degree Requirements

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

100, Introduction to Social Service
150, Social Welfare as a Social Institution
151, Social Welfare as a Social Institution Laboratory
210, Introduction to Interventive Strategies
280, Human Behavior in the Social Environment
285, Social Issues and Social Policy Development
300, Interventive Strategies for Social Work with Individuals, Families, and Groups
305, Interventive Strategies for Social Work with Organizations and Communities
320 and 321, Supervised Field Experience in Social Work I and II
320a and 321a, Integrative Field Experience Seminar I and II

A minimum of 33 hours and a maximum of 50 hours may be taken in social work. A minimum of 36 hours is required in related area departments.

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

Related Area Requirements
The following courses, or their alternatives, are required:
Biology 1, General Biology, or Biology 10, Introductory Biology
Economics 40, Introduction to the American Economy
Political Science 11, Introduction to American Politics
Psychology 3, General Psychology
Sociology 10, Introduction to Sociology
Sociology/Psychology 160, Social Psychology
Sociology 220, Quantitative Techniques in Sociology
Sociology 230, Research Methods
Sociology 231, Research Methods Lab

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

At least nine additional hours must be taken in social work, sociology, political science, psychology, anthropology, criminology and criminal justice, or economics at the 100 level or above.

After fulfilling the general education and specific major degree requirements, students are to take the remaining 31 hours required to complete the Bachelor of Social Work degree from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary. The social work department may require students to pass a placement test in order to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

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

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

Requirements for the Minor in Social Work
Candidates must complete the following social work courses:

100, Introduction to Social Service
150, Social Welfare as a Social Institution
210, Interventive Strategies in Social Work Practice
285, Social Issues and Social Policy Development

and one course at the 200 level or above.

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

Required Core Courses
Social Work 316, Clinical Gerontology
Psychology 373, Psychology of Aging, or Sociology 311, Social Gerontology
Political Science 444 (or Public Policy Administration 444), Public Policy and Aging
Social Work 412, Research Design in Social Work
Social Work 491, Professional Leadership Practice

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

Students completing the Bachelor of Social Work degree may enter beginning positions as social workers or choose to enter professional schools of social work in preparation for eventual careers in supervision, administration research, and other specialized areas of practice.

Additional information may be obtained from:

UM-St. Louis Admissions Office
8001 Natural Bridge Road
St. Louis, Missouri 63121-4499
Telephone: (314) 553-5451
Sociology

Faculty

K. Peter Etzkorn, Chairperson; Professor
Ph D., Princeton University
Harry H. Bash, Associate Professor
Ph D., University of Pennsylvania
Jerome Himelhoch, Professor Emeritus
Ph D., Columbia University
George J. McCall, Professor
Ph D., Harvard University
Sarah L. Boggs, Associate Professor
Ph D., Washington University
Daniel J. Monti, Associate Professor
Ph D., University of North Carolina
Herman W. Smith, Associate Professor
Ph D., Northwestern University
Kay Young McChesney, Assistant Professor
Ph D., University of Southern California
Nancy M. Shields, Assistant Professor; Assistant Dean
Evening College
Ph D., Southern Illinois University-Carbondale
Michael C. Stein, Assistant Professor
Ph D., University of Nebraska-Lincoln
Chikako Usui, Assistant Professor
Ph D., Stanford University
Frances Hoffman, Visiting Associate Professor
Ph D., University of Oregon, Eugene, Oregon

*members of Graduate Faculty

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

General Information

Degrees and Areas of Concentration The Department of Sociology offers undergraduate work leading to B.A. and B.S. degrees in sociology, and in cooperation with the School of Education, the B.S. in education with an emphasis in Social Studies (see School of Education section in this Bulletin for details). Minors in sociology are available to students who are majoring in other disciplines but also have special interests in gaining further knowledge of sociological approaches to the study of legal, political, cultural, and ethnic issues in modern society.

Students may specialize in the department’s focused areas of study which include The Urban World (Urban Sociology); Race, Ethnicity, and Power (Minority Relations and Social Stratification); Deviance, Conformity and Social Control (Criminology); The Individual and Society (Social Psychology); Organizational Dynamics; and Sociological Practice. In many courses, attention is given to the ways in which sociological knowledge may assist in the solution of public and practical issues. In addition to formal instruction, internships may be arranged in which students can relate classroom learning to practical experience.

The undergraduate major in sociology offers an excellent foundation for students wishing to obtain a liberal arts education. Such studies can be rounded out by taking an additional Minor outside sociology in Public Affairs Journalism, Black, Legal, or Urban Studies, or by obtaining a Certificate in one of the following fields: Photographic Studies, Studies in Religion, Women’s Studies, Writing, or International Studies.

The Department of Sociology also offers graduate courses leading to the M.A. in sociology. These courses are available for students wishing to gain advanced knowledge on urban problems and social change that may be related to careers in government, business, community, or non-profit agencies. A collaborative program is available for students interested in the administration of justice field, gerontology, and public policy administration. The flexibility of the sociology master’s degree allows for tailoring the degree program to meeting individual students’ learning objectives by drawing on courses offered in related disciplines.

Most graduate classes are scheduled so that those employed outside the University can participate in the program on a part-time basis.

Special Interdisciplinary Degrees

The Department of Sociology cooperates with the Departments of Economics and Political Science in the College of Arts and Sciences and the School of Business Administration in offering a master’s degree in Public Policy Administration. In addition, the Department of Sociology also cooperates with faculty from the Schools of Nursing and Optometry and other departments in the College of Arts and Sciences in offering a multidisciplinary master’s degree in Gerontology (see the sections on the MPPA and Gerontology degree programs in the Bulletin).

Cooperative Programs

Sociology students are encouraged to study overseas, or participate in programs offered by other universities (see section on “Programs at Other Universities” in this Bulletin).

Research in sociology is encouraged for students at all levels. Assistance is available at UM-St. Louis’ Centers for Public Policy Research and International Studies, and the Office of Computing and Telecommunications. The department is a member in the Inter-University Consortium for Political and Social Research which provides access to a wide variety of survey data on local-state-national, comparative, and international issues. In addition, extensive research opportunities are available within the metropolitan St. Louis region. Financial assistance may be available for qualified students; details can be obtained from the department office.
Sociology

Course Groupings
The department has grouped the following focused areas of study for the undergraduate sociology student:
- The Urban World
- Race, Ethnicity, and Power
- Deviance, Conformity, and Social Control
- Social Psychology: The Individual and Society
- Organizational Dynamics: Conflict and Consensus
- Sociological Practice

In addition to these areas, the department offers a variety of ungrouped courses. All course descriptions are found in a separate booklet, Description of Courses.

Minor in Sociology
The minor in sociology is designed to provide a consonant curriculum of at least 15 credit hours from the concentrated areas of study of the discipline to students majoring in other departments and to enhance the employment options for certain students majoring in related disciplines. Interested students should see a faculty adviser in the Department of Sociology to plan a coherent program of study as a minor field.

Students must achieve a minimum cumulative 2.0 GPA in the sociology courses chosen to qualify for the minor.

Undergraduate Studies

General Education Requirements
Majors must satisfy the University and College general education requirements. Sociology courses may be used to satisfy the College social sciences requirement. The foreign language requirement for the B.A. degree may be satisfied in any language. Not more than 10 hours of junior college transfer credit may be applied toward the combined minimum of required credit hours (31 and 30 hours respectively) for the B.A. and B.S. major. Department requirements taken on a satisfactory/unsatisfactory basis may not be applied toward the major.

Departmental Honors
The department awards honors to students having a grade point average (GPA) of 3.2 in the major, an overall GPA of 3.2 (except in extraordinary circumstances), and successful completion of an honors thesis, project, or report. The Sociology Chapter of the UM-St. Louis Alumni Association also awards the Ray Collins Prize to an outstanding sociology major.

Degree Requirements

Bachelor of Arts in Sociology
Candidates must complete the following required core courses:
- Sociology 10, Introduction to Sociology
- Sociology 210, Sociological Theory

Sociology 220, Sociological Statistics, or Mathematics 31, Elementary Statistical Methods, or Mathematics 102, Finite Mathematics
- Sociology 230, Research Methods
- Sociology 231, Research Methods Lab

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

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

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

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

Bachelor of Science in Sociology
Candidates must complete the core requirements for the B.S. in sociology consisting of the following departmental courses:
- Sociology 10, Introduction to Sociology
- Sociology 210, Sociological Theory
- Sociology 220, Sociological Statistics
- Sociology 230, Research Methods
- Sociology 370, Selected Topics in Techniques of Applied Research

and two of the following sociology research practicum courses:
- Sociology 298, Practicum in Field and Laboratory Research
- Sociology 304, Survey Research Practicum
- Sociology 330, Field Research in Criminology
- Sociology 346, Demographic Techniques
- Sociology 380, Selected Topics in Social Policy
Sociology

Five additional sociology courses (15 hours), chosen with the concurrence of the student’s faculty adviser from offerings of the department’s focused areas of study, are required for the B.S. degree in sociology, including a minimum of two courses (six hours) at the 300 level (exclusive of Sociology 350, Special Study).

After fulfilling the general education and specific major degree requirements, students are to take the remaining 51 hours required to complete the B.S. degree from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary.

Also required are:
Economics 40, Introduction to the American Economy
Psychology 3, General Psychology
Political Science 11, Introduction to American Politics

one of the following philosophy courses:
Philosophy 60, Logic and Language
Philosophy 282, Philosophy of Social Science

and one of the following political science courses:
Political Science 140, Pubic Administration
Political Science 240, Bureaucratic Politics
Political Science 245, Urban Administration
Political Science 343, Studies of Policy Formation

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

Focused Areas of Study

The Urban World
Sociology 040, Social Problems
Sociology 099, The City
Sociology 312, Social Stratification and Inequality
Sociology 314, Social Change
Sociology 316, Power, Ideology and Social Movements
Sociology 342, Population Dynamics
Sociology 344, Problems of the Urban Community
Sociology 380, Social Control

Race, Ethnicity, and Power
Sociology 100, Women in Contemporary Society
Sociology 105, Group Prejudice and Minority Identity
Sociology 312, Social Stratification and Inequality
Sociology 316, Power, Ideology, and Social Movements
Sociology 360, Sociology of Minority Groups

Deviance, Conformity, and Social Control
Sociology 165, Sociology of Deviant Behavior
Sociology 214, Juvenile Delinquency and Youth Crime
Sociology 275, Women, Crime and Society
Sociology 290, Alcohol, Drugs, and Society
Sociology 326, Criminology
Sociology 328, Institutions and the Control of Crime and Delinquency
Sociology 330, Field Research in Criminology

Social Psychology: The Individual and Society
Sociology 102, Social Psychology
Sociology 160, Social Psychology
Sociology 290, Social Interaction in Small Groups
Sociology 290, Socialization
Sociology 391, Social Gerontology
Sociology 391, Personality and Culture
Sociology 378, Selected Topics in Social Psychology
Sociology 380, Selected Topics in Social Policy

Organizational Dynamics: Conflict and Consensus
Sociology 218, Social Choice in Political Economic Systems
Sociology 224, Sociology of the Family
Sociology 234, Political Sociology
Sociology 241, Selected Topics in Political Sociology
Sociology 254, Occupations in their Work Setting
Sociology 264, Sociology of Religion
Sociology 266, Sociology of Conflict
Sociology 278, Sociology of Law
Sociology 280, The Arts in Society
Sociology 330, Organizations and Environments
Sociology 336, Sociology of Health
Sociology 356, Sociology of Education

Sociological Practice
Sociology 160, Social Psychology
Sociology 165, Sociology of Deviant Behavior
Sociology 214, Juvenile Delinquency and Youth Crime
Sociology 275, Women, Crime and Society
Sociology 290, Alcohol, Drugs, and Society
Sociology 326, Criminology
Sociology 328, Institutions and the Control of Crime and Delinquency
Sociology 330, Field Research in Criminology

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

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

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

Graduate Studies

Curriculum
The curriculum is developed in continuity with the department’s general orientation toward “Urban Problems and Social Change” and is guided by periodic reassessments of its history, faculty strengths, changing employment and developing career patterns in sociology, and by student needs. Based on a common core curriculum, the program offers four concentrations designed to prepare students for a variety of career options: program evaluation and research, field or case work related to community issues; administrative roles in social agencies and planning organizations; and/or doctoral studies in sociology or related fields.

The curriculum is designed to serve the needs of full-time students as well as working students who are able to engage only in part-time studies.

This design permits persons currently in research or policy positions in service agencies or community organizations to further their career developments through appropriate selection among the alternative concentrations. The curriculum also invites students to take advantage of the University’s urban setting through integrating, under faculty guidance, selected community agency or organization experiences with practicum courses and academic seminars.

Through the four career concentrations, grounded in studies of deviance (including criminology and law-and-society), urban sociology (including stratification and minority relations), and social psychology, the program aims to prepare students for professional activities that will contribute to community problem solving as well as scholarly discourse.

Admission Requirements
In addition to meeting the general admission requirements of the Graduate School, a student should have a baccalaureate degree with a minimum grade point average of 2.75 and at least 15 hours in the social sciences, of which 12 hours should be in upper-level courses.

A completed application shall include three letters of recommendation from persons qualified to judge the candidate’s potential for success in the program, and a statement describing the applicant’s interest in graduate study in sociology.

Students who do not meet these requirements may be admitted upon approval of the department and the dean of the Graduate School. Students wishing to continue regular employment outside the University may enroll on a part-time basis. Requests for further information about the program should be sent to the Director of Graduate Studies, Department of Sociology, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121-4499.

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

Degree Requirements

Master of Arts in Sociology  Candidates for the M.A. degree shall complete a minimum of 30 hours of approved study, 21 of which must be taken in courses offered by the department. The following requirements shall be fulfilled:

Core Curriculum
- Sociology 400, Preseminar in Sociology
- Sociology 402, Advanced Quantitative Techniques
- Sociology 404, Advanced Methodology

Concentration  Students are encouraged to plan their degree programs to reflect one of the following concentrations:
1) Advanced Sociological Perspectives
2) Conflict Intervention
3) Criminology
4) Methods of Applied Research

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

Plan of Study  Each student shall prepare an advise-approved course of study during the first semester of enrollment.

Career Outlook

Graduates with a bachelor’s degree in sociology will find themselves competing for employment with other liberal arts students who have majored in English, political science, psychology, history. There are relatively few employers who are looking specifically for graduates with an undergraduate degree in sociology in the same sense in which they might look for graduates with a B.S. in engineering or nursing. Yet the sociology major prepares students particularly well for careers that require an understanding of interpersonal dynamics, communication skills, or the ability to analyze complex social issues. Recent sociology graduates have done well in executive positions in St. Louis corporations, the Office of the Mayor of the City of St. Louis, and regional public relations firms. Many other majors pursue additional graduate studies in sociology, business, journalism, international relations, and other fields. The American Sociological Association has prepared a guide to careers in Sociology which is available in the department office.
Interdisciplinary Studies

Minors in Interdisciplinary Studies

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

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

These courses are listed and described in the companion volume to this book, the University of Missouri-St. Louis Bulletin: Description of Courses.

Minor in American Studies

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

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

Requirements

The following interdisciplinary courses are required.

90. The Foundations of American Culture
91. American Culture in the Twentieth Century
295. Issues in American Culture

Candidates must also select three courses from the following lists. No two courses can be in the same department. One course must be taken from the humanities list and one from the social sciences list. Two of the three courses must be taken at the 100 level or above.

Humanities courses applicable to the minor.

Art:
116. North American Indian Art
158. American Art
159. American Architecture
258. Topics in American Art
276. Women and the Visual Arts

English:
70. Afro-American Literature
171. American Literature I

172. American Literature II
173. Selected Major American Writers I
174. Selected Major American Writers II
175. American Fiction to World War I
176. Modern American Fiction

Music:
6. America's Black Musical Heritage
7. Introduction to Jazz

Philosophy:
107. American Philosophy

Interdisciplinary:
65. Photography and Society

Social Science courses applicable to the minor.

Administration of Justice:
60. Criminal Justice Processes and Institutions
170. Principles of Criminal Law
326. Criminal Law in Action

Anthropology:
122. Indians of North America
132. Archaeology of North America

Communication:
243. Communications in American Politics
343. The Rhetoric of Protest
350. Mass Communication History and Criticism

History:
105. History of the Family in the United States
112. United States Diplomatic History
120. Black History in the United States
204. The History of the American Labor Movement
301. United States History: Colonial America to 1703
302. United States History: Revolution and the New Nation 1763 to 1815
303. United States History: Nationalism and Sectionalism 1815 to 1860
304. United States History: 1860-1900
305. United States History: 1900-1940
306. United States History: 1940 to the Present
311. Topics in American Constitutional History
313. American Military History
314. American Foreign Policy Since 1941
321. History of Women in the United States
327. History of the American South

Political Science:
121. Civil Liberties
129. Women and the Law
131. Congressional Politics
135. Introduction to Urban Politics
165. American Political Thought
227. Urban Law: Poverty and the Justice System
230. The American Presidency
232. Ethnic and Racial Politics
235. Political Parties
320. Introduction to American Constitutional Law
327. Urban Judicial Systems
331. Legislative Processes

Social Work:
200. Social Welfare as a Social Institution
Interdisciplinary Studies

Sociology:
40, Social Problems
202, Urban Sociology
360, Sociology of Minority Groups

Interdisciplinary:
75, Crime and Punishment

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

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

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

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

Requirements
Students must take:
Interdisciplinary 40, The Black World
and a minimum of two courses from the following:
Anthropology 124, Cultures of Africa
Art 117, African Art
English 70, Afro-American Literature
History 21, African Civilization to 1800
History 82, African Civilization Since 1800
History 120, Black History in the United States
Music 5, America's Black Musical Heritage
Sociology 106, Group Prejudice and Minority Identity

and a minimum of three courses from the following:
History 381, West Africa Since 1800
History 382, Crisis in Southern Africa
Political Science 232, Black Americans and the Political System
Sociology 360, Sociology of Minority Groups

Minor in Classical Studies
The Minor in Classical Studies is an interdisciplinary course of studies intended to encourage undergraduates in various disciplines to come to a fuller awareness of the cultures of ancient Greece and Rome and of the classical tradition that underlies much of modern Western civilization.

In addition to appealing to any student's curiosity about the early stages of society in the West, the minor provides an especially valuable supplement to those who are majoring in many liberal arts areas including history, literature, philosophy, modern languages, and art.

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

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

Requirements
Candidates for the minor must complete 19 credit hours of course work including:
Interdisciplinary 10, The Classical World
and either
Latin 1, Latin 1
Latin 2, Latin 2
or
Ancient Greek 1, Ancient Greek 1
Ancient Greek 2, Ancient Greek 2

and two courses from the following list.
Ancient Greek 101, Ancient Greek 101
Art 111, Art and Archeology of the Ancient World
Art 112, Greek Art and Archeology
Art 113, Roman Art and Archeology
Art 212, Topics in Ancient Art and Archeology
English 23, Classical Mythology
English 120, Classical Literature in Translation
History 130, Ancient Civilization
History 330b, The Ancient World: History of Greece to the End of the Hellenistic Period
History 330c, The Ancient World: Rome
Interdisciplinary 200, Special Topics in Classical Studies
Latin 101, Latin 101
Philosophy 101, Ancient Philosophy
Philosophy 201, Plato
Philosophy 202, Aristotle

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

Requirements
Candidates must take:
Interdisciplinary 20, Foundations of Law: An Introduction to Legal Studies
and five courses from the following list. At least three courses must be taken at the 200 level and above. No more than two courses from a single discipline may be included in the minor.
Interdisciplinary Studies

A. Nine hours in communication/English professional training:

- English 214, News Writing, or Communication 214, News Writing
- English 218, Reporting, or Communication 212, Broadcast Writing and Reporting
- English 320, Independent Writing Project, or Communication 399, Internship in Communication

Administration of Justice 60, Criminal Justice Processes and Institutions
Administration of Justice 75, Crime and Punishment
Administration of Justice 201, The Criminal Justice System: Conflicting Perspectives I
Administration of Justice 202, The Criminal Justice System: Conflicting Perspectives II
Administration of Justice 227, Urban Law: Poverty and the Justice System
Administration of Justice 325, Rights of the Accused
Communication 355, Media Law and Regulation
Economics 219, Law and Economics
History 311, Topics in American Constitutional History
History 330lf, Medieval England
Philosophy 287, Philosophy of Law
Political Science 20, Foundations of Law: An Introduction to Legal Studies
Political Science 121, Civil Liberties
Political Science 128, Women and the Law
Political Science 225, Jurisprudence
Political Science 227, Urban Law: Poverty and the Justice System
Political Science 320, Introduction to American Constitutional Law
Political Science 327, Urban Judicial Systems
Political Science 385, International Law
Sociology 176, Women, Crime, and Society
Sociology 278, Sociology of Law

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

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

Requirements

A. Nine hours in communication/English professional training:

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

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

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

Requirements

Students must take:

Interdisciplinary 99, The City

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

Courses Applicable to the Minor

- Administration of Justice 227, Urban Law: Poverty and the Justice System
- Administration of Justice 260, Police in the Urban Community
- Administration of Justice 310, Crime Prevention
- Anthropology 142, The Culture of Cities
- Art 259, Modern Architecture
- Economics 270, Urban and Regional Economics
- Economics 317, Public Finance: State and Local
- Geography 210, Urban Geography
- Geography 211, Location Theory
- History 300, Selected Topics in History (when urban or St. Louis history)
- Interdisciplinary 99, The City
- Political Science 135, Introduction to Urban Politics
- Political Science 227, Urban Law: Poverty and the Justice System
- Political Science 245, Urban Administration
- Political Science 327, Urban Judicial Systems
- Political Science 346, Urban Planning and Politics
- Psychology 236, Community Psychology
- Psychology 266, Environmental Psychology
- Sociology 40, Social Problems
- Sociology 202, Urban Sociology
- Sociology 344, Problems of the Urban Community
Certificate Programs

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

Biochemistry Certificate

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

- Biology 10, Introductory Biology
- Biology 210, Cell Structure and Function
- Biology 224, Genetics
- Chemistry 11, Introductory Chemistry I
- Chemistry 12, Introductory Chemistry II
- Chemistry 222, Quantitative Analysis
- Chemistry 261, Structural Organic Chemistry
- Chemistry 262, Organic Reactions
- Chemistry 263, Techniques of Organic Chemistry

and one of the following biology courses:
- Biology 216, Microbiology
- Biology 235, Development
- Biology 310, Cell Physiology
- Biology 326, Molecular Biology

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

- Biology 326, Molecular Biology
- Biology 328, Methods in Biotechnology
- Biology 338, Microbial Genetics
- Chemistry 230, Physical Chemistry for the Life Sciences

The remaining hours can be taken from the following:

- Biology 310, Cell Physiology
- Biology 334, Virology
- Biology 376, Topics in Biological Chemistry
- Biology 378, Topics in Biological Chemistry Laboratory
- Biology 417, Advanced Immunology
- Biology 482, Topics in Molecular Biology/Genetics

Photographic Studies Certificate

UM-St. Louis students, graduates, and postbaccalaureate candidates may obtain a certificate in photographic studies by coordinating courses in and related to photography. To be eligible for the certificate, undergraduates must complete a degree in a chosen major field. A faculty member of the Interdisciplinary Photographic Studies Committee will act as adviser to all students and will consult with the faculty adviser in the student's major to plan appropriate credits.

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

Requirements

The following courses are required:

- Art 60, Photography I
- Art 160, Photography II
- Art 265, History of Photography, or History 168, Photohistory
- Interdisciplinary 65, Art 65, Photography and Society
- Art 360, Advanced Photography, or Interdisciplinary 390, Independent Studies in Photographic Studies

Certificate in Biotechnology

The Certificate in Biotechnology provides an opportunity for students to concentrate in the areas of molecular biology and biotechnology. The Certificate should be of special interest to those considering careers in industrial and health science research or seeking admission to advanced academic professional programs. A student may receive the Certificate in Biotechnology by completing a total of 18 hours taken from the following:

Requirements

Students must take:

- Biology 326, Molecular Biology
- Biology 329, Methods in Biotechnology
- Biology 338, Microbial Genetics
- Chemistry 230, Physical Chemistry for the Life Sciences

The remaining hours can be taken from the following:

- Biology 310, Cell Physiology
- Biology 334, Virology
- Biology 376, Topics in Biological Chemistry
- Biology 378, Topics in Biological Chemistry Laboratory
- Biology 417, Advanced Immunology
- Biology 482, Topics in Molecular Biology/Genetics
Certificate Programs

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

Art 250, Introduction to Art
Art 254, Photography: Color Printing
Art 257, Printmaking: Photolithography
Art 260, Advanced Photography
Art 263, Photography Since 1945
Biology 360, Techniques in Electron Microscopy
Communication 50, Introduction to Mass Media
Communication 70, Introduction to Cinema
Communication 210, Television Production
English 214, News Writing
English 215, Feature Writing
History 158, Phrenology
Interdisciplinary 40, The Black World
Interdisciplinary 365, Seminar in Photographic Studies
Philosophy 274, Philosophy of Art
Physics 172, Light and Color
Physics 173, Applications of Light and Color
Psychology 213, Principles of Perception
Psychology 265, Psychology of Perception
Extension course, Professional Photography Seminar

Studies in Religions Certificate

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

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

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

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

Requirements

Students must take:

Interdisciplinary 70, Introduction to the Study of Religion

and 15 hours chosen from the following list in accordance with the guidelines above:

Anthropology 144, Religion, Magic, and Science
*Art 226, Medieval Art
*Art 325, Early Christian Art and Archaeology
*Art 326, Monasteries, Cathedrals, and Preaching Churches
*English 13, Topics in Literature: Jewish Folklore
*English 123, Jewish Literature
*English 124, Literature of the New Testament
*English 125, Literature of the Old Testament
*History 144, Christianity: Jesus to Martin Luther
*History 252, The World of Islam
*History 330a, The Ancient World: Israel
*History 330d, History of the Church: Early Christianity
*History 330e, History of the Church: The Middle Ages
History 331b, The Age of Reformation
Music 103, Music in Religion
Philosophy 85, Philosophy of Religion
Philosophy 102, Medieval Philosophy
Philosophy 120, Asian Philosophy
Philosophy 185, Topics in Philosophy of Religion
Philosophy 265, Problems in Philosophical Theology
Political Science 165, American Political Thought
Political Science 261, Ancient and Medieval Political Thought
Sociology 264, The Sociology of Religion

Women’s Studies Certificate

Faculty

Suzanna Rose, Director, Associate Professor of Psychology
Ph.D., University of Pittsburgh
Carol K. Pack, Professor of Optometry
Ph.D., University of California-Los Angeles
Jayne Stake, Professor of Psychology
Ph.D., Arizona State University
Janet Berlo, Professor of Art
Ph.D., Yale University
Sarah Boggs, Associate Professor of Sociology
Ph.D., Washington University
Rita Breito, Associate Professor of Sociology and Nursing
Ph.D., University of Minnesota
Zuleyma Tang Halpin, Associate Professor of Biology
Ph.D., University of California-Berkeley
Michelle Hoyman, Associate Professor of Political Science
Ph.D., University of Michigan
Joyce Mushaben, Associate Professor of Political Science
Ph.D., Indiana University
Stephanie Ross, Associate Professor of Philosophy
Ph.D., Harvard University
Victoria Sork, Associate Professor of Biology
Ph.D., University of Michigan
Yael Even, Assistant Professor of Art
Ph.D., Columbia University
Dana Frank, Assistant Professor of History
Ph.D., Yale University
Kathy Gentile, Assistant Professor of English
Ph.D., University of Oregon
Barbara Kachur, Assistant Professor of Communication
Ph.D., Ohio State University
Kimberly Kampf, Assistant Professor of Administration of Justice
Ph.D., The Wharton School, University of Pennsylvania
Lana Steyn, Assistant Professor of Political Science
Ph.D., Michigan State University
Cathy Burack, Coordinator, Women’s Center
M.A., Wichita State University
Carol Kelly, Lecturer, Department of Biology
M.S., University of Iowa
Linda Kick, Lecturer, Department of English
M.A., Southern Illinois University-Edwardsville
Laurie Roades, Lecturer, Department of Psychology
M.A., University of Missouri-St. Louis
Nanora Sweat, Senior Lecturer, Department of English
M.A., University of Missouri-Columbia
Carolyn West, Lecturer, Department of Psychology
M.A., University of Missouri-St. Louis

College of Arts and Sciences 143
Certificate Programs

The Women's Studies Program at the University of Missouri-St. Louis draws upon feminist scholarship to create new ways of studying human experience that include women. The program seeks to correct the oversights and omissions of traditional education, which typically ignores the experiences and contributions of women in virtually all areas of society. Courses in Women's Studies look specifically at women's lives, roles, and contributions among different cultures and times, enabling students to broaden their educational experience and develop new insights into their own lives and aspirations. The program offers both day and evening courses.

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

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

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

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

Requirements

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

**Interdisciplinary 50, Interdisciplinary Perspectives on Women**

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

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

**Interdisciplinary 350, Topics in Women's Studies**

(e.g., Women and Science, Women and Religion, Survival Strategies of Third World Women, Women, Race, and Class)

**Interdisciplinary 351, Theories of Feminism**

**Art 176, Women and the Visual Arts**

**Biology/Psychology 140, Female Sexuality**

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

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

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

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

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

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

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

**Music 108, Women in Music**

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

**Philosophy 153, Philosophy and Feminism**

**Political Science 129, Women and the Law**

**Political Science 247, Women, Power, and Public Policy**

**Psychology 220, Psychology of Women**

**Social Work 312, Women's Social Issues**

**Sociology 100, Women in Contemporary Society**

**Sociology/Administration of Justice 175, Women, Crime, and Society**

Writing Certificate

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

**Communication 212, Broadcast Writing and Reporting**

**Communication 217, Script Writing for Business and Industry**

**English 103, Poetry Writing**

**English 104, Short Story Writing**

**English 105, Play Writing**

**English 112, Topics in Writing**

**English 209, Practical Criticism: Writing About Literature**

**English 210, Advanced Expository Writing**

**English 211, Advanced Expository Writing for International Students**

**English 212, Business Writing**

**English 213, Technical Writing**

**English 214, News Writing, or Communication 214, News Writing**

**English 215, Feature Writing**

**English 218, Reporting**

**English 300, Writing in the Professions**

**English 302, Writing Literary Criticism**

**English 303, Advanced Poetry Writing**

**English 304, Advanced Fiction Writing**

**English 305, Writing for Teachers**

**English 313, Advanced Business and Technical Writing**

**English 316, Gateway Writing Project**

**English 319, Editing**

Required: English 320, Independent Writing Project.

Students serve a supervised writing internship or work with the instructor to complete an extensive writing project.

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

International Studies Certificates 
Undergraduate

Through the Center for International Studies, the College offers certificate programs in East Asian, Latin American, European, and International Studies. In the junior or senior year, students seeking certificates must take an independent study course (three hours) in which a research paper will be written focusing upon some aspect of the particular field or on one of the fields offered in the program.

Interested students should petition for one of these certificates through the Center for International Studies by the first semester of the senior year. For further information, contact the Center at 553-5753.

Requirements for Each Program

East Asian Studies Certificate
1) First- and second-year Chinese, Japanese, or other appropriate Asian language (20 hours taken in four semesters). Chinese and Japanese courses are available at Washington University for UM-St. Louis students.
2) History 61 and History 62, East Asian Civilization
3) One course in three of the following four areas, a total of nine hours.

Area 1: Music
9. Non-Western Music I
10. Non-Western Music II

Area 2: Philosophy
120. Asian Philosophy

Area 3: Political Science
155. Asian Comparative Politics
*359. Studies in Comparative Politics
*366. Studies in International Relations

*Note Students should take Political Science 359 or Political Science 388 only when the specific topic is appropriate.

Area 4: History
361, Modern Japan: 1850 to Present
362, Modern China: 1800 to Present
*393. Senior Seminar

*Note Students should take History 393 only when the topic is appropriate to East Asia

European Studies Certificate
1) Four semesters of college work or the equivalent in a modern European foreign language.
2) History 32, Topics in European Civilization: 1715 to the Present
3) One course each from at least four of the following eight areas, a total of 12 hours. Students should consult advisers at the Center to determine how these courses can best be arranged to meet their interests.

Area 1: Art
235, Topics in Renaissance Art
245, Baroque Art
255, Topics in Nineteenth- and Twentieth-Century European Art
336, Artists and Theories of the Renaissance
345, Age of Grandeur: Perspectives in Seventeenth- and Eighteenth-Century Art
356, Nineteenth-Century Art
357, Twentieth-Century Art

Area 2: Economics
238, Comparative Economic Systems

Area 3: English
127, Survey of European Literature from 1650 to the Second World War
128, The Contemporary World in Literature
132, English Literature II
323, Continental Fiction
346, Restoration and Eighteenth-Century Drama
345, The Eighteenth-Century English Novel
365, The Nineteenth-Century English Novel
372, The Later Nineteenth Century
383, Modern British Fiction

Area 4: History
31, Topics in European Civilization: Emergence of Western Europe to 1715
331a, The Age of the Renaissance
331b, The Age of Reformation
332d, The Rise of the Modern British State
332e, Europe from the French Revolution to World War I, 1789-1914
333a, Contemporary France: Since 1870
333b, Germany in the Modern Age
333c, History of Russia From 1917-Present
333d, Europe in the Twentieth Century
333e, Contemporary Europe, 1939-Present

Area 5: Modern Foreign Languages
FRENCH
110, Modern French Literature in Translation
150, European Literature in Translation: Special Topics
211, Contemporary French Civilization
281, French Literature II: Nineteenth and Twentieth Centuries
341, Seventeenth-Century French Theatre
342, Seventeenth-Century French Prose and Poetry
353, Eighteenth-Century French Literature
354, Eighteenth-Century French Theatre
355, Eighteenth-Century French Theatre and Novel
362, Nineteenth-Century French Novel
371, Twentieth-Century French Novel
376, Modern French Theatre

GERMAN
110, Masterpieces of German Literature in Translation
150, European Literature in Translation: Special Topics
201, Masterpieces of German Literature
202, The German Novel and Drama
210, German Culture and Civilization
316, German Classicism and Romanticism
320, German Realism and Naturalism
345, Modern German Literature
397, Survey of German Literature Part I
398, Survey of German Literature Part II
Certificate Programs

SPANISH
110, Spanish Literature in Translation
150, European Literature in Translation: Special Topics
310, Spanish Literature from 1898 to 1939
315, Spanish Literature from 1939 to the Present
320, Realism and Naturalism in the Nineteenth-Century Spanish Novel
321, Poetry and Drama of the Nineteenth Century
325, Poetry and Drama of the Golden Age

Area 6: Music
322, Music of the Renaissance
323, Music of the Baroque
324, Music of the Classic Period
325, Music of the Romantic Period

Area 7: Philosophy
103, Early Modern Philosophy
104, Kant and Nineteenth-Century Philosophy
105, Twentieth-Century Philosophy
205, The Rationalists
206, The British Empiricists

Area 8: Political Science
251, Comparative Politics of Europe
256, The Soviet Political System
284, European International Relations
*351, Comparative Public Policy and Administration
*359, Studies in Comparative Politics
*388, Studies in International Relations

*Note Students should take Political Science 351, Political Science 359, or Political Science 388 only when the topic is appropriately European.

Latin American Studies Certificate
1) Thirteen credit hours or the equivalent in Spanish.
2) Either History 71, Latin American Civilization, or Spanish
211, Hispanic Culture and Civilization: Spanish America.
3) A total of 12 hours from at least three of the following areas:

Area 1: Anthropology
121, Modern Aztec and Maya
134, The inca, Aztec, and Maya

Area 2: History
371, History of Latin America: To 1808
372, History of Latin America: Since 1808

Area 3: Political Science
253, Political Systems of South America
254, Political Systems of Mexico, Central America, and the Caribbean
*359, Studies in Comparative Politics

*Note Students should take Political Science 359 only when the topic is appropriate to Latin America.

Area 4: Spanish
311, Spanish-American Literature in Translation
211, Hispanic Culture and Civilization: Spanish America
281, Introduction to Hispanic Literature: Spanish America
340, Spanish-American Literature of the Nineteenth Century
341, Modernismo
345, Spanish-American Literature of the Twentieth Century
351, Spanish-American Fiction in the Twentieth Century
360, Spanish-American Poetry from Modernismo to the Present

International Studies Certificate
1) Satisfactory completion of the language requirements for the degree program in which the student is enrolled
2) Political Science 180, World Politics.
3) A total of 12 hours from at least three of the following seven areas:

Area 1: Anthropology
201, Comparative Economic Behavior
202, Politics, Symbolism, and Culture

Area 2: Biology
120, Environmental Biology

Area 3: Business Administration
380, International Business

Area 4: Economics
230, International Economic Analysis
238, The World Economies of Today
331, International Economic Analysis: Finance

Area 5: Geography
102, World Regions

Area 6: History
112, America in World Affairs
332e, Europe from the French Revolution to World War I: 1789-1914
333d, Europe in the Twentieth Century

Area 7: Political Science
80, Global Issues
282, United States Foreign Policy
286, International Institutions and Global Problem Solving
288, Middle Eastern Politics
381, Comparative Foreign Policy
385, International Law
386, Studies in War and Peace
388, Studies in International Relations

International Studies Certificate Graduate
A Graduate Certificate in International Studies is a program of study featuring advanced, multidisciplinary course work designed for individuals, including teachers and other professionals, who wish to expand their knowledge and understanding of international and cross-cultural affairs. The Certificate is sponsored by the Center for International Studies, and the Departments of Economics, History, Modern Foreign Languages and Literatures, and Political Science. A broad set of course offerings is available in these and other departments, with the flexibility for students to tailor the program to their particular interests and needs. The program has been developed as a vehicle for bringing together the resources of a distinguished faculty in international studies and for providing an opportunity for further graduate learning. For further information, contact the Center for International Studies at 563-5763.
Certificate Programs

Applicants to the Certificate program must meet the general requirements for admission to Graduate School as explained in the Graduate Study section of this Bulletin. The Certificate is awarded after completion of 18 hours, including a minimum of 12 hours drawn from a list of core courses and an additional six hours selected from a wide variety of offerings in eight different disciplines. No more than 12 hours may be from any one discipline. Students may simultaneously earn a graduate degree and count credits earned in their degree program toward the Certificate when appropriate.

Requirements

Students must complete at least 12 hours chosen from the following list of core courses:

Business Administration
416, International Finance, Investment, and Commercial Relations
417, International Business Operations
443, International Accounting

Economics
430, International Trade
431, International Monetary Analysis

History
419, Readings in East Asian History
430, Readings in European History
460, Readings in Latin American History
470, Readings in African History

Political Science
460, Proseminar in Comparative Politics
461, Seminar in Comparative Politics
480, Proseminar in International Relations
481, Seminar in International Relations

Students may complete an additional six hours chosen from the following:

Administration of Justice
360, Comparative Justice Systems

Art
356, Nineteenth-Century Art
357, Twentieth-Century Art

Business Administration
390, International Business

Economics
331, International Economic Analysis: Finance
350, Special Readings

English
323, Continental Fiction

History
314, American Foreign Relations: Since 1941
320, History of Feminism in Western Society
322a, History of Spain
322b, Russian History to 1917
322c, Modern France to 1870
322d, The Rise of the Modern British State
322e, Europe from the French Revolution to World War I, 1789-1914
323a, Contemporary France: Since 1870
323b, Germany in the Modern Age
323c, History of Russia from 1917 - Present
323d, Europe in the Twentieth Century
323e, Contemporary Europe, 1939 - Present
361, Modern Japan: 1850 to Present
362, Modern China, 1800 to Present
372, History of Latin America: Since 1800
381, West Africa: Since 1900
382, Crisis in Southern Africa
390, Special Readings

Modern Foreign Languages and Literatures
French 352, Nineteenth-Century French Novel
French 355, Modern French Poetry
French 371, Twentieth-Century French Novel
French 375, Modern French Theatre
German 315, German Classicism and Romanticism
German 320, German Realism and Naturalism
German 345, Modern German Literature
German 398, Survey of German Literature Part II
Spanish 310, Spanish Literature from 1850-1898
Spanish 315, Spanish Literature from 1810 to Present
Spanish 320, Realism and Naturalism in the Nineteenth-Century Spanish Novel
Spanish 321, Poetry and Drama of the Nineteenth Century
Spanish 340, Spanish-American Literature of the Nineteenth Century
Spanish 341, Modernismo
Spanish 345, Spanish-American Literature of the Twentieth Century
Spanish 351, Spanish-American Fiction in the Twentieth Century
Spanish 360, Spanish-American Poetry from Modernismo to the Present

Music
325, Music of the Romantic Period
326, Music of the Twentieth Century

Political Science
351, Comparative Public Policy and Administration
359, Studies in Comparative Politics
381, Comparative Foreign Policy
395, International Law
396, Studies in War and Peace
398, Studies in International Relations
495, Directed Readings and Research in International Relations

Sociology
342, Population Dynamics
Preprofessional Programs

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

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

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

Pre-Architecture

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

The requirement that 24 of the last 30 hours of course work for a degree be taken at UM-St. Louis shall be waived where necessary for students graduating under this procedure.

Pre-Engineering

The pre-engineering program provides the student with a solid scientific base in mathematics, chemistry, physics, and communications. Jointly prepared transfer guides to UMC, UMR, Washington University, and SIU-Edwardsville are available from the pre-engineering adviser or the Admissions Office. Curricula for all the engineering fields are listed in detail therein. Usually, transfer can be effected without loss of credit and with full standing since the curricula have been approved by the participating engineering schools and departments.

Students also may remain at UM-St. Louis to pursue B.S. degrees in pure science or in an applied area of physics, mathematics, or chemistry. The program's built-in flexibility allows students to explore various areas in engineering and applied science in order to discover the most appropriate and rewarding directions in which to aim their talents.

General Education Requirements

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

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

The following courses are required in the first two years for most of the engineering curricula that are part of the pre-engineering program.

Chemistry:
Chemistry 11, Introductory Chemistry I

English:
English 10, Freshman Composition

Computer Science:
Computer Science 125, Programming Methods I

Engineering:
Engineering 30, Engineering Graphics
Engineering 85, Statics and Elementary Strength of Materials
Engineering 185, Introduction to Dynamics

Humanities and Social Sciences:
Twelve hours of electives

Mathematics:
Math 80, Analytic Geometry and Calculus I
Math 175, Analytic Geometry and Calculus II
Math 180, Analytic Geometry and Calculus III
Math 202, Introduction to Differential Equations
Preprofessional Programs

Physics:
Physics 111, Physics: Mechanics and Heat
Physics 112, Physics: Electricity, Magnetism, and Optics
Physics 124, Circuit Analysis I

See the transfer guides for specific requirements at each of the participating universities.

Upper-Division Students
Students should be aware that there is a cooperative program between Rolla and St. Louis area employers which allows the student to alternate periods of study with periods of work in industry or business. Students may be interested in knowing there are about fifty St. Louis-area industries now cooperating in this program. Normally the cooperative program involves one semester of college study at Rolla, followed by one semester of work.

Specific inquiries about the pre-engineering program should be made to: Pre-engineering Program, A216 Benton, telephone 553-5931.

Prejournalism
Students wishing to pursue a journalism degree should review the entrance requirements of the schools they would like to attend for information on suggested prejournalism courses of study.

Students seeking a journalism degree from the University of Missouri must complete their junior and senior years at the School of Journalism, University of Missouri-Columbia. For admission, students must present to the UMC School of Journalism 60 acceptable credit hours with a cumulative grade point average of 3.0 or higher at the University of Missouri or another accredited two- or four-year institution.

Required Courses
The following studies are required for admission to the School of Journalism:

1) English Composition: Six credit hours. English 10, Freshman Composition, and English 210, Advanced Expository Writing, satisfy the requirement with a grade of B or better in English 210.

2) Foreign Language: Thirteen credit hours are required unless the student has completed four or more high school units in a single foreign language.

3) Behavioral, Biological, Physical, and Mathematical Science: Fourteen hours from four of six areas including anthropology, psychology, sociology, and biological, physical, and mathematical science. The fourteen hours must include at least one course with a lab (minimum four hours credit).

4) Social Science: Three hours in each of these three areas: economics, history, and political science.

5) Humanistic Studies: Eight hours in three of seven areas including appreciation or history of art or music; foreign civilizations; classics; literature; philosophy; speech and dramatic art; humanities sequence.

Nontransferable courses at the School of Journalism are basic military science, basic physical education, typing or shorthand, journalism or communication, and no more than three hours each of applied or performance music, dance, drama, or studio art.

Recommended, but not required, are courses in American history, general sociology, general psychology, introductory philosophy, principles of marketing, elementary accounting, statistics, and general anthropology.

For advisement and information, contact the Advising Office, College of Arts and Sciences, 303 Lucas, telephone 553-5300.

Prelaw
A "prelaw curriculum" is a myth, a mistaken notion based on an inexact analogy to premedical programs, which are quite specific and virtually obligatory for medical school candidates. While no single curricular path is the ideal preparation for law school, a broadly based undergraduate program that includes training in analytical reasoning and writing will serve the student well.

English language and literature courses are virtually indispensable. An awareness of the institutional processes of government obtained through study in political science is needed. Since law is inseparable from historical experience, an acquaintance with American history is important. Students should acquire a knowledge of macro- and microeconomics. Statistics, accounting, and computer science are valuable in understanding special legal subjects and the practice of law.

The University of Missouri has law schools at Columbia and Kansas City. University of Missouri-St. Louis students will find everything needed in planning an undergraduate program, preparing for the LSAT, and applying to law school in the office of the prelaw adviser, 303 Lucas, 553-5300. Students should contact the prelaw adviser early in their undergraduate career.

For advisement and information, contact the Advising Office, College of Arts and Sciences, 303 Lucas, telephone 553-5300.
Preprofessional Programs

Premedical Sciences

Students wishing to enter medical, dental, optometry, or veterinary medicine schools should pursue the B.A. or B.S. degrees with majors in the disciplines of their choice, but they should take whatever additional courses may be necessary for admission to the professional school. Pre-veterinary students will have to obtain certain animal sciences courses not offered at the University of Missouri-St. Louis.

Since medical school admission requirements vary, students are urged to consult the catalogs of the schools to which they intend to apply. Updated information may be found in Medical School Admission Requirements (United States and Canada) for the current year, available from the Association of American Medical Colleges, One Dupont Circle, N.W., Washington, D.C. 20036. The dean’s office has a copy available for student use within the office.

Suggested Courses

Many medical schools recommend the following undergraduate courses:

**Biology:** Biology 10, Introductory Biology; Biology 224, Genetics; and additional courses in developmental biology and/or physiology.

**Chemistry:** Chemistry 11, Introductory Chemistry I; Chemistry 12, Introductory Chemistry II; Chemistry 261, Structural Organic Chemistry; Chemistry 262, Organic Reactions; Chemistry 263, Techniques of Organic Chemistry; and additional courses in organic chemistry and quantitative analysis.

**Mathematics:** Students should take courses at least through calculus, as appropriate for the major degree.

**Physics:** Eight credit hours or as appropriate for the degree chosen.

Since students are not confirmed for admission to professional schools until the science requirements for admission are fulfilled, students should meet the science requirements before the end of the junior year. To complete these requirements in time, premedical students should take Chemistry 11 and 12, Introductory Chemistry I and II, during the freshman year.

Students also should take the required national standardized examination before or during the junior year: the Medical College Admission Test for premed students; the Veterinary Medical Aptitude Test for preveterinary students; the Dental Aptitude Test for predental students; and the Optometry Admission Test for pre-optometry students.

Each year the number of applicants to health profession schools exceeds the number of available places. Students, therefore, are encouraged to have alternative plans should they not gain entrance. Pharmacy, nursing, and laboratory technology may be considered as alternative fields.

For further information, testing dates, or premedical advising, contact the premedical adviser, 303 Lucas Hall, telephone 553-5300.

Pre-Optometry

The University of Missouri-St. Louis offers a four-year program of study leading to the Doctor of Optometry degree. This professional degree is administered by the School of Optometry. It is one of only 19 schools of optometry nationwide and the only one in the state of Missouri.

Because the University offers the Doctor of Optometry degree, it is an ideal institution for pre-optometry education. Undergraduate students have access to the optometry school students, faculty, and staff for career and academic guidance.

For more information contact the Office of Student Affairs at the School of Optometry.

Preprofessional 3 + 4 Program

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

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

Prepharmacy

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

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

Freshman Year
First Semester (16 hours)
Chemistry 11, Introductory Chemistry I
English 10, Freshman Composition
Mathematics 30, College Algebra, and Mathematics 35, Trigonometry
(At UMKC mathematics through survey calculus, Mathematics 101, is preferred.)
Elective*: One three-hour course
Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

Second Semester (16 hours)
Biology 10, Introductory Biology
Chemistry 12, Introductory Chemistry II
Literature: Any three-hour course
Elective*: One three-hour course
Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

Sophomore Year (for 2 + 3 programs)
First Semester (15 hours)
Biology: One biology elective
Chemistry 261, Structural Organic Chemistry
Literature: Any three-hour course
Physics 11, Basic Physics
Elective*: One three-hour course
*Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

Second Semester (14 hours)
Biology: One biology elective
Chemistry 262, Organic Reactions
Chemistry 263, Techniques of Organic Chemistry
Physics 12, Basic Physics
Elective*: One three-hour course
*Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

For additional information and prepharmacy advising, contact the chemistry department, 324 Benton Hall, telephone 553-5311.
Faculty

Robert M. Neust, Interim Dean; Professor*
Ph.D., University of California-Los Angeles

John J. Anderson, C.P.A., C.M.A., Associate Dean; Professor*
Ph.D., University of Wisconsin-Madison

David R. Ganz, Associate Dean and Director of Undergraduate Studies in Business; Assistant Professor
M.S. in C., St. Louis University

Albert P. Ameiss, Professor Emeritus*
Ph.D., St. Louis University

Howard B. Balz, Professor*
Ph.D., Oklahoma State University

William P. Dommermuth, Professor*
Ph.D., Northwestern University

Sioma Kagan, Professor Emeritus*
Diplom-Ingenieur, Ph.D., Columbia University

L. Douglas Smith, Director, Center for Business and Industrial Studies; Professor*
Ph.D., University of Minnesota

Robert S. Stich, Professor Emeritus*
Ph.D., New York University

Fred J. Thumlin, Professor*
Ph.D., Washington University

Nasser Arshadi, Associate Professor*
Ph.D., University of Nebraska

James A. Breugh, Coordinator in Management; Associate Professor*
Ph.D., Ohio State University

Dennis L. Dossott, Associate Professor*
Ph.D., University of Washington

Donald H. Driemeier, Interim Vice Chancellor for Academic Affairs; Associate Professor*
D.B.A., Washington University

David P. Gustafson, Associate Professor*
Ph.D., Stanford University

Michael M. Harris, Associate Professor*
Ph.D., University of Illinois-Chicago

Marius A. Janson, Associate Professor*
Ph.D., University of Minnesota

Charles R. Kuehl, Director of Graduate Studies in Business; Associate Professor*
Ph.D., University of Iowa

Donald R. Kummer, Coordinator in Finance; Associate Professor*
Ph.D., University of Oregon

Edward C. Lawrence, Associate Professor* (on leave)
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Silvia A. Madoe, C.P.A., Associate Professor*
Ph.D., North Texas State University

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Ph.D., University of Illinois

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Ph.D., University of Illinois

Stefan Wartick, Associate Professor (visiting)*
Ph.D., University of Washington

George C. Witteried, Associate Professor Emeritus*
M.B.A., J.D., Northwestern University

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Ph.D., University of California-Berkeley

Michael T. Elliott, Assistant Professor*
D.B.A., Mississippi State University

Thomas H. Eysass, Assistant Professor*
Ph.D., Texas A & M

Timothy A. Faver, C.P.A., Assistant Professor*
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Joseph P. Gillum, C.P.A., Assistant Professor*
L.L.M., New York University

D'Anne G. Hancock, Assistant Professor*
Ph.D., University of New Orleans

Kailash Joshi, Assistant Professor*
Ph.D., Indiana University

James M. Krueger, C.P.A., Associate Vice Chancellor for Budgeting and Academic Planning; Acting Deputy to the Chancellor; Assistant Professor*
D.B.A., Louisiana Tech University

Ashok Subramanian, Assistant Professor*
Ph.D., University of Houston

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M.B.A., University of Missouri-St. Louis

Beryl Lycan, Director, University System-Extension; Lecturer
M.A., Central Missouri State University

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

*members of Graduate Faculty

The School of Business Administration faculty has distinguished itself in the areas of teaching, research, and service. Of the current faculty, members have been cited as outstanding teachers by the UM-St. Louis Alumni Association; members have received the AMOCO Foundation Award for excellence in teaching; a faculty member has received the newly created Chancellor's Teaching Award; and a faculty member was the recipient of the Burlington Northern Foundation Faculty Achievement Award. The School of Business Administration also has a strong research and service orientation.
Business Administration

Undergraduate Studies

Degrees and Emphasis Areas
The School of Business Administration offers work leading to the bachelor of science degree in business administration (BSBA). The program is accredited by the American Assembly of Collegiate Schools of Business, the authorized professional accrediting body in collegiate business education.

The BSBA program represents a concentrated professional education in business. Professional credit requirements have been kept to a minimum to allow for a balanced liberal arts-professional program. Students have ample opportunity to develop a professional emphasis area in accounting, finance, management, and organizational behavior, management information systems, management science, or marketing. Specific information with respect to the emphasis area requirements may be obtained from the School of Business Administration's Office of Undergraduate Academic Advising.

Minor in Business Administration
The School also offers a minor in business administration for students pursuing other degree programs.

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

Business Development Center (BDC)
The Business Development Center is a part of the School of Business Administration and the University of Missouri Extension Division. The BDC is a unique vehicle that mobilizes students, faculty, and other professional resources for small business and community economic development.

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

Admission to the School of Business Administration
The school offers a two-year, junior/senior-level program. Admission prerequisites are:

1) At least a 2.0 overall grade point average for all work attempted within the University of Missouri system.

2) A minimum of 60 total credit hours. Normally, the following introductory business administration courses are included within the 60 hours:
   - Business Administration 103, Computers and Information Systems
   - Business Administration 131, Elementary Statistics
   - Business Administration 140, Fundamentals of Financial Accounting

Business Administration 145, Managerial Accounting
Business Administration 156, Legal Environment of Business
Economics 51, Principles of Microeconomics
Economics 52, Principles of Macroeconomics

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

Business students transferring from other institutions must complete at least 21 hours in business at UM-St. Louis on a regular graded basis and meet both the University's and the School's residency requirements.

Degree Requirements

General Education Requirements
All undergraduate business administration majors must complete the general education requirements of both the University and the School of Business Administration. The School's general education requirements are in keeping with those of the University. Many of the courses needed to complete the School's degree requirements, as outlined below, may be taken to fulfill the University's general education requirements.

General Degree Requirements
All undergraduate business administration majors must complete the specific nonbusiness courses which are business degree requirements. To satisfy the BSBA general degree requirements, the following boldface prebusiness administration requirements must be met:

1) Demonstration of basic skills in written communication by a minimum grade of C in English 10, English Composition or a satisfactory score on the English placement test. For more information refer to the University General Education Requirements.

2) Effective Fall Semester, 1985, students wishing to complete a degree at UM-St. Louis must complete a junior-level English requirement with a grade of C or better.

3) Three courses in the humanities, to be chosen from art history or art appreciation (applied art and applied music courses do not count); literature; music history, literature, theory, or appreciation; philosophy and logic; theatre appreciation, theory, and history.
Business Administration

4) Five courses in social science, to include:
   Economics 51, Principles of Microeconomics, and
   Economics 52, Principles of Macroeconomics; one
   course which meets the state requirement (see the
   University General Education Requirements), and two
   courses in the behavioral sciences, chosen from
   anthropology, psychology, or sociology.

5) Three courses in mathematics and science which must
   include: a minimum proficiency in Mathematics 102, Finite
   Mathematics; and at least one lecture course in either a
   biological or physical science.

   Note Mathematics 30, College Algebra, is a prerequisite
   to Mathematics 102.

6) One course in non-Euro-American studies, as outlined
   in the College of Arts and Sciences General Information.

Language and Mathematics Option
In addition to the above, degree candidates must complete
one of the following options:
1) Thirteen hours in one foreign language. (These are
   counted as free electives since they do not meet any specific
   general education requirements.)

or
2) A minimum of Mathematics 101, Survey Calculus, or
   Mathematics 80, Analytic Geometry and Calculus I.
   (Students planning to pursue any further calculus should take
   Mathematics 80.) Also required is one quantitative course
   from the following:

   Business Administration 306, Production and Operations
   Management
   Business Administration 329, Business Forecasting
   Business Administration 331, Multivariate Analysis
   Business Administration 375, Operations Research
   Economics 365, Economic Statistics and Econometrics

School of Business Administration Core Degree
Requirements

Bachelor of Science Degree in Business Administration
Candidates for the BSBA degree must complete the following
business administration core courses:
   103, Computers and Information Systems
   131, Elementary Statistics
   140, Fundamentals of Financial Accounting
   145, Managerial Accounting
   156, Legal Environment of Business
   *202, Fundamentals of Production
   *204, Financial Management
   *206, Basic Marketing
   *210, Management as a Behavioral Science I
   *391, Business Policy and Administration (Seminar)

   Students must earn a minimum grade of "C" in each course
   included in the thirty (30) hour business core except
   Business Administration 391, Business Policy and
   Administration.

School of Business Administration Graduation Degree
Requirements
All students who begin college as of Fall 1991 and who
pursue the Bachelor of Science in Business Administration
(BSBA) degree are required to complete a minimum of 33
hours in business courses at the junior/senior level
(UM-St. Louis courses numbered 200 and above). Fifteen (15)
of these hours are business core courses (those with an
asterisk, above) and eighteen (18) hours are business
electives.

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

Free Electives
In addition to the above, there are approximately 30 free
elective hours. Up to 12 of these may be taken in the School
of Business Administration; the remaining must be earned
outside the School. A minimum of 60 hours must be taken in
nonbusiness administration course work.

Graduation Requirements
The degree program requires a minimum of 48 hours in
business administration courses and a total of 120 hours.
The student must earn a minimum grade point average of 2.0
overall and a minimum grade point average of 2.0 for all
business courses. All grades from within the University of
Missouri system are computed in the GPA.

School of Business Administration Residency
Requirement
Effective Fall Semester, 1987, business administration
students must take their last 30 hours at the University of
Missouri-St. Louis. Exceptions to this residency requirement
would have to be approved by the School's Undergraduate
Studies Committee.

Limitation on Discipline Concentration
While a certain level of concentration in one of the various
business fields is desirable, students should not concentrate
their course selection to the extent of limiting their career
flexibility. Therefore, no more than 15 hours beyond required
core courses are allowed in any discipline, with the exception
of management information systems and accounting, in
which 18 hours and 24 hours, respectively, beyond the
required core courses are allowed. The combined hours in
business and economics courses may not exceed 75 within
the 120-hour program.
Business Administration

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

A student who has not been formally admitted to the School of Business Administration or who has not formally declared Business Administration as a major in the Evening College, may take no more than 30 hours of business courses.

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

Requirements for the Minor in Business Administration

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

Pre-Business General Education Requirements A student must complete the following economics courses:

51, Principles of Microeconomics
52, Principles of Macroeconomics

Statistics Requirement A student must take one of the following statistics courses:

Business Administration 131, Elementary Statistics
Economics 365, Economic Statistics and Econometrics
Mathematics 232, Applied Statistics II (Prerequisite: Mathematics 31 or Mathematics 132 or equivalent)

Psychology 101, Psychological Statistics (Prerequisites: Psychology 3 and Mathematics 30 or equivalent)

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

103, Computers and Information Systems
140, Fundamentals of Financial Accounting (Prerequisite: 27 credit hours and college algebra)

145, Managerial Accounting (Prerequisite: Business Administration 140 or equivalent and college algebra)
204, Financial Management (Prerequisites: Business Administration 140, Economics 52, and Statistics requirement)
206, Basic Marketing (Prerequisites: Economics 51 and junior standing)
210, Management as a Behavioral Science I (Prerequisites: three hours in anthropology, psychology, or sociology, and junior standing)

and any two additional business courses other than those listed under Statistics and Business Course Requirements.

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

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

Graduate Studies

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

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

Applicants are required to take the Graduate Management Admissions Test (GMAT). This test is given four times each year. This three and one-half hour aptitude test is designed to measure certain mental capabilities important in graduate business studies. The examination tests ability to read, understand, and reason logically with both verbal and quantitative material. The test is not a measure of achievement or knowledge of business administration curriculum. Applications for the examination may be applied directly to the Graduate Management Admissions Test, Educational Testing Service, CN6103, Princeton, New Jersey 08541. Information concerning the GMAT may also be obtained from the admissions advisers or the Office of Graduate Studies in Business.
Business Administration

Master of Business Administration Program (MBA)

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

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

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

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

MBA Program Degree Requirements

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

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

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

Students who have not completed Economics 351, Quantitative Methods for Economics, or its equivalent with a grade of B or better, within five years preceding entry into the program, will be required to take Business Administration 411, Analysis of National Economic Environment. Graduate credit is awarded for this course and may be included as elective credit.

Required Basic Courses

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

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

Required Second-Level Courses

At least three of the following courses are also required:

- Accounting 441, Concepts in Management Accounting
- Finance 451, Advanced Financial Management
- Management 481, Managing Human Resources
- Marketing 471, Marketing Planning and Strategy
- Management Science and Information Systems 483, Production and Operations Management

Electives

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

Previous Education

Students with previous education in business or economics may waive certain courses. Depending upon the student’s transcripts and the applicability of the course work, students with an undergraduate background in business may waive up to 21 hours of the 60-hour program. At least 39 hours must be taken to earn the degree regardless of the number of courses waived.
Business Administration

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

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

MS in MIS Program Degree Requirements

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

Students are required to have completed the equivalent of Economics 351 with a grade of C or better by the end of the first semester. Credit toward the program is not given for this course.

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

Required Basic Courses

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

- Business Administration 405, Business Communications
- Business Administration 410, Managerial Economic Analysis
- Business Administration 412, Public Policies Toward Business
- Accounting 440, Financial Accounting: Theory and Practice
- Finance 450, Financial Management
- Management 460, Organizational Behavior and Administrative Processes
- Marketing 470, Contemporary Marketing Concepts
- MS/IS 480, Management Information Systems
- MS/IS 481, Statistical Analysis for Management Decisions
- MS/IS 482, Operations Research Methods

Required Specialization Courses

The following courses are required:

- MS/IS 484, Business Programming and File Systems
- MS/IS 485, Theoretical Foundations of Management Information Systems
- MS/IS 486, Information Systems Analysis
- MS/IS 487, Database Management Systems
- MS/IS 488, Information Systems Design
- Business Administration 490, Policy Formulation and Administration

At least two of the following courses are also required:

- MS/IS 491, Computer Systems: Architecture and Programming
- MS/IS 492, Information Systems Management
- MS/IS 493, Simulation for Managerial Decision Making
- MS/IS 496, Telecommunications: Design and Management for Business Administration 309
- MS/IS 497, Expert Systems for Business Administration 306, Decision Support and Expert Systems
- MS/IS 498, Fourth Generation Languages and End-User Computing for Business Administration 307
- MS/IS 424, Seminar in Current MIS Topics
- MS/IS 425, Advanced MIS Applications

Electives

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

Master of Accounting Program (MAcc)

The MAcc program is intended for students preparing to enter the accounting profession or furthering existing accounting careers. Designed to accommodate both undergraduate students with undergraduate accounting majors and students with other backgrounds, the program permits students to specialize in either corporate or not-for-profit accounting or income taxation. It may require as few as 30 credit hours for students with undergraduate accounting majors or as many as 66 credit hours for students with no business background.

MAcc Program Degree Requirements

All students must meet course requirements in mathematics, general business, and accounting. At least 21 credits must be in advanced 400-level courses not used to meet the mathematics or general business requirements.

Math Background Requirement

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

General Business Requirements

Students must complete the equivalent of one three-credit-hour course in each of the following subject areas: macroeconomics, microeconomics, statistics, financial accounting, managerial accounting, marketing, production, finance, business law, management, business policy, and management information systems. These requirements may be met with graduate-level courses (numbered 400 or above) or with courses taken as an undergraduate.
Business Administration

Accounting Requirements
Students must complete at least 30 credit hours in accounting courses prior to graduation. Accounting courses taken prior to entry into the program (other than introductory financial and managerial accounting) may be included in the 30 hours. At least 15 credit hours must be in 400-level accounting courses. These courses must include:

1) Accounting 448, Seminar in Advanced Theory and Contemporary Issues in Accountancy

2) One of the following advanced seminars:
   Accounting 421, Seminar in Corporate Accounting
   Accounting 422, Seminar in Governmental and Nonprofit Accounting
   Accounting 439, Seminar in Taxation

3) At least one course in each of the following areas:
   Financial Accounting—e.g.,
   Business Administration 341, Intermediate Accounting II
   Accounting 446, Financial Accounting: Advanced Theory and Analysis
   Cost/Managerial Accounting—e.g.,
   Business Administration 345, Cost Accounting
   Accounting 441, Concepts in Management Accounting
   Auditing—e.g.,
   Business Administration 348, Auditing
   Accounting 446, Topics in Professional Accounting
   Income Taxation—e.g.,
   Business Administration 347, Income Taxes
   Management Information Systems—e.g.,
   Business Administration 310, Information Systems Design
   Business Administration 344, Computer Applications in Accounting
   Accounting 449, Systems Auditing

Other currently offered 400-level courses in accounting from which students may choose include:

Business Administration 418, Governmental Budgeting and Financial Control
Accounting 431, Tax Research
Accounting 432, Taxation of Estates, Gifts, and Trusts
Accounting 433, Taxation of Corporations and Shareholders
Accounting 434, Taxation of Partnerships and Partners
Accounting 435, Tax Practice and Procedure
Accounting 436, Advanced Topics in Taxation
Accounting 443, International Accounting
Accounting 447, Accounting Systems for Management Planning and Control

Special Interdisciplinary Degree
The School of Business Administration also cooperates with the departments of economics and political science in the College of Arts and Sciences in offering a master's degree in public policy administration (MPPA). For information on the MPPA degree program, see the Inter-School Studies section of this Bulletin.

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

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

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

Undergraduate Studies

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

Course Designations in the School of Education
The following abbreviations are used to indicate instructional areas in the course listings and descriptions in the School of Education. The page numbers refer to the University of Missouri-St. Louis Bulletin: Description of Courses, a separate booklet.

Adult Education Courses (ADU ED), p. 110
Counselor Education Courses (CNS ED), p. 105
Early Childhood Education Courses (ECH ED), p. 118
Educational Administration Courses (ED ADM), p. 111
Educational Foundations Courses (ED FND), p. 112
Educational Psychology Courses (ED PSY), p. 106
Educational Research and Evaluation Methods (ED REM), p. 107
Educational Technology Courses (ED TEC), p. 113
Elementary Education Courses (ED ED), p. 119
Physical Education Courses (PHY ED), p. 122
School-wide Education Courses (EDUC), p. 103
Secondary Education Courses (SEC ED), p. 114
Special Education Courses (SPC ED), p. 108

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

Admission Policies

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

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

Application to the School of Education Application to the School is processed through the Admissions Office. Eligibility is based upon the following criteria:
1) Satisfactory completion of two years of college work, with a minimum of 60 semester hours with a grade point average of 2.0 or above.
2) Having no more than nine hours of deficiencies in general education.
3) Completion of the specific prerequisites and/or other special requirements of the curriculum areas for which students are applying.

Admission to the Teacher Education Program

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

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

Effective September 1, 1988
Students not previously admitted to the Teacher Education Program (acceptance of 60-hour form) must submit qualifying scores on the College Basic Academic Subjects Evaluation (C-BASE) in the areas of English, Writing, Mathematics, Science, and Social Studies as mandated by the Missouri Excellence in Education Act of 1985. Consult the Office of Undergraduate Studies in Education, School of Education, for test descriptions, cost, required scores, dates of administration, retest policies, etc. Acceptable C-BASE scores are required in addition to acceptable ACT or SAT scores.

1) Scored either 18 on the ACT Composite (20, when taken after 10/1/89) or 800 on the SAT (verbal plus math).
2) Completed 60 hours of college or university courses at UM-St. Louis or another accredited school.
Undergraduate Studies in Education

3) Accumulated a grade point average of 2.5.
4) Completed ELE ED 101, PHY ED 101, or SPC ED 101, Introduction to Classroom Teaching, or the equivalent, with a grade of C or better. (Not applicable for secondary education or early childhood education majors).
5) Completed ED FND 111, The School in Contemporary Society, or the equivalent, with a grade of C or better.
6) Received screening test in hearing (at no cost at the UM-St. Louis Health Center or off campus at personal expense).
7) Received screening test in vision (at no cost at UM-St. Louis Optometry Clinic or off campus at personal expense).
8) Agreed to adhere to ethical codes which have particular pertinence during clinical experiences. (These codes are available in the Office of Undergraduate Studies in Education, School of Education.)
9) Agreed to subscribe to a standard of professional behavior which will enhance greater self-awareness if social or emotional difficulties arise which may affect future teacher effectiveness. (This standard is available in the Office of Undergraduate Studies in Education.)
10) Submitted an Affidavit of Moral Character, notarized by a Notary Public.

*Policy for Students Scoring Below ACT and SAT Qualifying Requirements

Students who do not achieve satisfactory scores of 18 (enhanced 20) on the ACT or 800 on the SAT may re-take the test(s) until the requirement is met. Students who initially score below the required ACT score of 18 or SAT score of 800 may petition the Dean of Education to attest that basic educational competencies are met if their grade point average from 60 hours of college or university courses is at least 2.20 and they have performed satisfactorily on a norm-referenced achievement test other than ACT or SAT. The Form to Record Alternate Basic Education Competencies is available in the Office of Undergraduate Studies in Education, Room 155, Marillac Hall. Students must produce evidence that the ACT or SAT was initially completed and a score recorded.

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

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

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

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

Level II Application to the Student Teaching Program

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

Health Certificate

A Missouri School Personnel Health certificate signed by a licensed physician and valid for the year in which students do their student teaching must accompany the application forms. All Missouri School Personnel Health Certificates are available in the Office of Undergraduate Studies in Education.

Upon receipt, formal applications are checked to ensure students have met the following requirements:
1) Full admission to the teacher education program.
2) Completion of 90 hours of approved course work at the time of application.
3) A cumulative grade point average of 2.5 or above by the semester prior to the one in which students plan to co teach.
4) Completion of English 210, Advanced Expository Writing, with a grade of C or better.
5) Completion of Speech 40, Introduction to Public Speaking, with a grade of C or better.
6) Completion of general education requirements and near completion of course requirements in the teaching major.
7) A grade of C or better in all professional education courses so designated. Lists of these courses are available in the Office of Undergraduate Studies in Education and from advisers.
8) Satisfactory recommendations by students' teaching area representatives in the teacher education program.
9) Completion at UM-St. Louis of no less than 12 hours of approved course work.
10) Grade point average of 2.2 in the teaching field (secondary education students only).
11) Completion of prerequisite courses in professional education and psychology.

Student Teaching

The student teaching experience in the Early Childhood, Elementary Education, Middle School, Physical Education, and Special Education certification programs has been strengthened by providing assignments in two different school settings and appropriately increasing the amount of time devoted to it. Students in the "7-1-7" program teach full days for seven weeks. They are off for one week then teach seven weeks in a different district and at a different grade level.
Undergraduate Studies in Education

Student teaching, which must be done in residence, is not offered during the summer or in the evening. Secondary student teaching in science education, mathematics education, and foreign language education is offered only during the Winter semester. Secondary education majors student teach for an entire semester, full days.

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

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

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

Student teachers who fail the course or are allowed to withdraw because they are failing to meet minimum requirements must wait at least one full semester and fulfill the remedial requirements established at the time of the failure or withdrawal before they may re-apply for admission to student teaching. The remedial requirements will be determined by the Office of Undergraduate Studies in Education after consultation with the cooperating teachers, University supervisors, and student teachers involved. The students must provide appropriate evidence that the remedial requirements have been met at the time they re-apply for admission to student teaching. It is understood that meeting the remedial requirements does not guarantee success in the subsequent student teaching experience.

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

Application for Degree and/or Certificate

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

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

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

Certification

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

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

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

Graduate Studies

Degrees and Areas of Emphasis
M.Ed. programs are offered in counseling, educational administration, elementary education, secondary education, and special education. Within the counseling program are the emphasis areas of community education, elementary administration, and secondary administration. Within the Educational Administration program are the emphasis areas of adult education, curriculum and instruction, and student personnel certification as graduate students should complete forms in the Office of Undergraduate Studies in Education, 155 Marillac Hall. An adviser is then appointed who counsels the student in registration and program planning. A program for master's degree form must be submitted for approval during the first 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.

Doctor of Education Degree

Admission and General Requirements
The School of Education follows Graduate School policies relating to admissions, academic standards, residency, transfer credit, time limitations, and thesis options (see Graduate Studies in this Bulletin). The minimum number of hours required for the M.Ed. degree is 32 except for the general counseling emphasis which requires 48 hours, effective fall semester, 1988. The school has adopted a flexible policy on exit requirements which are determined departmentally.

Advisement and Program Planning
After acceptance, each student completes a graduate advising form, available in the School of Education's Office of Graduate Studies, 155A Marillac Hall. An adviser is then appointed who counsels the student in registration and program planning. A program for master's degree form must be submitted for approval during the first 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.

Admission Application
In order to ensure time for review and decision, complete applications and accompanying materials must reach the School of Education's Office of Graduate Studies by February 1 for summer or fall semester, and October 1 for the winter semester. These documents should be filed in the Office of Admissions at least two weeks prior to these dates. 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.
Graduate Studies in Education

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 from:
- Statistics
- Research design
- Computer applications
- Nonquantitative research
- Tests, measurements, and evaluation

Common doctoral seminars, 6 hours

2) Role Specialization, 48 hours from:
- Emphasis area doctoral seminars (16-12)
- Emphasis area electives (15-17)
- Related area (12-18)
- Internship (3-9)

3) Dissertation, 12 hours

Support Services

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

Office of Undergraduate Studies in Education – 155 MH
This office supplies advisement services for undergraduate teacher education and certification students. It coordinates the clinical experiences of the School of Education and directs the student teaching program.

Office of Graduate Studies in Education – 158A MH
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 – 304 SSB
The Center has four components: the instructional media laboratory, the instructional television laboratory, the teaching skills laboratory, and the computer terminal facility. The Center, through these components, provides direct instructional support to School of Education courses.

Human Services Unit – B23A ED LIB
The Human Services Unit is a training facility for graduate students supervised by faculty in the Department of Behavioral Studies. Career counseling and assistance with vocational, adult, or adolescent developmental concerns are available to individuals in the community.

Reading Clinic – B9 ED LIB
The Reading Clinic provides a laboratory setting for graduate level elementary and secondary teachers who are seeking certification as reading specialists. The Clinic has been providing services to the surrounding community in diagnosing and treating severe reading problems in children and adults since 1966. The Clinic also serves as a demonstration and materials center for pre-service and in-service teacher education as well as a clinical research facility for the faculty.

University Child Development Center – 130 SCB
The Center provides University students with observation, participation, research, and similar educational and clinical opportunities; it also offers quality child care programs for children of student, faculty, staff, and community families.

Midwest Community Education Development Center – 313 MH
Graduate students interested in community and continuing education may receive assistance from the Center in the form of information, materials, and training programs. The Center serves Missouri in the promotion and development of community schools and continuing education. It is a cooperative venture of the School of Education and Continuing Education-Extension.
Faculty

Arthur E. Smith, Professor*; Chairperson
Ph.D., St. Louis University
William L. Franzen, Professor*; Dean Emeritus
Ph.D., University of Wisconsin
Rickey L. George, Professor*; Associate Dean
Ph.D., Northwestern University
Patricia A. Jakubowski, Professor*
Ed.D., University of Illinois
Thomas E. Jordan, Curators' Professor* of Child Development
Ed.D., Indiana University
George E. Mowrer, Professor Emeritus
Ed.D., University of Missouri-Columbia
Donald W. Robinson, Professor*; Dean
Ph.D., Bradley University
W. Ray Rhine, Professor*
Ph.D., University of Texas
Harold W. Richey, Professor*
Ph.D., University of Kansas City
Margaret W. Cohen, Associate Professor*
Ph.D., Washington University
R. Rocco Cottone, Associate Professor*
Ph.D., St. Louis University
Theresa A. Cristiani, Associate Professor*
Ph.D., Southern Illinois University-Carbondale
Lowe S. (Sandy) MacLean, Adjunct Associate Professor*
E.D., Indiana University-Bloomington
Steve D. Spaner, Associate Professor*
Ph.D., Southern Illinois University-Carbondale
Gaylen R. Wallace, Associate Professor*
Ed.D., Oklahoma State University
W. Glenn White, Associate Professor*
Ph.D., University of Missouri-Columbia
George J. Yard, Associate Professor*
Ph.D., St. Louis University
Peggy S. Filer, Assistant Professor*
Ed.D., Oklahoma State University
Howard P. Brown, Jr., Assistant Professor*
Ph.D., Mississippi State University
Gary D. House, Assistant Professor*
Ed.D., University of Missouri-St. Louis
Delores M. John, Assistant Professor*
Ph.D., University of Missouri-Columbia
MaryAnn Lingg, Assistant Professor*
Ph.D., University of North Texas
Robert J. Loyd III, Assistant Professor*
Ph.D., University of Missouri-Columbia

*members of Graduate Faculty

General Information

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

At the undergraduate level the department coordinates work in educational psychology, counseling, measurement, special education, and related areas. Offerings leading to the B.S. in Education degree are available in special education. The Special Education program prepares students to teach educable mentally retarded, severely handicapped, emotionally disturbed, or learning disabled children. Students also receive certification as regular elementary school teachers upon completion of the curriculum. New Missouri certification standards require a student teaching experience in each area of special education. It is possible for students to become certified as secondary school teachers with appropriate advising.

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

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

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. The General Counseling area, for which there are no certification requirements, is only appropriate for the practice of counseling in non-school settings.

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

Undergraduate Studies

Bachelor of Science in Education: Special Education

General Education Requirements (46 hours required):

English 10, Composition
Communication, 3 hours
English 210, 3 hours

Mathematics (3 hours)
Mathematics 50, Structure of Mathematical Systems I
No credit toward graduation is granted for Mathematics 15, Mathematics: Ideas and Structures, unless Mathematics 50 is completed.

Science (8 hours)
Biology (3)
Physical Science (3)
Science Lab (2)
Behavioral Studies

**Humanities (8 hours)**
Music 177, An Introduction to Music for the Elementary School Teacher (Recommended)

*plus two courses from art, music, philosophy, or literature*

**Social Science (18 hours)**
Geography 101, Introduction to Geography
History 3, American Civilization, or
History 4, American Civilization
Political Science 11, Introduction to American Politics
Psychology 3, General Psychology
Psychology 270, Child Psychology
Economics 306, Microeconomics for the School Curriculum, or
Economics 40, Introduction to the American Economy

**Related Area Requirements (12 hours)**
PHY ED 130, Elements of Health Education
PHY ED 261, Physical Activity of the Exceptional Learner

**Program Requirements (24 hours)**
SPC ED 101, Introduction to Classroom Teaching
ED FND 111, The School in Contemporary Society
ED PSY 312, Psychology of Teaching and Learning

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

230. Children's Literature and Reading
246. Teaching Mathematics in the Elementary School
335. Teaching Language Arts and Reading, N-9
342. Teaching Remedial Mathematics
385. Teaching Reading in the Elementary School

**Special Education Requirements (33 hours)**
The following courses are required:
SPC ED 290 Student Teaching in Special Education I
SPC ED 291 Student Teaching in Special Education II

*Note SPC ED 290 and SPC ED 291 must be taken during the same semester.*
ED REM 310, Interpretation of Educational Tests and Measurements
SPC ED 313, The Psychology and Education of Exceptional Individuals
SPC ED 315, Speech and Language Problems of Exceptional Children
SPC ED 320, Behavior Management
CNS ED 331, Counseling the Handicapped

*and at least two of the following Special Education (SPC ED) courses. (It is important that an adviser be consulted.)*
330. Introduction to Mental Retardation and Severe Disabilities
332. Education of the Mentally Retarded
345. Introduction to Emotional Disturbance and Learning Disabilities
347. Teaching in the Learning Disabilities Classroom
350. Instructional Techniques for the Emotionally Disturbed Student
371. Methods and Curricula for the Severely Handicapped
372. Screening and Diagnosis of the Developmentally Delayed

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

SPC ED 322, Teaching Mainstreamed Students
ELE ED 241, Teaching of Science in the Elementary School

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

**Total: 120 hours**

**Graduate Studies**

**Master of Education: Emphasis in Elementary School Counseling**

The courses listed below meet both M.Ed. degree and certification requirements for those who have completed their work prior to September, 1988. Those who did not receive certification by that date should consult their adviser now for the new requirements. At this time the degree may be completed without obtaining certification providing:

CNS ED 327, Personal and Professional Development in Counseling
ED PSY 411, Psychology of Learning Processes
CNS ED 411, Theories of Counseling
CNS ED 420, Group Procedures in Counseling
CNS ED 483, Guidance Practicum I
CNS ED 494, Guidance Practicum II

are included in the program. Students should check with their advisers about teaching and noneducational work experience requirements for certification as well as course prerequisites and sequencing.

**Area of Specialization**

In addition to the above, the following Counselor Education (CNS ED) courses are required for certification in elementary school counseling:

327. Personal and Professional Development in Counseling
411, Theories of Counseling
414, Individual Inventory
420, Group Procedures in Counseling
431, Foundations of School Guidance
490, Internship
493, Guidance Practicum I

Also required:

ELE ED 389, The Analysis and Correction of Reading Problems in the Classroom, or ELE ED 486, Clinical Diagnosis and Treatment of Reading Disabilities

**Psychological Foundations and Human Development**

ED PSY 411, Psychology of Learning Processes
ED PSY 413, Personality Development and Adjustment
ED PSY 417, Psychology of the Elementary School Child
*SPC ED 412, Psychology of Exceptional Children or SPC ED 313, The Psychology and Education of Exceptional Individuals*

*SPC ED 313 or SPC ED 412 is required for certification if it has not been taken previously at the undergraduate or graduate level. It is not a degree requirement.*

**Educational Research and Evaluation Methods**

ED REM 421, Educational and Psychological Measurement
ED REM 422, Individual Assessment of Cognitive Abilities
Behavioral Studies

Master of Education: Emphasis in General Counseling

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

Students should consult advisers about the requirements for licensure as a professional counselor.

Core Curriculum
The following courses in Counselor Education (CNS ED) are required:

327. Personal and Professional Development in Counseling
411. Theories of Counseling
414. Individual Inventory
420. Group Procedures in Counseling
443. Career Development
490. Internship
493. Guidance Practicum I
494. Guidance Practicum II

Psychological Foundations and Human Development
At least one course from the following Counselor Education (CNS ED) courses:

841. Theories of Counseling
842. Group Procedures in Counseling
843. Career Development
890. Internship
893. Guidance Practicum I
894. Guidance Practicum II

Area of Specialization
The following Counselor Education (CNS ED) courses are required for certification in secondary school counseling:

327. Personal and Professional Development in Counseling
411. Theories of Counseling
414. Individual Inventory
420. Group Procedures in Counseling
443. Career Development
490. Internship
493. Guidance Practicum I

Psychological Foundations and Human Development
At least one of the following:

ED PSY 411, Psychology of Learning Processes
ED PSY 413, Personality Development and Adjustment

*SPC ED 313 or SPC ED 412 is required for certification if it has not been taken previously at the undergraduate or graduate level. It is not a degree requirement.

Educational Research and Evaluation Methods
ED REM 330, Educational Statistics
ED REM 421, Educational and Psychological Measurement

Area of Specialization (15 hours)
Course work in the area of specialization is to be selected in consultation with advisers.

Master of Education: Program in Special Education

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

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

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

Knowledge Base (3-6 hours)
ELE ED 497, Problems
SPC ED 431, Problems in Mental Retardation
SPC ED 443, Learning Disabilities
SPC ED 450, Introduction to Behavioral Disorders
SPC ED 462, Introduction to Early Childhood-Special Education

Curriculum (3-6 hours)
SEC ED 415, The Secondary School Curriculum
SEC ED 416, Curriculum Construction for Secondary Schools
ELE ED 410, Current Research in the Elementary School Curriculum
SPC ED 413, Organizational Foundations for Special Education
SPC ED 421, Prescriptive Teaching of Exceptional Children
SPC ED 430, Education of the Mentally Retarded
SPC ED 444, Education of Children with Learning Disabilities
SPC ED 452, Education of Behaviorally Disorderly Children

Practicum (3-6 hours)
At least three hours must be taken in SPC ED 492, Practicum in Special Education.
Behavioral Studies

Psychological Foundations and Human Development (3-6 hours)
- ED PSY 411, Psychology of Learning Processes
- ED PSY 417, Psychology of the Elementary School Child
- ED PSY 418, The Psychology of Adolescence
- SPC ED 412, Psychology of Exceptional Children
- SPC ED 416, Current Research in Psychology of Exceptional Children

Educational Research and Evaluation Methods (3-6 hours)
- ED REM 330, Educational Statistics
- ED REM 420, Classroom Measurement and Evaluation
- ED REM 421, Educational and Psychological Measurement
- ED REM 422, Individual Assessment of Cognitive Abilities

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

Elementary and Secondary School Intern Supervisors and Sites

The Department of Behavioral Studies in the School of Education wishes to recognize the contributions to the profession made by the following counselors, their school and district, and by the administrators who cooperated in the supervision of our counseling interns:

Marcia Alexander, Pierremont School
Parkway School District

Phyllis Atkins, McCluer Senior High School
Ferguson-Floissant R-II School District

Ann Barber, Clayton Senior High School
Clayton School District

Tom Barrow, Crestview Junior High School
Rockwood School District

Duane Becker, Pacific High School
Meramec Valley R-III School District

Sue Bell, Sullivan Middle School
Sullivan C-2 School District

Sandy Bergesch, Troy Senior High School
Troy R-III School District

Roberta Brennan, St. Charles West High School
St. Charles School District

Pamela Brill, Logos High School

Ruth Brown, Avery Elementary School
Webster Groves School District

Kate Brunn, Conway Elementary School
Ladue School District

Edell Buhliger, Holman Middle School
Patonville School District

Joan Butts, Wentzville Middle School
Wentzville R-IV School District

Carlene Cox, Jennings Senior High School
Jennings School District

Dr. Michael Cundiff, Parkway South High School
Parkway C-2 School District

Terry Diehl, Nipher Middle School
Kirkwood R-VII School District

Sandra Dobnikar, Parkway North High School
Parkway C-2 School District

Virginia Donnison, Crestview Junior High School
Rockwood School District

Helen Dozier, Marshall School
St. Louis Public Schools

Patricia Duggan, Affton Senior High School
Webster Groves School District

Gary Edler, Becky David School
Francis Howell School District

Vivian Edwards, O’Fallon Technical High School
St. Louis Public School System

Renny Eisenberg, St. Peters Elementary School
Fort Zumwalt School District

Ann Eissfeldt, Bowles Elementary School
Rockwood R-VI School District

Jim Fischer, Hillsboro Senior High School
Hillsboro R-III School District

Dr. Hazel Freeman, Horton Watkins Senior High School
Ladue School District

DiAnna Fulkerson, Carrolton Elementary School
Patonville School District

Carol Fuss, Airport Elementary School
Ferguson-Floissant R-II School District

Bill Gegg, St. Francis Borgia Regional High School
Archdiocese of St. Louis

Hardina Graham, Lafayette Elementary School
St. Louis Public School System

Jack Greeny, Fox Senior High School
Fox C-6 School District

Cathy Grindler, Russell School
Hazelwood School District

Deionas Guyton, McKelvey Elementary School
Parkway C-2 School District

Carlena Hamlin, McKinley Elementary School
Normandy School District

Patricia Harrison, Koch Elementary School
Lewes and Clark Elementary School

Janet Henry, Ireland Elementary School
Brelmaur School District

Gayle Horn, St. Charles High School
City of St. Charles School District

Pauli House, Fairmount Primary School
Francis Howell R-III School District

Dennis Hugo, Parkway Central High School
Parkway C-2 School District

Dr. Marlin Jackoway
Patonville School District

Andrew Jeppsen, Lincoln Elementary School
St. Charles R-VI School District

Randy Jones, Pattonville High School
Patonville School District

Sherry Kaiser, Bierbaum Elementary School
Mehlville School District

Ken Kielty, Robert W. Barnwell Junior High School
Francis Howell R-III School District

Sr. Susan Kienzler, Ursuline Academy
Archdiocese of St. Louis

Don R. Kinsey, Mehlville Senior High School
Mehlville R-IX School District

Dr. Rosemary Kline, Southwest High School
St. Louis Public School System

Sharon Koening, Crestview Junior High School
Rockwood School District

Betty Lack, Fairmount Elementary School
Francis-Howell R-III School District

Shelia Lamplin, Joseph L. Mudd Elementary School
Fort Zumwalt R-II School District
Behavioral Studies

Judi Land, St. Charles High School  
City of St. Charles School District  
Carole Lander, Claymont Elementary School  
Parkway School District  
Dr. Susan Lile, Brentwood High School  
Brentwood School District  
Lynn Lowrance, Fairmount Primary School  
Francis Howell R-III School District  
Ann Lowry, Francis Howell High School  
Francis-Howell R-III School District  
Marie Mahaffy, South Middle School  
Fort Zumwalt R-II School District  
Michelle Mangall, McKelvey Elementary School  
Parkway C-2 School District  
Jeanette Mathews, Vashon High School  
St. Louis Public School System  
Vernon McIntire, Mark Twain Elementary School  
Brentwood School District  
Tom Messner, O’Fallon Technical High School  
St. Louis Public School System  
Dr. Lorraine Mild, Oakville Elementary School  
Mehlville School District  
Barbara Mueller, Mason Ridge Elementary School  
Parkway School District  
Mrs. G. Newsom, Hazelwood Junior High School  
Hazelwood School District  
Dr. Pamela Nickels, Webster Groves High School  
Webster Groves School District  
Pat Perrymon, University City Senior High School  
St. Louis County School District  
Peggy Peterson, Emil E. Holt Wentzville Senior High School  
Wentzville R-IV School District  
Betty Portman, Becky David School  
Francis Howell School District  
Margie Rich, Larimore Elementary School  
Hazelwood School District  
Cathy Richter, Tilman Elementary School  
Kirkwood School District  
Dixie Rodgers, Oakville Senior High School  
Mehlville R-IX School District  
Robin Rone-Baden, Progress South Elementary School  
Fort Zumwalt School District  
Carol Rosenband, Point Elementary School  
Mehlville School District  
Alta Royal, Parkway East Junior High School  
Parkway C-2 School District  
Barb Scheegel, Mason Ridge Elementary School  
Parkway School District  
Charlie Sans, Oakville Senior High School  
Mehlville R-IX School District  
Linda Siegfried, North Glendale Elementary School  
Kirkwood R07 School District  
Dr. Mildred Smith, Beaumont High School  
St. Louis Public School System  
Nancy Smith, Bristol Elementary School  
Webster Groves School District  
Allen Turner, St. Clair Junior High School  
St. Clair R-XII School District  
Benita Vaughn, M. Gene Henderson Elementary School  
Francis Howell R-III School District  
Lena Waters, Lafayette Elementary School  
St. Louis Public School System  
Alice Watson, Parkway Central Junior High School  
Parkway C-2 School District  
Bill White, Butler School  
Ritenour School District  
Ben Williams, Aquinas/Mercy High School  
St. Louis Archdiocese  
Karen Williams, Brennan Woods Elementary School  
Northwest R-I School District  
Ann Wilson, Lafayette Elementary School  
St. Louis Public School System  
David Winkler, Woodland School  
Jennings School District  
Roy Wolverton, Hazelwood East High School  
Hazelwood School District  
Cindy Wynn, Jefferson West High School  
St. Charles R-VI School District  

Career Outlook

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

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

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

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

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

Faculty
Paul D. Travers, Chairperson, Professor
Ed.D., George Peabody College
Walter Erikh, Professor
Ph.D., Washington University
Charles Grenger, Professor
Ph.D., University of Iowa
Blanche Touhill, Professor, Chancellor
Ph.D., St. Louis University
Harold E. Turner, Professor Emeritus
Ed.D., George Peabody College
Henry R. Weinstock, Professor
Ph.D., University of Georgia
Joy E. Whitener, Dean Emeritus, Professor Emeritus
Ph.D., Washington University
Fred Willman, Professor
Ph.D., University of North Dakota
Charles J. Fazzaro, Associate Professor
Ed.D., Western Michigan University
Richard J. Friedlander, Associate Professor
Ph.D., University of California-Los Angeles
Donald R. Greer, Associate Professor
Ph.D., University of Missouri-Columbia
John A. Hensch, Associate Professor, Continuing Education Specialist
Ed.D., Boston University
Jane A. Miller, Associate Professor
Ph.D., Tulane University
Evelyn E. Nance, Associate Professor,
Associate Dean for Research and Administration, School of Education; Director
Ed.D., Western Michigan University
Angelo H. Puricelli, Associate Professor
Ph.D., St. Louis University
James E. Walter, Associate Professor
Ph.D., University of Wisconsin-Madison
Edith M. Young, Associate Professor
Ed.D., University of Missouri-Columbia
Gregory Fox, Assistant Professor
Ph.D., University of Illinois
Sandra S. Gottfried, Assistant Professor
Ph.D., University of Connecticut
Anita McDonald, Assistant Professor
Ph.D., St. Louis University
K. Kelly McKerrow, Assistant Professor
Ph.D., Southern Illinois University-Carbondale
Dennis K. Smelzter, Associate Professor
Ph.D., Northern Illinois University
Wendell L. Smith, Associate Professor
Ph.D., University of Missouri-St. Louis
Jane Zeni, Assistant Professor
Ed.D., University of Missouri-St. Louis
Gayle Wilkinson, Visiting Assistant Professor
Ph.D., University of Illinois
Mimi J. LaMarca, Lecturer; Director of Admissions and Registrar
M.Ed.
Beth Pike, Lecturer
M.Ed.
Rita C. White, Lecturer
M.A.
*members of Graduate Faculty

General Information

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

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

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

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

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

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

Undergraduate Studies

Degree Requirements

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

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

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

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

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

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

Mathematics
One college-level mathematics course.

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

Program Requirements
28 hours required
The following education and psychology courses meet the state professional education standards:
ED FND 111, The School in Contemporary Society
Psychology 271, Adolescent Psychology
ED PSY 312, Psychology of Teaching and Learning
SEC ED 213, Techniques of Secondary School Teaching and Field Experience
SEC ED 290, Secondary School Student Teaching
SPC ED 313, The Psychology and Education of Exceptional Individuals
SEC ED 385, Problems of Teaching Reading in Secondary Schools

and the appropriate course entitled Curriculum and Methods of Teaching ___.

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

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

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

Total: 120 hours

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

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

Program Requirements
28 hours required
ED FND 111, The School in Contemporary Society
Psychology 271, Adolescent Psychology
ED PSY 312, Psychology of Teaching and Learning
SEC ED 213, Techniques of Secondary School Teaching and Field Experience
SEC ED 267, Curriculum and Methods of Teaching Business Subjects
SEC ED 290, Secondary School Student Teaching
SPC ED 313, The Psychology of Education of Exceptional Individuals
SEC ED 385, Problems of Teaching Reading in Secondary Schools

Academic Major
33 hours required
These Secondary Education (SEC ED) courses:
261, Methods of Teaching Typewriting
262, Methods of Teaching Shorthand
263, Methods of Teaching Accounting and Data Processing
264, Methods of Teaching Social Business Subjects
265, Secretarial Practice
292, Field Experience and Seminar in Secretarial Practice
plus these Business Administration courses
206, Basic Marketing
140, Fundamentals of Financial Accounting
156, Legal Environment of Business or 256, Business Law
340, Intermediate Accounting
and
Economics 51, Principles of Microeconomics

Note Grades of C or better are required in all courses in the academic major in SEC ED 267 and SEC ED 290.

Electives
Electives are to be selected only after consultation with an adviser.

Total: 120 hours
Educational Studies

Graduate Studies

Master of Education: Secondary Education

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

Degree Requirements for All Secondary Education Majors

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

Core Requirements (9 hours)
ED FND 421, Philosophy of Education
SEC ED 415, The Secondary School Curriculum
SEC ED 420, The Improvement of Secondary School Teaching

Exit Requirement (3 hours)
One of the following courses must be taken as part of the last nine hours in the M.Ed. program in secondary education:
ED FND 422, Analysis of Educational Issues
SEC ED 416, Curriculum Construction for Secondary Schools

In addition to the above courses, the following is a third exit course option, limited solely to those in the Adult Education Emphasis or Business Education teaching field:
ADU ED 490, Internship (in Adult Education)

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

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

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

Degree Requirements (32 hours)

1) Core Requirements (9 hours as specified above)

2) Curriculum/Instruction Core (8 hours)
Courses are to be selected in consultation with an adviser in the curriculum/instruction field from among the following:
EDUC 415, Seminar II, Curricular Issues and Problems
SEC ED 385, Problems of Teaching Reading in Secondary Schools
SEC ED 414, Teaching the Gifted and Talented in Secondary Schools
SEC ED 416, Curriculum Construction for Secondary Schools
SEC ED 418, The Junior High/Middle School
SEC ED 422, Individualizing Instruction in Secondary Schools
PHY ED 482, The Physical Education Curriculum

3) Teaching Field Core (8 hours)
Courses approved by the Graduate School for M.Ed. programs are to be selected in consultation with an adviser in secondary education.

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

Master of Education: Secondary Education with Emphasis in Adult Education

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

Degree Requirements (32 hours)

1) Core Requirements (9 hours as specified above)

2) Adult Education Core (8 hours)
Courses are to be selected in consultation with an adviser in the adult education teaching field from among the following courses:
*ADU ED 412, Foundations of Adult Education
*ADU ED 413, Improvement of Instruction in Adult Education
*ADU ED 414, Curriculum Theory and Development in Adult Education
*ED ADM 480, Administration of Adult and Community Education
ADU ED 490, Internship (in Adult Education) or ADU ED 497, Problems in Adult Education

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

Adult Basic Education Certification

*ADU ED 311, Teaching Basic Reading Skills to Adults
*ELE ED 446, Problems of Teaching Arithmetic in the Elementary School or ELE ED 346, Advanced Methods in Elementary School Mathematics

*Eight semester hours from these six courses, and three hours of Adult Education electives, in addition to SPC ED 313, Psychology and Education of Exceptional Individuals, are required for five-year certification from the Missouri State Department of Education. New requirements will be implemented in 1994 and are currently required for all new ABE teachers.
Adult Basic Education (ABE) Certification  The state of Missouri has established ABE teacher certification standards at three levels: life, five-year, and one-year. The requirements for these levels, including approved UM-St. Louis courses, are the following:

1) Life Teacher’s Certification ABE
   a) Bachelor’s degree accredited for teaching plus regular Missouri life teacher’s certificate.
   b) Completion of the eight courses indicated above.

2) Five-Year Teacher’s Certification ABE
   a) Bachelor’s degree accredited for teaching plus regular Missouri life teacher’s certificate.
   b) Minimum of eight hours of credit from the group of adult education courses asterisked above (renewable upon completion of an additional eight hours from the same group).
   c) Recommendation by local superintendent or ABE director to Missouri Director of Teacher Certification.

3) One-Year Teacher’s Certification ABE
   a) Bachelor’s degree accredited for teaching.
   b) Minimum of one hour of college credit from an ABE teacher training workshop.
   c) Recommendation by local superintendent or ABE director to Missouri Director of Teacher Certification.

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 385, Problems of Teaching Reading in Secondary Schools
   ELE ED 486, Clinical Diagnosis and Treatment of Reading Disabilities
   ED REM 422, Individual Assessment of Cognitive Abilities
   ELE ED 493, Clinical Methods in Child Study I
   ELE ED 494, Clinical Methods in Child Study II
   ELE ED 492, 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 undergraduate level. Students should see an adviser.
   SPC ED 315, Speech and Language Problems of Exceptional Children or ECH ED 331, Language Acquisition and Development in Early Childhood
   SPC ED 320, Behavior Management
   CNS ED 411, Counseling Methods
   ED PSY 417, Psychology of the Elementary School Child
   ED PSY 418, The Psychology of Adolescence

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

Master of Education: Secondary Education and Certification

The M. Ed. in secondary education requires a minimum of 32 hours of graduate credit. Certification requires 28 hours of undergraduate course work, making a total of 60 hours of graduate and undergraduate work. Under the combined program up to 12 hours of graduate courses may be substituted for the same number of undergraduate courses.

Degree Requirements

Required and Recommended Courses

1) Professional Requirements
   SEC ED 2XX, Curriculum and Methods of Teaching
   SEC ED 213, Techniques of Secondary School Teaching and Field Experience
   SEC ED 290, Secondary School Student Teaching

2) Certification and M.Ed. Requirements
   ED PSY 312, The Psychology of Teaching and Learning
   SEC ED 385, Problems of Teaching Reading in Secondary Schools
   ED PSY 418, The Psychology of Adolescence
   SPC ED 412, Psychology of Exceptional Children
   ED FND 421, Philosophy of Education
   SEC ED 415, The Secondary School Curriculum

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

Educational Administration Options

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

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

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

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

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

Requirements

1) Educational Core (Required for M.Ed. and ACS)
   ED FND 421, Philosophy of Education
   ED FND 425, History of Western Education or ED FND 330, History of American Education
   ED ADM 411, Organizational Theory & Analysis in Education
   ED ADM 416, Policymaking in Education

2) Research Core (Required for both M.Ed. and ACS)
   *ED ADM 435, Education Administration Policy Research
   ED REM 330, Educational Statistics

3) Educational Administration Core (Required for both M.Ed. and ACS)
   ED ADM 414, Foundations of Educational Administration
   ED ADM 460, School Law
   ED ADM 471, School Staff Development & Supervision

4) School Administration Specialization (Required for both M.Ed. and ACS)**
   For Elementary School Administration
   ED ADM 441, Elementary School Administration
   ELE ED 411, Curricular Issues in the Elementary School
   For Secondary School Administration
   ED ADM 461, Secondary School Administration
   SEC ED 415, Secondary School Curriculum or SEC ED 416, Curriculum Construction for Secondary Schools

5) Internship (Required for state certification, but not for M.Ed.)
   ED ADM 490, Internship

6) Technical Aspects of Educational Administration (Electives, 12 hours for ACS)
   ED ADM 425, Organizational Change in Education
   ED ADM 429, The Department Head
   ED ADM 495, Principles of School Finance in Missouri
   ED ADM 475, School Buildings and Sites
   ED ADM 480, Administration of Adult and Community Education
   ED ADM 481, Programming in Community Education and Adult Education
   ED ADM 485, Financing of Community Education
   ELE ED 410, Current Research in the Elementary School Curriculum
   ELE ED 411, Curricular Issues in the Elementary School
   ELE ED 422, Curriculum Construction in the Elementary School
   ELE ED 423, Elementary School Curriculum
   SEC ED 415, The Secondary School Curriculum
   SEC ED 416, Curriculum Construction for Secondary Schools
   SEC ED 481, The Junior High/Middle School

SEC ED 420, The Improvement of Secondary School Teaching
SEC ED 422, Individualizing Instruction in Secondary Schools
ED TEC 433, Educational Technology Systems Management
ED REM 420, Classroom Measurement and Evaluation

7) Human Aspects of Educational Administration (Electives 12 hours for ACS)
   ED ADM 423, Problems in School Public Relations
   ED ADM 475, Collecting Data in Educational Organizations
   ED ADM 477, School Finance Administration
   ELE ED 425, Elementary School Supervision
   SEC ED 425, Secondary School Supervision
   CNS ED 431, Principles and Procedures of Student Personnel Work

*Exit Requirement for M.Ed. -- this course must be taken within the last nine (9) semester hours before the completion of the program.
**Students choose either the sequence for elementary school administration or the sequence for secondary school administration.

Master of Education: Educational Administration with Emphasis in Community Education

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

Degree Requirements

1) Common Educational Foundations (9 hours required)
   ED FND 421, Philosophy of Education
   *SPC ED 412, Psychology of Exceptional Children
   *SPC ED 313, The Psychology and Education of Exceptional Individuals
   ED REM 420, Classroom Measurement and Evaluation
   ED REM 330, Educational Statistics

*Students who have already had a graduate or undergraduate course related to Psychology of Exceptional Children need not take SPC ED 412 or SPC ED 313.

2) Administrative Foundations (12 hours required)
   ED ADM 411, Theory and Organizational Development in Educational Administration
   For elementary administration community education
   ED ADM 441, Elementary School Administration
   ELE ED 425, Elementary School Supervision
   ELE ED 410, Current Research in the Elementary School Curriculum
   For secondary administration community education
   ED ADM 461, Secondary School Administration
   SEC ED 425, Secondary School Supervision
   SEC ED 415, The Secondary School Curriculum or SEC ED 416, Curriculum Construction for Secondary Schools
3) Community Education Emphasis Area (9 hours required)
ED ADM 480, Administration of Community and Adult Education
ED ADM 481, Programming in Community and Adult Education
ED ADM 490, Internship

4) Recommended Electives
ED ADM 485, Financing of Community Education
ED ADM 432, Problems in School Public Relations
ED ADM 460, School Law
ED ADM 465, State and Federal Financing of Public Education
ED ADM 414, Foundations of School Administration

5) Minor Area of Concentration (6 hours required for ACS)
Students are expected to demonstrate competence in at least one other field. Other fields may include sociology, political science, business administration (industrial-labor relations or other area), economics, educational research, and other approved fields. Competence may be shown by successful completion of at least six hours in one of these fields.

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

Career Outlook

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

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

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

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

Faculty
Thomas R. Schnell, Associate Professor*, Chairperson
Ph.D., Southern Illinois University-Carbondale
Richard W. Burnett, Professor*, Director of Reading Clinic
Ed.D., Indiana University
Doris A. Trojacak, Professor*, Coordinator of Graduate Studies in Education
Ed.D., Indiana University
Huber M. Walsh, Professor*
Ed.D., University of California-Los Angeles
Lloyd I. Richardson, Jr., Associate Professor*
Ph.D., George Peabody College
Leo V. Rodenborn, Associate Professor*
Ed.D., Oklahoma State University
Anne D. Lally, Instructor
M.Ed., University of Missouri-St. Louis
Kathryn Mitchell Pierce, Assistant Professor*
Ph.D., Indiana University
Bennie Adams, Assistant Professor*
Ph.D., University of Illinois
Gwendolyn Turner, Associate Professor*
Ed.D., University of Arkansas
Helana Sherman, Assistant Professor*
Ed.D., University of Missouri-St. Louis
Cynthia Jordan, Assistant Professor*
Ed.D., Memphis State University

*members of Graduate Faculty

General Information

The faculty of the Department of Elementary and Early Childhood Education have their offices on the third floor of Marillac Hall. Questions about departmental matters should be directed to 369 Marillac Hall.

The department coordinates programs leading to the B.S. in Education degree in early childhood education and elementary education. The B.S.Ed. in elementary education may also be tailored to the middle school/junior high teaching certificate. A special feature of these programs is the many opportunities to work with children in schools as part of the professional course work.

Note: The General Assembly enacted a law during 1984 eliminating Life Teaching Certificates after September 1, 1988. 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.

Undergraduate Studies

General Education Requirements

Elementary Education (1-8)

English and Communication (9 hours)
English 10, Composition
English 210, Advanced Expository Writing
Communication: 3 hours

Mathematics (6 hours)
Mathematics 50, Structure of Mathematical Systems I
Mathematics 151, Structure of Mathematical Systems II

Science (8 hours)
Biological Science: 3 hours
Physical Science: 3 hours
and two hours of a science laboratory

Humanities (8 hours)
Three courses from two of the following fields: art, music, philosophy, and literature.

Social Science (21 hours)
Psychology 3, General Psychology
Psychology 270, Child Psychology
Political Science 11, Introduction to American Politics or equivalent
and one of the following history courses:
History 3, American Civilization
History 4, American Civilization

and the following courses:
one geography course
Economics 40, Introduction to the American Economy or Economics 306, Macroeconomics for the School Curriculum or Economics 306, Microeconomics for the School Curriculum
Sociology 10, Introduction to Sociology or any anthropology course

Early Childhood Education (P-3)

General education requirements are the same as for Elementary Education except that Mathematics 151, geography, and economics are not required.

Middle School/Junior High (4-9)

General education requirements are the same as for Elementary Education except that Psychology 271, Adolescent Psychology is taken in lieu of Psychology 270, Child Psychology.

Degree Requirements

Bachelor of Science in Education: Early Childhood Education The early childhood program is designed for students wishing to teach and direct programs for children from pre-kindergarten through grade three. Students electing this program will work directly with young children as a part of their professional courses.
Elementary and Early Childhood Education

General Education Requirements
Students are required to take the general education requirements as indicated for Early Childhood Education above.

Program Requirements
ED FND 111. The School in Contemporary Society
ED PSY 312. Psychology of Teaching and Learning
SPC ED 313. The Psychology and Education of Exceptional Individuals

and these Elementary Education (ELE ED) courses:
230. Children’s Literature and Reading
336. Teaching Language Arts and Reading, N-9
385. Teaching Reading in the Elementary School
389. The Analysis and Correction of Reading Problems in the Classroom

plus these Early Childhood Education (ECH ED) courses:
290. Student Teaching in Early Childhood Education I
291. Student Teaching in Early Childhood Education II
Note: ECH ED 290 and ECH ED 291 must be taken during the same semester.
312. Principles of Early Childhood Education
314. Curriculum, Methods, and Materials for Early Childhood Education
317. Assessing Individual Needs for Early Childhood
321. Parent and Community Resources in Early Childhood Education
331. Language Acquisition and Development in Early Childhood
333. Creative Experiences for Young Children
346. The Acquisition of Mathematical Concepts

Related Area Requirement
PHY ED 130, Elements of Health Education
PHY ED 282, Physical Growth and Motor Development

Postdegree certification students may take ED FND 330, History of American Education, or ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Total: 120 hours

Bachelor of Science in Education: Elementary Education

Program Requirements
ED FND 111. The School in Contemporary Society
ED PSY 312. Psychology of Teaching and Learning
SPC ED 313. The Psychology and Education of Exceptional Individuals

and these Elementary Education (ELE ED) courses:
230. Children’s Literature and Reading
246. Teaching Mathematics in the Elementary School
253. Teaching of Social Studies in the Elementary School
*290. Elementary School Student Teaching I
*291. Elementary School Student Teaching II
336. Teaching Language Arts and Reading, N-9
341. Teaching of Science in the Elementary School
385. Teaching Reading in the Elementary School
389. The Analysis and Correction of Reading Problems in the Classroom

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

Total: 120 hours

Bachelor of Science in Education: Elementary Education (Middle School/Junior High Certification)

Program Requirements
ED FND 111. The School in Contemporary Society
ED PSY 312. Psychology of Teaching and Learning
SPC ED 313. The Psychology and Education of Exceptional Individuals

and these Secondary Education (SEC ED) courses:
222. Middle School/Junior High School Organization, Philosophy and Curriculum
386. Problems of Teaching Reading in Secondary Schools

Area of Concentration for State Certification
Junior high 7-9 requirements as listed by the State Department of Education.

Postdegree certification students may take ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Total: 120 hours
Elementary and Early Childhood Education

Graduate Studies

Master of Education: Elementary Education

General Curricular Program or Specialization in Selected Curricular Areas

The M.Ed. student in elementary education may elect either of these programs. Please note, however, that in either case the degree is the Master of Education in Elementary Education. Diplomas and transcripts do not show areas of specialization nor are special certificates awarded.

1) Core Competencies (12 hours)
To include ELE ED 410, Current Research in the Elementary School Curriculum; ELE ED 411, Curricular Issues in the Elementary School; and six hours selected, in consultation with advisers, from among cognate fields or professional education.

2) Content Competencies (12 hours)
Students desiring to specialize through a sequence of courses should select at least nine hours in one of the following areas: Children's Literature, Early Childhood, Language Arts, Mathematics Education, Reading, Science Education, Social Studies Education, or Special Education (ELE ED 425, Elementary School Supervision is also recommended for specialist sequence). Students who elect a general sequence should take no more than six hours in any one area.

3) Curricular Applications Competencies (9 hours)
Students must select, in consultation with their advisers, a measurement course, and complete the following: ELE ED 422, Curriculum Construction in Elementary Schools, and ELE ED 423, Curriculum Implementation in the Elementary School.

Upon completion of ELE ED 410 and ELE ED 411 in phase one, each candidate selects a curricular area or areas, identifies an adviser from the elementary and early childhood education faculty, and plans appropriate course sequences. A candidate enrolling in the specialist program should select an adviser in the area of specialization.

The sequence of courses, ELE ED 410 and ELE ED 411 should be taken at the beginning of the program; ELE ED 422 and ELE ED 423 constitute the final two program courses. Students should note that ELE ED 411 is typically offered only during the Winter and Summer semesters, ELE ED 422 is offered only during the Fall semester and ELE ED 423 only during the Winter semester.

Electives should be selected according to candidates' needs and/or interests.

Emphasis in Reading

The M.Ed. program with emphasis in reading is designed to enable candidates to further their competencies as reading teachers and prepares them for positions as remedial reading specialists, reading consultants, and/or for further graduate study. The minimum required and recommended courses are as follows:

1) Core Requirements
At least one graduate-level course in each of the following areas: learning psychology; research, statistics, and measurements; and elementary curriculum.

2) Courses in Reading
The following required courses in reading should be taken in sequence. Courses denoted by asterisks are required for certification in remedial reading by Missouri teacher certification regulations. Students, with their advisers' permission, may substitute other courses for any requirement if they have had a recent upper-class undergraduate course covering the same material. Required are:
- ELE ED 385, Teaching Reading in the Elementary School
- SEC ED 385, Problems of Teaching Reading in the Secondary School

these Elementary Education (ELE ED) courses:
- 486, Clinical Diagnosis and Treatment of Reading Disabilities
- 493, Clinical Methods in Child Study I
- 494, Clinical Methods in Child Study II

Note ELE ED 493 is offered in Fall and Summer semesters; ELE ED 494 is offered in the Winter and Summer.

and also:
- ELE ED 482, Problems and Research in Teaching Elementary School Reading (offered only in the Winter semester).
- ED REM 420, Classroom Measurement and Evaluation
- SPC ED 315, Speech and Language Problems or
- ECH ED 331, Language Acquisition and Development
- SPC ED 320, Behavioral Management
- CNS ED 327, Personal and Professional Development in Counseling
- ED PSY 417, Psychology of the Elementary School Child
- ED PSY 418, Psychology of Adolescence

Note SPC ED 412. Psychology of Exceptional Children, is required for certification if it has not been taken previously at the undergraduate or graduate level. It is not a degree requirement.
Elementary and Early Childhood Education

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 421, Philosophy of Education
- ADU ED 311, Teaching Basic Reading Skills to Adults
- ELE ED 484, Developmental Reading (K-13)
- ELE ED 488, Supervision of School Reading Programs

Certification Options
A combined M.Ed. and certification option exists. Options include Elementary Education (1-8), Early Childhood Education (P-3), and Middle School/Junior High (4-9). Students should consult certification advisers. Graduate credit will not be given for courses at the 100 or 200 level.

Career Outlook
Undergraduate and graduate degrees in Early Childhood Education and Elementary Education are most directly applicable to teaching at the level appropriate to the program emphasis. Increasing specialization of teaching assignments and downward extensions of "ages of schooling" continue to open employment opportunities. As in the past, early childhood and elementary education graduates at all degree levels also continue to be attractive candidates for employment in many positions which require or are well suited to training in social and behavioral sciences. Positions in constant contact with and service to the general public such as sales, service, public relations, and general business are most common examples. Future expansions of opportunities in schools are tied to population growth, increased specialization of services, and reduction in ratios between professional staff and children served. Many presently employed teachers will retire within the next 5-10 years, consequently, a shortage of teachers is anticipated.
Physical Education

Faculty
Bruce A. Clark, Chairperson; Associate Professor*
Ph.D., University of Illinois
Kathleen M. Haywood, Professor*
Ph.D., University of Illinois-Urbana-Champaign
Thomas J. Loughrey, Associate Professor*
Ph.D., University of Iowa
Charles G. Smith, Associate Professor*, Director of Athletics
M.S., Washington University
Tammy Slone, Lecturer
M.S., Middle Tennessee State University

*members of Graduate Faculty

General Information

The Department of Physical Education is housed on the second floor of the Mark Twain Building. Information about offerings and related matters may be obtained in the departmental office, 225 Mark Twain.

The department coordinates work in physical education. At the undergraduate level this work leads to the B.S. in Education degree with emphasis in either elementary or secondary physical education.

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

The master of education degree in elementary and secondary education provides courses for graduate students who choose physical education as their teaching field. Graduate students should consult their advisors about the requirements.

Undergraduate Studies

Bachelor of Science in Education:
Physical Education

General Education Requirements (42 hours required):

Humanities
At least one course from two of the following fields: music (excluding applied music), art, foreign language, Western and non-Western cultures, philosophy, literature, classical studies, and theatre and drama.

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

Social Studies
Courses in American history and American government, and one additional course selected from the following areas:

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

Mathematics
One college-level mathematics course.

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

Electives 11-14 hours

Program Requirements
Students must pass Proficiencies in first aid, cardiopulmonary resuscitation, personal physical fitness, and water safety instructor. The proficiency evaluations are regularly scheduled each semester. Contact the department for further information. Students are urged to complete these requirements as early in the program as possible. Successful completion is required prior to student teaching. No credit hours are granted for satisfying this requirement.

Elementary School Emphasis

Students are required to take 12 hours of analysis and teaching courses in Physical Education (PHY ED):

121, Analysis and Teaching of Physical Activities I
122, Analysis and Teaching of Physical Activities II
123, Analysis and Teaching of Physical Activities Laboratory

Offered Fall Semester Only
Golf, Bowling, and Archery
Ballroom, Folk, and Square Dancing
Racquet Sports
Gymnastics and Tumbling

Offered Winter Semester Only
Soccer/Basketball
Rhythmic Activities and Modern Dance
Track and Field
Aquatics

Baseball/Softball/Volleyball

The following theory of Physical Education (PHY ED) courses are required (38 hours):

130, Elements of Health Education
165, Physical Education Activities in the Elementary School
232, Sports Medicine
251, Physical Activity for the Exceptional Learner
276, Psychology of Sport
276, Sociocultural Foundations of Sport and Physical Education
280, Human Anatomy and Physiology or Biology
281, Physical Activity for the Exceptional Learner
282, Physical Growth and Motor Development
283, Kinesiology
284, Physiology of Human Exercise
Physical Education

The following Professional Education courses are required (28 hours):

PHY ED 101, Introduction to Classroom Teaching
ED FND 111, The School in Contemporary Society
Psychology 270, Child Psychology
ED PSY 312, Psychology of Teaching and Learning
SPC ED 313, The Psychology and Education of Exceptional Individuals
SEC ED 385, Problems of Teaching Reading in Secondary Schools
PHY ED 268, The Curriculum and Methods of Teaching Physical Education
PHY ED 290, Student Teaching in Physical Education I
PHY ED 291, Student Teaching in Physical Education II

Total: 120 hours

Secondary School Emphasis

Students are required to take 12 hours of analysis and teaching courses in Physical Education (PHY ED):

121, Analysis and Teaching of Physical Activities I
122, Analysis and Teaching of Physical Activities II
123, Analysis and Teaching of Physical Activities Laboratory

The following is a list of laboratories for PHY ED 123:

Offered Fall Semester Only
Golf, Bowling, and Archery
Ballroom, Folk, and Square Dancing
Racquet Sports
Gymnastics and Tumbling

Offered Winter Semester Only
Soccer/Basketball
Rhythmic Activities and Modern Dance
Track and Field
Aquatics
Baseball/Softball/Volleyball

The following theory of Physical Education courses are required (32 hours):

165, Physical Education Activities in the Elementary School
232, Sports Medicine
261, Physical Activity for the Exceptional Learner
275, Psychology of Sport
276, Sociocultural Foundations of Sport and Physical Education
280, Human Anatomy and Physiology or Biology 113, Human Physiology and Anatomy I
282, Physical Growth and Motor Development
283, Kinesiology
284, Physiology of Human Exercise

The following Professional Education courses are required (31 hours):

ED FND 111, The School in Contemporary Society
SEC ED 213, Techniques of Secondary School Teaching and Field Experience
Psychology 271, Adolescent Psychology
ED PSY 312, Psychology of Teaching and Learning
SPC ED 313, The Psychology and Education of Exceptional Individuals

SEC ED 385, Problems of Teaching Reading in Secondary Schools
PHY ED 268, The Curriculum and Methods of Teaching Physical Education
PHY ED 280, Student Teaching in Physical Education I
PHY ED 281, Student Teaching in Physical Education II

Total: 120 hours

Career Outlook

The employment outlook for physical educators has been improving, especially at the elementary school level. In addition to elementary or secondary physical education teaching, graduates may want to consider coaching, athletic training, dance, research, and gerontological careers. Graduates have been employed as specialists in recreation and physical fitness organizations, as special physical educators and coaches.

Students are urged to consult with their advisers in order to broaden the career options available by combining physical education with other specialties for positions in community agencies, business, and industry.
Evening College

Administration
Anita McDonald, Dean
Ph.D., St. Louis University
Harry Gaffney, Assistant Dean
Ph.D., St. Louis University
Nancy Shields, Assistant Dean
Ph.D., Southern Illinois University-Carbondale

General Information
The Evening College provides undergraduate degree programs for students who, for various reasons, choose to attend evening classes. In addition, persons who want to maintain their professional competence or broaden their educational background without pursuing degree work will find a broad array of courses which may be taken for credit or on an audit basis.

Recognizing the value of continuing education and career advancement, many St. Louis institutions, businesses, and industries encourage their employees to avail themselves of the educational opportunities offered by the Evening College. The Veterans Administration has approved either full-time or part-time study for educational benefits.

Since most Evening College students are employed full time, they normally carry less than a full academic load. To enable students to carry as many courses as they wish, the Evening College schedules classes between 5:30 and 9:35 p.m. Classes and degree programs are conducted according to the same standards as the day program.

Course Areas
The Evening College offers courses in 26 academic areas: administration of justice, anthropology, art, astronomy, biology, business administration, chemistry, communication, computer science, 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 help develop programs appropriate to their needs. Appointments may be made by calling the Evening College, 553-5162. Transfer students or students with 40 or more credit hours who wish to be assigned advisers and to graduate from the Evening College must file a Declaration of Major form.

Facilities The facilities of the University of Missouri-St. Louis, including the computer center, library, laboratories, cafeteria, bookstore, health service, placement service, and admissions office, are open in the evening. Evening College students are also eligible to participate in any of the University sports programs that interest them. The athletic facilities of the Mark Twain Building are available. For information on hours, contact the athletics office at 553-5641.

Alpha Sigma Lambda The Beta Epsilon Chapter of Alpha Sigma Lambda is a national honorary scholastic society for Evening College students. To be eligible for membership, a student must have completed at least four semesters of college or university work, completed a minimum of 30 semester hours in the Evening College, have a cumulative grade point average of 3.2, and be enrolled in the Evening College. Individuals already in possession of a college degree are not eligible for membership.

Degree Programs

General Education Requirements All candidates for a degree through the Evening College must meet the University general education requirements.

Bachelor of Arts Majors available for the B.A. degree are biology, chemistry, communication, economics, English, history, mathematics, physics, political science, psychology, and sociology. For further information, consult the appropriate departmental section of the College of Arts and Sciences portion of this Bulletin.

Bachelor of Science The B.S. degree is available in applied mathematics, biology, chemistry, computer science, economics, physics, public administration, 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 specialized Bachelor of Science in Administration of Justice (B.S.A.J.), the Bachelor of Science in Business Administration (B.S.B.A.), and the Bachelor of Science in Education (B.S.Ed.). The B.S. in education offers specialization in any of the following: early childhood education, elementary education, middle school/junior high school, special education, and secondary education (in 11 teaching areas). Students should consult the appropriate departmental section of the College of Arts and Sciences portion of this Bulletin or the sections for the School of Business Administration or the School of Education.

Bachelor of Social Work The B.S.W. degree program is designed to prepare persons for employment in social welfare agencies, schools, hospitals, correctional institutions, or day care, geriatric, or rehabilitation centers. Individuals currently working in social welfare settings can improve their skills or increase their opportunities for job advancement. For further information, consult the Social Work section of this Bulletin.
Bachelor of General Studies Degree

The Bachelor of General Studies degree (B.G.S.) is also offered through the Evening College. It is designed to provide mature students with a meaningful alternative to traditional degree programs. It appeals to a variety of students whose circumstances, goals, and aspirations are different from those of the "typical" college student. The B.G.S. program provides the flexibility needed to enable students, with careful advisement, to develop individualized programs of study.

Some of the educational goals pursued by students in the program are designed to reflect students' interests in the fields of public relations, corporate communication and medical technology. The Evening College, in cooperation with Jewish Hospital's School of Medical Technology and Barnes Hospital's Cytotechnology program, has made courses in medical technology and cytotechnology available for students.

Admission Requirements for the B.G.S. Program

Candidates for the B.G.S. degree must be admitted to the Evening College and must complete an application for admission to the program. Applications must be approved by the General Studies Committee and the Evening College dean. The criteria for admission are:

1. Students must be mature and their programs of study reasonable.
2. Students should have a broad education and must have demonstrated the equivalent of academic proficiency required for any other undergraduate degree at UM-St. Louis.
3. Study programs should be structured to meet students' unique educational goals and should not be readily available under any other UM-St. Louis degree program.
4. That the degree will better qualify the recipients to deal with their life goals than if they had some other degree.

Degree Requirements for the B.G.S. Program

General Education Requirements

Students must complete the University's general education requirements. For details refer to the General Education Requirements section of this Bulletin.

Personal Emphasis Area

In consultation with an adviser, students shall develop a personal emphasis area of at least 30 advanced semester hours of graded credit that meets their educational goals. Graded credit consists of degree credit courses in which the student received a letter grade of A, B, C, or D. Regardless of the focus, theme, or purpose, the personal emphasis area should result from self-examination and contribute to self-realization and an advanced level of academic competence and achievement. The study program must be approved by the faculty adviser, dean, and General Studies Committee. Students and advisers periodically review the progress toward attaining the goal or objective and make appropriate modifications where necessary, subject to the dean's approval.

Hour and Grade Requirements

The degree requires completion of 120 semester hours with a 2.0 grade point average overall and in the personal emphasis area. No more than 30 hours may be taken in any one department without written consent of the departmental chairperson. At least 45 hours must be earned in courses beyond the introductory level. A minimum of 24 hours of graded credit must be completed in residence at UM-St. Louis, of which 15 hours must be in the personal emphasis area. No more than 18 hours may be taken on a satisfactory/unsatisfactory basis. Each candidate must be in residence for 24 of the last 30 hours of graded credit (exclusive of courses taken on a satisfactory/unsatisfactory basis).

Credit for Experience, Special Projects, Examinations, and Non-Traditional Forms of Study

Credit may be earned through the College Level Examination Program in accordance with University policy or through examinations proposed or approved by University departments. Credit also may be earned through correspondence study, supervised independent research study, and college-level courses offered by television or similar education media. Students are responsible for obtaining approval for credit applied under this option.

Students also may receive credit for vocational experience, community service projects, or cultural activities after they have completed 24 hours of course work in residence.

Vocational Experience

Credit may be granted for vocational experience when related to the personal emphasis area. Credit cannot exceed three semester hours for each year of experience with a maximum of 12 hours allowed only in exceptional circumstances. Petitions for vocational experience credit must be accompanied by a job description verified by the employer or similar appropriate evidence. Credit may be granted only upon recommendation of the adviser and approvals of the dean and the General Studies Committee.

Community Service Projects/Cultural Activities

Credit not exceeding six hours may be earned for participation in approved community service projects or cultural activities. The projects or activities must be formulated by the student and carried out under the supervision of a faculty member with the approval of the adviser, dean, and General Studies Committee. Students must submit a written report approved by the supervisor upon completion of the projects or activities.

Credit for vocational experience or community service/cultural activities may be applied toward the credits required for the degree but may not be used to complete the personal emphasis area or general education requirements. Students must file a degree application form in the Evening College at least one year before the expected graduation date.
Evening College

Minors

Minor in Employee Training and Development: The Evening College and the School of Business Administration offer a minor in employee training and development. The requirements are:

- Business Administration 318, or Psychology 318, Industrial Psychology
- Business Administration 319, Employee Training and Development
- ED PSY 312, Psychology of Teaching and Learning
- ED TEC 340, Selection and Utilization of Educational Media
- Psychology 219, Research Methods

One additional course selected from these approved electives:

- Business Administration 309, Personnel Management
- Communication 141, Business and Professional Speaking
- Sociology 354, Occupations and Their Work Settings

Students should consult with an adviser when planning their programs. A 2.0 grade point average is required for the minor. No courses may be taken on a satisfactory/unsatisfactory basis. At least 12 credits of those required must be completed in residence at UM-St. Louis.

This minor is designed for personnel managers in small companies and training managers or personnel specialists in larger companies. The required 18 hours, including the approved elective course, enable the student to be exposed to different skills essential for the occupational area.

Other Minors

Minors are also available in administration of justice, biology, business administration, chemistry, communication, computer science, economics, English, history, mathematics, political science, psychology, and sociology. For currently offered minors, consult your adviser.

Certificates

Certificate programs are available in women's studies and writing. For more information consult the Certificate Programs section of this Bulletin.

Career Outlook

Many graduates of the Evening College have found their careers advanced upon obtaining their degree. Some have entered new careers in mid-life and others have found personal satisfaction in the acquisition of knowledge for its own sake. The Evening College staff consists of advisers with extensive experience concerning adult students' needs. In addition, a psychological counselor is available to assist students with career planning and personal problems. For an appointment, call the Evening College office.
Public Policy Administration Graduate Degree Program

Faculty
Carol W. Kohfeld, Director of MPPA Program; Associate Professor of Public Policy Administration and Political Science*  
Ph.D., Washington University

E. Terrence Jones, Professor of Public Policy Administration and Political Science*; Dean, College of Arts and Sciences  
Ph.D., Georgetown University

George J. McCall, Professor of Public Policy Administration and Sociology*  
Ph.D., Harvard University

Eugene J. Meahan, Curators' Professor of Public Policy Administration and Political Science*  
Ph.D., London School of Economics

Donald Phares, Professor of Public Policy Administration and Economics*; Special Assistant to the Chancellor for Budgeting and Planning  
Ph.D., Syracuse University

Dennis L. Dossett, Associate Professor of Public Policy Administration and Management*  
Ph.D., University of Washington

J. Frederick Springer, Associate Professor of Public Policy Administration and Political Science*  
Ph.D., University of California-Davis

Andrew D. Glassberg, Associate Professor of Public Policy Administration and Political Science*  
Ph.D., Yale University

James M. Krueger, C.P.A., Assistant Professor of Public Policy Administration and Accounting*; Associate Vice Chancellor for Budgeting and Academic Planning; Acting Deputy to the Chancellor  
D.B.A., Indiana University

Timothy D. McBride, Assistant Professor of Public Policy Administration, Gerontology, and Economics  
Ph.D., University of Wisconsin-Madison

Anne E. Winkler, Assistant Professor of Public Policy Administration and Economics*  
Ph.D., University of Illinois

Elizabeth W. Sale, Internship Coordinator  
M.A., St. Louis University

*members of Graduate Faculty

The Master's program in Public Policy Administration (MPPA) is an interdisciplinary program designed to prepare students for managerial positions in the public sector or in agencies having substantial interaction with the public sector. The program is a unit of the Graduate School and is accredited by the National Association of Schools of Public Affairs and Administration. Faculty are on joint appointment in public policy administration and in either economics, political science, sociology, or business administration. The program includes courses in policy analysis, public administration, management, accounting, and economics in the basic curriculum.

The MPPA program at the University of Missouri-St. Louis differs from existing programs available in the Missouri-Illinois region in its interdisciplinary nature and emphasis on the development of analytic and administrative skills. It is designed to meet the needs of prospective full-time students as well as those who wish to earn a degree in the evening while continuing to work.

In addition to the distinguished doctoral-level faculty in public policy administration, students have access to courses and faculty in business and other social sciences, in the Center for Metropolitan Studies, and in the Center for International Studies. The MPPA Program, together with similar programs at UM-Columbia and UM-Kansas City, is responsible for the editorship of the American Review of Public Administration. The full facilities of the office of Computing, including the urban data program, are available. UM-St. Louis is also a member of the Inter-University Consortium for Political and Social Research.

Admission Requirements
Applicants to the MPPA program must meet the general requirements for admission to Graduate School as explained in the Graduate Study section of this Bulletin. Students entering the MPPA program may be required to take up to 9 hours of prerequisites in mathematics, accounting, and social science. Up to three hours of graduate-level work at UM-St. Louis, taken to meet prerequisite requirements, may be applied to the 40 hours required for the MPPA degree.

Degree Requirements
The program includes 40 hours, 25 in the core curriculum sequence and 15 in a special field chosen by students in consultation with their advisers.

Prerequisites
Students must demonstrate competency in micro-computer-based applications, including spreadsheets and data bases. These competencies must be acquired at the beginning of the degree program, if students are not already familiar with these applications. Competency may be demonstrated by examination, or by successfully completing approved short courses in spreadsheets and data bases, or by completing Public Policy Administration 480, Management Information Systems.

Core Curriculum
All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

Administration
460, Organizational Behavior and Administrative Processes
440, Proseminar in Public Policy Administration

Accounting and Budgeting
418, Governmental Budgeting and Financial Control

Economics
421, Public Sector Microeconomics

Policy Analysis
410, Introduction to Policy Analysis
419, Cases in Public Policy Analysis
Public Policy Administration
Graduate Degree Program

Statistics and Applications
401, Introduction to Policy Research
365, Economic Statistics and Econometrics or 475, Introduction to Evaluation Research Methods

Exit Project
499, Exit Project Research

A full range of graduate-level offerings in the social science departments and the School of Business Administration are available for specialized training. Among the possible fields are urban policies, health policies, human resources, local finance and budgeting, administration of justice, urban economics, public policy, and public management.

A thesis is not required, but students must complete written analyses as part of their course work and/or internships. There is also a one credit hour exit project examining a problem in public policy administration in the final semester.

Internships
There currently exists a need for well-trained policy administrators and analysts. Frequent contact is maintained with public practitioners and public officials in the St. Louis metropolitan area, providing valuable input for program development, creation of a wide variety of internship assignments, and assistance with a vigorous placement program for MPPA graduates. Interns may be placed in assignments in planning agencies, city managers' offices, administrative departments, and budgeting offices.

Up to six hours may be earned through an internship. MPPA students employed in public agencies may receive up to six hours of credit for internships in those agencies. To do so, students must develop, in consultation with their advisers, special research projects outside the scope of their regular employment duties. Credit is granted after successful completion of the project and a written paper at the end of the semester.

Typical MPPA Program
Full-time students who have completed all prerequisites could complete the program in four semesters by taking the following public policy administration courses in this sequence:

First Semester—9 hours
410, Introduction to Policy Analysis
440, Proseminar in Public Policy Administration
460, Organizational Behavior and Administrative Processes

Second Semester—12 hours
401, Introduction to Policy Research
418, Governmental Budgeting and Financial Control
421, Public Sector Microeconomics
and three hours of special field electives or internship

Third Semester (Summer)—6 hours
six hours of special field electives or internship

Fourth Semester—13 hours
419, Cases in Public Policy Analysis
475, Introduction to Evaluation Research Methods
499, Exit Project Research
and six hours of special field electives or internship

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.
Gerontology

Faculty
Robert J. Calsyn, Director, Associate Professor of Psychology
Ph.D., Northwestern University

Carl J. Bassi, Assistant Professor of Optometry
Ph.D., Vanderbilt University

Anna Biggs, Assistant Professor of Nursing
Ph.D., University of Colorado Health Sciences Center

Bruce Clark, Associate Professor of Physical Education
Ph.D., University of Illinois

Ruth Davies, Assistant Professor of Psychology
Ph.D., Washington University

K. Peter Etzkorn, Professor of Sociology
Ph.D., Princeton University

Norman Flax, Associate Professor of Social Work
Ph.D., St. Louis University

Joan Hashimi, Associate Professor of Social Work
Ph.D., Washington University

Margo-Lea Hurwicz, Assistant Professor of Anthropology
Ph.D., University of California-Los Angeles

Timothy D. McBride, Assistant Professor of Public Policy
Administration and Economics
Ph.D., University of Wisconsin-Madison

Nanora L. Sweet, Senior Lecturer of English
M.A., University of Missouri-Columbia

Chikako Usui, Assistant Professor of Sociology
Ph.D., Stanford University

Ilene Wittels, Associate Professor of Gerontology
Ph.D., Washington University

*members of Graduate Faculty

Faculty from ten departments and schools are involved in the undergraduate and graduate programs in gerontology.

Master of Science in Gerontology

The master of science degree in gerontology program is a multidisciplinary program designed to prepare students for management or direct service positions working with the aged. The program of study includes courses from a variety of departments including anthropology, biology, nursing, political science, psychology, sociology, social work, physical education, English, and counseling education. Courses are offered primarily in the evening to accommodate part-time as well as full-time students.

Admission Requirements

Program applicants must have the following:
1. Baccalaureate degree
2. 3.0 or (B) average (students with exceptions should contact the Director of the Gerontology Program)
3. Official transcripts of all previous undergraduate/graduate work
4. Three letters of recommendation

In addition students must meet the other general requirements for admission to the Graduate School as explained in the Graduate Study section of the Bulletin.

Degree Requirements

The students are required to complete 45 credit hours including 24 hours in gerontology courses, a three-hour research methods course, and an 18-hour specialization that is individually tailored to the students' career goals. Depending on the students' prior course work in gerontology, up to fifteen hours of credit may be waived. The required courses are listed below.

Biology 311, Physiology of Aging
Psychology 373, Psychology of Aging
Sociology 361, Social Gerontology
Nursing 401, Health and Wellness in the Elderly
Political Science 444, Public Policy and Aging
Psychology 494, Integrative Research in Gerontology
Psychology 496, Practicum in Gerontology
Gerontology Electives (6 credit hours)

Specialization

Each student must have an 18-hour specialization area within the administrative or direct service track, which will be individually developed by the student and faculty adviser.

Research Methods

Students are required to take a three-hour research methods course.

Graduate Certificate in Gerontology

Requirements

The Graduate Certificate in Gerontology is designed for those students who wish to receive postbaccalaureate training in gerontology. The Graduate Certificate in Gerontology can be taken by itself or in conjunction with pursuit of a graduate degree in another field. Eighteen credit hours are required.

Admission Requirements

Program applicants must have the following:
1. Baccalaureate degree
2. 2.75 Grade Point Average (students with exceptions should contact the Director of the Gerontology Program)
3. Official transcripts of all previous undergraduate/graduate work
4. Three letters of recommendation

Required Courses

Biology 311, Physiology of Aging
Psychology 373, Psychology of Aging
Nursing 401, Health and Wellness in the Elderly
Political Science 444, Public Policy and Aging
Sociology 361, Social Gerontology
Four to five hours of Gerontology electives at the 400 level
Gerontology

Graduate Certificate in Gerontological Social Work

The Graduate Certificate in Gerontological Social Work is a program designed for students who wish to pursue advanced study in Social Work practice with the elderly. While the program draws from several disciplines, the focus is on practice and/or administration in gerontological settings. The program can be taken by itself or in conjunction with the pursuit of a graduate degree in another field.

Admission Requirements

Program applicants must have the following:
1. Baccalaureate degree
2. 2.75 grade point average (students with exceptions should contact the director of the Gerontology program)
3. Official transcripts of all previous undergraduate/graduate work
4. Three letters of recommendation

Certificate Requirements

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

Required Core Courses

Social Work 316, Clinical Gerontology
Psychology 373, Psychology of Aging, or Sociology 361, Social Gerontology
Political Science 444 (Public Policy Administration 444), Public Policy and Aging
Social Work 412, Research Design in Social Work
Social Work 491, Professional Leadership Practice

Undergraduate Certificate in Gerontological Studies

A Certificate in Gerontological Studies, a multidisciplinary course of study, is available at the University of Missouri-St. Louis. This program provides an opportunity for students to obtain a focused specialty in gerontology in addition to their majors. It utilizes offerings in the College of Arts and Sciences and the Schools of Business Administration, Nursing and Education. It is appropriate for students in the College of Arts and Sciences or any of the Schools of the University.

Certificate Requirements

A student may earn the Certificate in Gerontological Studies by completing a total of fifteen hours. Courses must be chosen from at least two of the following four topic areas. No more than three credit hours from Research/Practicum Experience courses will be allowed. The student must have the approval of the Director of the Gerontology Program before enrolling in the course. Courses taken to fulfill the requirements may not be taken on a satisfactory/unsatisfactory basis. New courses continually are added, so it is advisable to check with the Director each term.

Humanities
English 113, Topics in Literature: Images of Age in Literature
Philosophy 156, Medical Ethics

Natural Sciences and Mathematics
Biology 111 (Nursing 111), Issues in Geriatric Health Care
Biology 311, Physiology of Aging

Social Sciences
Psychology 277, Adult Development and Aging
Psychology 280, The Psychology of Death and Dying
Psychology 373, The Psychology of Aging
Social Work 316, Clinical Gerontology
Sociology 361, Social Gerontology

Education
PHY ED 190, Clinical Experience in Physical Gerontology
PHY ED 292, Internship in Physical Gerontology
PHY ED 330, Prescribing Physical Activity

Career Outlook

The increasing number of elderly in the population has greatly expanded job opportunities in gerontology in the last decade, and job prospects for the future are equally bright. Career possibilities include nursing home administration, administration and planning of community-based programs for the elderly, recreational programming, and counseling of the elderly.
School of Nursing

Faculty
Shirley A. Martin, Dean, Professor
R.N., Ph.D., St. Louis University

Janice M. Arrala, Adjunct Assistant Professor
R.N., Ph.D., Southern Illinois University-Edwardsville

Jean Bachman
R.N., D.S.N., University of Alabama

Anna J. Biggs, Assistant Professor
R.N., Ph.D., University of Colorado

Gloria Broun, Adjunct Clinical Faculty
R.N., M.S.N., St. Louis University

Kathleen A. Burke, Lecturer
R.N., M.S.N., O.G.N.P., Southern Illinois University-Edwardsville

Mary Reardon Castles, Professor Emeritus
R.N., Ph.D., St. Louis University

Wadona Fritz, Adjunct Assistant Professor
R.N., M.S.N., University of Maryland

Barbara S. Heeter, Associate Professor
R.N., Ph.D., St. Louis University

Ruth L. Jenkins, Associate Professor
R.N., Ph.D., St. Louis University

Connie K. Koch, Assistant Professor
R.N., Ed.D., Southern Illinois University-Edwardsville

Barbara C. McDonnell, Assistant Professor
R.N., Ph.D., St. Louis University

Maryellen McSweeney, Professor
Ph.D., University of California-Berkeley

Janice A. Spikes, Project Director
R.N., Ph.D., University of Texas-Austin

Marlene Strader, Associate Professor
R.N., Ph.D., St. Louis University

*members of graduate faculty

General Information

About the Faculty The School of Nursing faculty includes accomplished leaders in professional nursing and research. The dean serves as a leader in both state and national professional organizations. Faculty members are clinical specialists in the various areas of nursing practice and research. Research interests include developmental disabilities, stress management, assertiveness, nursing management, death and dying, sex-role behavior, aging, self care, health seeking behaviors, adolescent pregnancy, and professional socialization.

The School of Nursing A national movement in the nursing profession encourages preparation for entry into professional nursing practice to begin at the baccalaureate level. The majority of practicing registered nurses today have earned either a diploma in nursing from a hospital school of nursing or an associate degree in nursing. The UM-St. Louis School of Nursing offers a baccalaureate program for registered nurses in the St. Louis area. The program is designed so that studies may be pursued on either a full- or part-time basis. Qualified students are admitted each semester. The UM-St. Louis School of Nursing is located on the South Campus Complex. The Schools of Nursing at the University of Missouri-Kansas City and the University of Missouri-St. Louis also offer a Cooperative Graduate Nursing Program on the St. Louis campus.

Undergraduate Studies

Bachelor of Science in Nursing Degree The bachelor of science in nursing program is designed to provide the registered nurse with the opportunity to continue nursing education at the baccalaureate level. The curriculum builds on the student's knowledge and skills acquired through diploma or associate degree education as well as nursing practice experience. The expansion of nursing practice into a variety of settings will provide opportunities to apply knowledge from nursing and related disciplines. Recent employment in clinical nursing is recommended.

Assumptions The bachelor of science in nursing degree (B.S.N.) is designed to build on the student's previous education and experience and is based on the following assumptions:
1) Most of the students will be employed full-time and attend the program on a part-time basis.
2) Registered nurse students are adult learners, and the concepts and techniques related to adult learners are appropriate for this program.
3) Registered nurse students are licensed practitioners and do not require the same type of clinical activities found in generic programs.
4) Lower-division nursing courses, completed either in an associate degree program or a hospital diploma program, provide a base of nursing content for baccalaureate nursing education taught at the upper-division level.
5) Quality baccalaureate nursing education can be designed to build on students' prior education and experience without duplicating content or experiences.
6) Students enrolled in the upper-division nursing program have an academic background equivalent to the academic background required for junior standing in any undergraduate program at the University of Missouri-St. Louis.

Purposes The purpose of the program is to provide the registered nurse student with:
1) Upper-division content in general education and nursing courses necessary to practice at the professional level.
2) The foundation for continued personal and professional development as well as preparation for graduate study.
3) The ability to adapt to a rapidly changing health care delivery system.
4) The knowledge and skills necessary to practice in a variety of health care settings.

Accreditation The School of Nursing is fully accredited by the National League for Nursing.

Admission Policies

Admission Requirements
A candidate for admission to the School of Nursing:
1) must meet all requirements for admission to the University of Missouri-St. Louis (see Undergraduate Admissions section in this Bulletin).
School of Nursing

2) must be a graduate of either a diploma or associate degree program in nursing; 
3) must hold a current license as a registered nurse in the state of Missouri; 
4) must have a cumulative grade point average of 2.5 (4.0 scale) on all previous college-level course work; 
5) must have at least 30 hours of college credit applicable to a degree.

Credit Requirements for Admission

Associate Degree or Diploma Nursing  The curriculum of the upper-division nursing major is based on the lower-division program of study in general education which most associate degree graduates will have acquired. Currently most diploma graduates will have these credits as well, because hospital schools of nursing are utilizing college courses for their general education requirements.

For the diploma nurse who graduated before hospital schools affiliated with colleges, various testing methods can be used to grant college credit, such as NLN science scores and CLEP (College Level Examination Program).

Nursing Credit by Examination  In order to grant college credit for basic nursing knowledge and skill, the student must successfully complete four placement examinations. The four examinations cover nursing knowledge in medical-surgical nursing, nursing of children, maternity nursing, and psychiatric nursing.

Twenty-eight hours of college credit will be recorded on the student’s transcript following successful completion of the four examinations.

Additionally, provisions have been made with some St. Louis area nursing schools to facilitate transfer of credit. For example, the University of Missouri has established agreements with various hospitals to accept college courses for their general education requirements. Therefore, graduates of these programs with a 2.5 grade point average have met all admission requirements.

General education courses are taught at UM-St. Louis and at off-campus sites at DePaul Health Center, Jewish Hospital School of Nursing, and other locations thereby facilitating nurses’ matriculation into the B.S.N. program.

Acceptance into the B.S.N. Program

Following the completion of the University’s admission requirement, the Student Affairs Committee of the School of Nursing will review the application for acceptance into the program.

For specific information regarding the B.S.N. degree program, please contact: UM-St. Louis, School of Nursing, Office of Student Services and Records—(314) 553-6066.

Degree Requirements

A total of 120 credit hours is needed for graduation. The lower-division requirements of the B.S.N. program will be met by most associate degree or diploma graduates with transferable college credit.

Satisfactory/Unsatisfactory Restrictions All prerequisite courses to the nursing major and all nursing courses are exceptions to the satisfactory/unsatisfactory option.

Lower-Division Requirements (59-60 hours total)

These courses are prerequisite to the nursing major and must be completed prior to matriculation into the nursing courses. Lower-division general education courses must meet the prerequisite requirements for upper-division general education courses.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>UM-St. Louis Equivalent</th>
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<td>General Education Courses (29-31 hours)</td>
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<tr>
<td>English Composition (3)</td>
<td>English 10, English Composition (3)</td>
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<tr>
<td>Anatomy and Physiology (6-8)</td>
<td>Biology 113, Human Physiology and Anatomy I (4)</td>
</tr>
<tr>
<td>Microbiology (4-5)</td>
<td>Biology 114, Human Physiology and Anatomy II (4)</td>
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<tr>
<td>Chemistry (4-5)</td>
<td>Biology 116, Microbiology and Lab (3)</td>
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<tr>
<td>American History or Government (3)</td>
<td>Biology 118, Microbiology and Lab (3)</td>
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<tr>
<td>(State requirement)</td>
<td>Laboratory (2)</td>
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</table>

| Political Science 11, Introduction to American Politics |
| Political Science 121, Civil Liberties |
| Political Science 130, State Politics |
| Political Science 135, Introduction to Urban Politics |
| Political Science 140, Public Administration |
| Political Science 230, The American Presidency |
| Political Science 233, Introduction to Political Behavior |
| Political Science 235, Political Parties and Elections |
| Political Science 240, Bureaucratic Politics |
| Political Science 246, Urban Administration |
| Political Science 250, Introduction to American Constitutional Law |
| Political Science 331, Legislative Processes |
| Political Science 348, Urban Planning and Politics |
School of Nursing

Psychology (6) Psychology 3, General Psychology (3) Psychology 288, Human Growth and Behavior (3), or Psychology 270, Child Psychology (3)

Sociology (3) Sociology 10, Introduction to Sociology (3)

Mathematics Proficiency Mathematics 02, a, b, c, Fundamentals of Algebra (no credit toward graduation) or Proficiency by mathematics placement examination

Nursing Credit Requirement (28 hours)
Successful completion of a junior-level placement exam in basic nursing knowledge and skills. See Nursing Credit by Examination in the preceding General Information section for more details.

II Upper-Division Requirements (58-63 hours total)
The upper-division program of study leading to the B.S.N. degree integrates general education and advanced professional nursing knowledge and skills. The upper-division requirements of 58-63 credit hours, to complete the 120 hours needed for the degree, may be earned in a two-year period by most full-time students. A student must earn a grade of C or better in all courses required for the degree, both in general education course work and in nursing course work.

General Education Course Work (30-31 hours)
English 210, Advanced Expository Writing or equivalent (3 hours) is required.

Humanities (9 hours) Three courses are selected, one course in logic and two courses from art or music appreciation, literature or philosophy.

Electives (3-9 hours) Students take 3 to 9 credit hours of electives to meet the 120-hour degree requirement and the University requirements of 45 hours above the introductory level.

Statistics (3 or 4 hours) One of the following courses is required:
Sociology 220, Sociological Statistics (3)
Psychology 201, Psychological Statistics (4)
Mathematics 31, Elementary Statistical Methods (3)
Business Administration 131, Elementary Statistics (3)

Also required are the following courses:
Biology 213, Vertebrate Physiology (3)
Chemistry 2, General Organic Chemistry (3)

Nursing Course work (32 hours)
The nursing courses have been developed to expand the student's nursing knowledge and skill in patient teaching, leadership, interpersonal communication, and health assessment. A number of courses are designed to acquaint the registered nurse with nursing theory, research, and family and community health. The nursing course sequence must be completed within five years after a student has taken Nursing 200 and enrolled in a subsequent nursing course. The following nursing courses are required for the degree.

Junior-Level Nursing Courses Admission to the School of Nursing is required for the student to begin the nursing course sequence. All junior-level courses are three-hour courses.

200, Dimensions of Professional Nursing Practice
Note: Nursing 200 is a prerequisite or corequisite to other junior-level nursing courses.

216, Teaching and Interpersonal Systems in Nursing
220, Health Assessment
240, Leadership and Management in Nursing
260, Research in Nursing
Note: The above 200-level nursing courses are prerequisites or corequisites to 260.

260, Application of Professional Nursing Skills

All junior-level courses must be completed successfully prior to enrolling in senior-level courses.

Senior-Level Nursing Courses 337 and 340 contain a clinical component.

315, Computerized Systems for Health Professionals
336, Families and Community
337, Families and Community: Clinical
340, Synthesis in Nursing Practice
360, Contemporary Nursing Issues
Note: Nursing 350 must be taken in the student's last semester.

Graduate Studies

Cooperative Graduate Program in Nursing

Master of Science in Nursing The Schools of Nursing at the University of Missouri-Kansas City and the University of Missouri-St. Louis offer a Cooperative Graduate Nursing Program on the St. Louis campus. The program requires 36 semester credits to complete and is fully accredited by the National League for Nursing. The full-time student, taking nine credits a semester, can complete the program in four semesters.
School of Nursing

Students may choose one of the three Clinical majors:
- Health Care of the Adult
- Health Care of Children
- Health Care of Women

In addition, the student may select one of three functional role areas: Education, Administration, or Clinical Specialty.

Method of Instruction  The faculty of both the Kansas City and St. Louis campus will teach in this program using the interactive telecommunication system of the University of Missouri. All classes and clinical experiences will be in the St. Louis area.

Admission Requirements

Program applicants must have the following:
1) B.S.N. from NLN-accredited college/university-based program or from a B.S.N. program comparable to UM-Kansas City School of Nursing's B.S.N. program.
2) Minimum cumulative grade point average of 3.0.

Matriculation Requirements

1) Current Missouri licensure. Clinical courses cannot be taken without current licensure; copy of license is to be filed in the School of Nursing.
2) Basic Cardiac Life Support Certification record on file with the School of Nursing.
3) Graduate Record Examination. Have an official copy of scores submitted to the Admissions Office.
4) Upper-division or comparable statistics course with minimum grade of "B."
5) Free standing Health Assessment course with minimum grade of "B."

See an academic adviser in the School of Nursing for specific courses in the M.S. in Nursing program.

Professional Organizations

American Nurses Association
Students, as registered nurses, are eligible for membership in the American Nurses Association. Membership and participation in this professional organization is strongly urged for all nurses practicing today. Nurses, as the largest group of health professionals, have a responsibility to assume leadership positions in the determination of health-care policy, and this activity can best be accomplished by participating in the professional organization.

Rho Nu
Rho Nu is the student association of the School of Nursing. It is a collegial group providing professional development activities for the registered-nurse student. All students enrolled in the School of Nursing are eligible for membership.

Continuing Education-Extension

Continuing education offerings in the field of nursing are currently presented to provide nurses with new information, techniques, and trends within the nursing profession.

Credit courses which will apply to the B.S.N. program are offered at the following off-campus sites: Jewish Hospital, St. Mary's Health Center, St. John's Mercy Health Center, DePaul Health Center, and St. Louis Children's Hospital.

Career Outlook

The increased expertise in nursing skills and the broad base of managerial skills acquired by the registered nurse in a baccalaureate program will qualify our graduates for many positions of leadership in nursing. Moreover, the current growth in community health nursing has created a demand for nurses with the bachelor's degree in nursing.

B.S.N. graduates have an awareness of the complexity of influences on the health care of individuals, families, and groups, and this makes them a valuable member of health care teams in both the hospital and community health setting.
School of Optometry

Faculty

Jerry L. Christensen, Dean; Professor*
O.D., Ph.D., Ohio State University

Carol K. Peck, Professor*
Ph.D., Postdoctoral Fellow, University of California-Los Angeles

Edward S. Bennet, Associate Professor*; Chief, Contact Lens Clinic
M.S.Ed., O.D., Indiana University-Bloomington

Robert E. Carly, Clinical Associate Professor
M.S.Ed., Troy State University; O.D., Southern College of Optometry

David W. Davidson, Associate Dean; Associate Professor*
M.S., University of Alabama-Birmingham; O.D., University of California-Berkeley

Gerald A. Franzel, Associate Dean for Continuing Education and Community Relations; Clinical Associate Professor
O.D., University of Houston

Ralph P. Garza, Associate Professor*; Chief, Pediatric Binocular Vision Services
O.D., Residency, Pediatric Optometry, Pennsylvania College of Optometry

James M. Gordon, Clinical Assistant Professor of Ophthalmology
M.D., University of Minnesota; Residency, Ophthalmology, Washington University, Barnes Affiliated Hospitals

John D. Hunkeler, Clinical Associate Professor of Ophthalmology
M.D., Residency, Ophthalmology, University of Kansas

Stephen W. Lehmkohl, Associate Professor*; Chair, Research Development Committee
Ph.D., Vanderbilt University Postdoctoral Fellow, University of Virginia

William F. Long, Associate Professor*
Ph.D., Michigan State University; 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

Frank O'Donnell, Jr., Clinical Associate Professor of Ophthalmology
M.D., Johns Hopkins University; Residency, Ophthalmology, Wilmer Institute, Johns Hopkins University

Faye DeClue Allen, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

W. Gary Bachman, Assistant Professor*; Director, Center for Cornea and Contact Lens Research
M.S., University of Alabama-Birmingham; O.D., Southern College of Optometry

Carl J. Bassi, Assistant Professor*
Ph.D., Vanderbilt University; Postdoctoral Fellow, University of Southern California, Doheny Eye Institute

P. Douglas Becherer, Clinical Assistant Professor
O.D., Southern College of Optometry

Daniel M. DePolito, Clinical Assistant Professor
O.D., Pennsylvania College of Optometry

Breckenridge Dilly, Clinical Assistant Professor
M.B.A., Regis College; O.D., Indiana University-Bloomington

James A. DeClue, Clinical Assistant Professor
O.D., Illinois College of Optometry

Gail B. Doell, Adjunct Assistant Professor
M.S., Washington State University; O.D., University of Missouri-St. Louis

Frank D. Fontana, Clinical Assistant Professor
O.D., Illinois College of Optometry

Gary Frederickson, Clinical Assistant Professor
O.D., New England College of Optometry

Carrie S. Gaines, Clinical Assistant Instructor
O.D., University of Missouri-St. Louis

John M. Garber, Clinical Assistant Professor
O.D., Southern College of Optometry

N. Rex Ghormley, Clinical Assistant Professor
O.D., Southern California College of Optometry

Steven J. Grondalski, Clinical Assistant Professor, Chief, Primary Care Services
O.D., Pennsylvania College of Optometry; Residency, Hospital-Based Optometry, VA Medical Center, Wilkes Barre, PA

Alexander D. Harris, Clinical Assistant Professor; Chief, External Rotations
M.A., Washington University; O.D., University of Missouri-St. Louis

Timothy Harkin, Adjunct Assistant Professor
O.D., Southern California College of Optometry

Vinita A. Henry, Clinical Associate Professor
O.D., Residency, Contact Lenses, University of Missouri-St. Louis

Lesa Klein, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Robert A. Koering, Clinical Assistant Professor
O.D., Southern College of Optometry

W. Howard McAllister, Assistant Professor*
M.A., Webster College, M.P.H., University of Illinois-Chicago; O.D., Ohio State University

Harvey Mack, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Joseph H. Maino, Clinical Assistant Professor
O.D., Illinois College of Optometry; Residency, Rehabilitative Optometry, VA Medical Center, Kansas City

Carol F. Merritt, Assistant Professor*
O.D., University of Missouri-St. Louis

Robert L. Mobley, Clinical Assistant Professor
O.D., Illinois College of Optometry

Bruce Morgan, Clinical Assistant Professor
O.D., Northeastern State University

Robert L. Morgan, Clinical Assistant Professor
O.D., Southern College of Optometry

Raymond I. Myers, Clinical Associate Professor
O.D., Indiana University-Bloomington

Robert E. Prouty, Clinical Assistant Professor
O.D., Pacific University; Residency, Hospital-Based and Geriatric Optometry, VA Medical Center, Tacoma, WA

Daniel G. Puetz, Clinical Assistant Professor
O.D., Pacific University

William P. Ridley, Adjunct Associate Professor
Ph.D., University of Minnesota

Thomas S. Sandler, Clinical Assistant Professor
O.D., Pennsylvania College of Optometry

Daniel D. Seibert, Clinical Assistant Professor; Director of Optometric Center and Chief, Low Vision Services
O.D., Illinois College of Optometry

Michael A. Seuma, Assistant Professor*
Ph.D., University of California-Riverside; Postdoctoral Research Associate, Vanderbilt University

Donald E. Simpson, Clinical Assistant Professor
O.D., Indiana University-Bloomington

Scott B. Steinman, Assistant Professor*
Ph.D., University of Houston; O.D., State University of New York Post-Doctoral Fellow, Smith-Kettlewell Eye Research Institute

Barbara A. Steinman, Clinical Assistant Professor
O.D., University of Houston Research Fellow, Smith-Kettlewell Eye Research Institute

Jonathan A. Stevens, Assistant Professor*
O.D., Pennsylvania College of Optometry; Residency, The Eye Institute, Pennsylvania College of Optometry

Robert Tryggestad, Clinical Assistant Professor
O.D., Illinois College of Optometry

Nina Tumosa, Assistant Professor*
Ph.D., State University of New York-Albany; Postdoctoral Fellow, University of California; Postdoctoral Fellow, University of Wisconsin
General Information

The UM-St. Louis School of Optometry enrolled its first class in 1980, graduating 32 students in May 1984. It is located on the South Campus complex of the University of Missouri-St. Louis at 7800 Natural Bridge Road. A modern five-story building houses the School's classrooms, laboratories, research facilities, administrative offices, health-science library, and the Center for Eye Care and Vision Research campus facility (the University Eye Center). The complex also includes a student lounge and an impressive 350-seat amphitheater.

The University Eye Center facility located on campus is open to the public, as well as to the faculty, staff, and students of the University. The primary goal of the center is to provide patients with high-quality vision care. This purpose is consistent with the overall goal of training well-qualified eye care practitioners.

In addition to the University Eye Center on the UM-St. Louis campus, the School's Center for Eye Care and Vision Research operates a second clinical facility, the Optometric Center of St. Louis, in the Central West End of the city. The Optometric Center is a full-scale optometric eye care facility which serves as an important clinical rotation for third- and fourth-year student interns.

A number of externships have been established to provide additional sites for the advanced clinical training of fourth-year student interns. These programs have been established to broaden the patient care experiences of the senior clinicians. Through these programs, the students are able to examine more patients than they would see at the UM-St. Louis eye care facilities, and students are usually exposed to different types of patients than seen on campus. Currently, the following are off-campus eye care sites: Indian Health Service Hospitals (Oklahoma: Anadarko and Adak); Veterans Administration Hospitals (Missouri: St. Louis and Kansas City); Colorado Optometric Center in Denver; OMNI Center in Denver, Colorado; St. Louis Community Services (Grace Hill, New Life Evangelistic Center, and Metro Health Center); Ciba Vision Corporation in Atlanta, Georgia; and military base hospitals (Missouri: Ft. Leonard Wood; Illinois: Scott Air Force; Mississippi: Kessler Air Force; Delaware: Dover Air Force; and, Hawaii: Kaneohe Medical Center). Students may also arrange their own off-campus externships which may include private practices and/or institutional sites with the approval of the Chief of Externships.

Situated in Missouri's largest metropolitan area, the School enjoys the city's strong community and professional support. The urban setting offers many opportunities for outreach programs, expanding the scope of optometric education and making available highly diverse programs of clinical training. Another asset of the School is the location of the national headquarters of the American Optometric Association, approximately twelve miles from the campus.

The curriculum leading to the Doctor of Optometry degree is a four-year, full-time program of study. The first year of the professional curriculum stresses optics and basic health sciences, and introduces students to optics of the visual system. The second year covers vision science and training in eye examination techniques. The third year emphasizes patient care and introduces the student to various specialty areas within optometry, such as contact lenses, pediatric and geriatric vision care, binocular vision and vision training, and low vision rehabilitation. The second and third years also include course work and clinical training in ocular disease and pharmacology. The fourth year provides additional patient care experiences and includes rotations through a variety of outreach programs, giving the student added experience in the treatment of eye diseases as well as valuable experience in other optometric clinical specialties.

In 1986 the Missouri Optometry Practice Act was revised by the State Legislature to include treatment of certain eye diseases utilizing pharmaceutical agents. Thus, optometry students at UM-St. Louis are uniquely situated to receive excellent training in this aspect of optometric practice. Roughly half of the states in the United States now have laws authorizing optometrists to prescribe drugs in the treatment of certain eye diseases. The training and clinical experience optometry students receive at UM-St. Louis in the diagnosis, treatment, and management of ocular disease is excellent and qualifies UM-St. Louis graduates to practice optometry in any state in the nation.
A student who satisfactorily completes all four years of the professional curriculum will be eligible to receive the Doctor of Optometry degree.

The School of Optometry is a member of the Association of Schools and Colleges of Optometry and is accredited by the Council on Optometric Education of the American Optometric Association, the official optometric agency recognized by the National Commission on Accrediting, and by the International Association of Boards of Examiners in Optometry.

Admission Requirements

All optometry students enrolled in the University of Missouri-St. Louis School of Optometry are eligible for membership in the student optometric association, which is affiliated with the American Optometric Association. Through this organization, students become involved in local and national optometric activities. The organization provides an environment for the cultivation of professional leadership skills, and members have organized and participated in a variety of community service activities, including community health screenings and vision care to residents of nursing homes, convalescent hospitals, and mental institutions. Furthermore, optometry students have formed local chapters of SVOSH (Student Volunteer Optometric Services to Humanity), an international organization of optometrists providing free vision care to people in impoverished nations and the NOSA (National Optometric Student Association) which strives to recruit minority students into optometry and encourages retention of minority students.

In addition to the many activities through the School of Optometry, optometry students are able to take advantage of all the activities provided by the University to the entire university community. These include intramural sports; movies and cultural activities; a modern, fully-equipped gymnasium; and access to many social and cultural opportunities in St. Louis at reduced cost.

Admission Test

All applicants are required to take the Optometry Admission Test (OAT). The OAT is offered twice each year in February and October. Results are sent to the applicant and colleges of optometry approximately four to six weeks following the date of testing. Official test scores are acceptable for up to three years from the testing date.

Admission Test

Applicants are encouraged to take the examination in February or October of the year preceding anticipated application to the School of Optometry. If applicants wish to enhance their scores, they are encouraged to repeat the examination. For an OAT application packet and additional information, contact: Optometry Admission Testing Program, 211 East Chicago Ave., Chicago, IL 60611, (312) 440-2693.

Application Procedures

The Admissions Committee begins to process applications on August 1 for the class entering the following year. An applicant’s file will be considered complete and ready for consideration by the Admissions Committee when the following material has been received:

1) Application.
2) Official high school and college transcripts, followed by updated transcripts as they become available.
3) Academic Record form.
4) Official OAT results.
5) A composite evaluation prepared by the preprofessional advisory committee at the educational institution the applicant is attending. Those applicants not currently attending college or who are at an institution that does not offer a committee evaluation will be required to submit four letters of recommendation.

In addition to the standard application procedures, prospective students living outside the United States and its possessions must take the Test of English as a Foreign Language (TOEFL).

Applications are processed and considered as they are received. Applicants are encouraged to begin the admissions process approximately one year in advance of their planned entrance date. Early submission of applications is encouraged.
Applications must be complete by March 15 to be considered for admission to the class entering in August of the same year. Application materials received after March 15 will not be evaluated for the class entering in August of the same year.

All correspondence and inquiries, including transcripts, should be addressed to: Chairperson, Admissions Committee, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4499, (314) 553-6263.

**Selection Procedures**

The Admissions Committee has the responsibility to review and evaluate all applicants and select the best qualified candidates. The Committee considers: an applicant's overall grade point average, the grade point achieved in the sciences, any grade trends over the years in college, and the scores on the Optometry Admission Test (OAT). Concurrently, candidates are evaluated on less quantitative measures such as extracurricular activities and interests, related or unrelated work experience, written narrative, and letters of recommendation.

Those applicants whom the Committee feels to be most competitive will be scheduled for an on-campus interview. The on-campus interview facilitates the committee's assessment of the applicant's interests, motivation, and personal characteristics. In addition the on-campus interview allows the applicant to tour the facilities, meet with currently enrolled students, have questions answered regarding financial aid and housing, and learn more about the School. From this group of interviewed applicants, the entering class of 40 students will be selected. The policies of the University of Missouri-St. Louis and the School of Optometry comply with the provisions under those laws which forbid discrimination on the basis of race, color, sex, national origin, religion, age, handicap, or veteran status. The School of Optometry encourages minority applicants.

**Acceptance Procedures**

Students accepted for admission will begin receiving notices of acceptance in December prior to the year of anticipated matriculation. Notices of acceptance may be received as late as the following May. If acceptance to the class is conditional, the terms of the condition must be completed prior to matriculation. Applicants who have indicated that degree requirements will be completed prior to matriculation, and who have been selected for admission, may receive a conditional offer of acceptance contingent upon completion of the degree.

**Financial Aid**

The University of Missouri-St. Louis maintains an Office of Student Financial Aid to assist eligible students in financing their education when their own and/or their families' resources are insufficient for this purpose. For information regarding available sources of student financial assistance contact: Student Financial Aid, Room 209 Woods Hall, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4499, (314) 553-5526. In addition, the UM-St. Louis School of Optometry Office of Student Affairs has up-to-date information on numerous scholarships and grants. This information is given to a prospective student during the pre-interview process.

**Fees**

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<th>Summer 1991*</th>
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<tr>
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*A Summer Clinic is required between the third and fourth professional year.

The above figures include the Educational Fee, Student Facility and Activity Fee; they do not include the Instructional Computing Fee ($3.50 per credit hour—Fall 1991, $3.50 per credit hour—Winter 1992), and the optional Parking Fee ($2.90 per credit hour).

**Class Size**

Each entering class will be limited to 40 students.

**Residence**

The UM-St. Louis School of Optometry is state-supported and therefore gives preference to individuals who are bona fide residents of Missouri. Twenty of the forty available positions are reserved for Missouri residents. This number may be revised slightly (upward or downward) based on annual variations in the applicant pool. The remaining places will be allocated to residents of other states with some preference given to qualified applicants from states that provide contract support.

Currently, seven of these nonresident positions are allocated by State Affiliation Agreements. Of the seven, three positions are reserved for residents of Arkansas and four positions are reserved for residents of Kansas. Individuals who are admitted under these State Affiliation Agreements will pay reduced educational fees. For additional information, contact: Optometry Program, Kansas Board of Regents, Suite 609, Capitol Tower, 400 S.W. Eighth, Topeka, KS 66603 (913) 296-3517; or Dr. Collis Geren, Coordinator, Optometry Assistance Program, University of Arkansas-Fayetteville, Fayetteville, AR 72701 (501) 575-3251.

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) 553-5151.
School of Optometry

Four-Year Professional Degree (O.D.) Curriculum

First Year
Fall Semester
504. Neuroanatomy
505. Geometric Optics
506. Optometric Orientation
508. Human Anatomy and Physiology
512. Biochemistry

First Year
Winter Semester
510. Ocular Anatomy
513. Physical Optics and Photometry
514. Clinical Optometry I
515. Ocular Optics
516. Physiological Optics Laboratory
517. Ocular Motility
522. Systemic Pathology

Second Year
Fall Semester
520. Ophthalmic Optics
521. Clinical Optometry II
523. Ocular Physiology
524. Monocular Sensory Processes
541. Interpersonal Relations
555. General Pharmacology

Second Year
Winter Semester
530. Ophthalmic Dispensing
531. Clinical Optometry III
532. Binocular Vision and Space Perception
533. Ocular Pathology I
535. Epidemiology
565. Ocular Pharmacology

Third Year
Fall Semester
550. General Clinic I
553. Contact Lenses I
554. Binocular Vision Anomalies
556. Ocular Pathology II
558. Geriatric Optometry
596. Public Health

Third Year
Winter Semester
567. Vision Performance
560. General Clinic II
561. Specialty Clinic I
563. Contact Lenses II
564. Low Vision
565. Pediatric Optometry
566. Practice Management
567. Elective

Fourth Year
Fall Semester
580. General Clinic III
581. Specialty Clinic II
582. Clinic Seminar I
584. Affiliated Clinic I
587. Elective

Fourth Year
Winter Semester
590. General Clinic IV
591. Specialty Clinic III
593. Clinic Seminar II
594. Affiliated Clinic II

Graduate Studies
Physiological Optics
Physiological Optics is a multidisciplinary area concerned with the study of normal and anomalous vision. The goal of this program in Physiological Optics is to train the next generation of researchers in clinical and basic vision science, to conduct research, and to educate faculty for schools of optometry. Students will be required to integrate basic skills in vision science with focal studies in an area of research emphasis. This program will emphasize research aimed at new treatments and cures for vision disorders, as well as research in basic mechanisms of visual functions. The School of Optometry offers both an M.S. degree and a Ph.D. degree. Students may apply to the Graduate School for admission to either the M.S. or the Ph.D. program.

Admission Requirements
Students should have the appropriate background for graduate training in physiological optics and appropriate undergraduate courses for their anticipated research emphasis. Applicants must have a bachelor’s degree from an accredited college or university within the United States or from an equivalent institution outside of the United States. In order to be admitted as regular graduate students, applicants must have a grade point average of at least 3.0 in their overall undergraduate work, in their undergraduate major and in any post-baccalaureate academic work. Students must arrange for transcripts to be submitted from all post-secondary academic work and to have at least three letters of recommendation sent by faculty members at previously attended colleges and universities. Students must also submit Graduate Record Examination (GRE) scores (verbal, quantitative, and analytic). In addition, students from countries where English is not a primary language must submit Test of English as a Foreign Language (TOEFL) scores of 550 or better. All materials and scores must be submitted before an application for admission can be decided.
School of Optometry

Master of Science in Physiological Optics

Degree Requirements

The M.S. degree requires 30 semester hours of course work, including the core courses. At least 25 of these hours will normally be taken from courses offered by the School of Optometry with no more than 10 of these in Physiological Optics 490, Graduate Research in Physiological Optics. Each M.S. student will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

Proficiency examinations in the core areas are given at the end of each semester. Students must declare their intent to take exams within the first four weeks of the semester within which they expect to take those exams. All proficiency exams must be attempted within the first year of graduate study and must be passed prior to advancement to candidacy. All proficiency exams must be passed within the first three semesters of graduate study.

The Core Courses for this program are:

Physiological Optics 400, Sensory Processes and Perception (3 credits)
Physiological Optics 401, Visual Optics (3 credits)
Physiological Optics 402, Ocular Anatomy and Physiology (3 credits)
Physiological Optics 403, Psychophysical Methods and Experimental Design (3 credits)
Physiological Optics 404, Sensory Neuroscience (3 credits)

Special Topics, Individual Studies and Advanced Topics courses in Physiological Optics are also offered.

Each M.S. student must also complete a thesis based on research conducted during the program. The thesis must be approved by a committee of at least three members of the graduate faculty, at least two of which must be from the graduate faculty in Physiological Optics.

Ph.D. in Physiological Optics

Degree Requirements

The doctor's degree requires 60 semester hours of course work, including the core courses. Each Ph.D. student will also be required to demonstrate proficiency in a foreign language, computer language, advanced statistical methods, or another acceptable tool skill. The tool skill and level of proficiency must be selected in advance in consultation with the Graduate Committee in Physiological Optics. Students will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

The preparation of the dissertation will be supervised by a dissertation committee, which will be selected by the student and the student’s adviser and will consist of at least three members of the graduate faculty, at least two of which must be from the doctoral faculty in Physiological Optics. An oral examination of the written dissertation proposal will be conducted by the Committee. This will be required of all students for advancement to candidacy. An oral defense of the completed written dissertation before the Committee is also required.

The Core Courses for this program are:

Physiological Optics 400, Sensory Processes and Perception
Physiological Optics 401, Visual Optics
Physiological Optics 402, Ocular Anatomy and Physiology
Physiological Optics 403, Psychophysical Methods and Experimental Design
Physiological Optics 404, Sensory Neuroscience

Special Topics, Individual Studies and Advanced Topics courses in Physiological Optics are also offered.

Career Outlook

Doctor of Optometry Degree

A Doctor of Optometry or “optometrist,” is an independent, health care professional who is specifically educated, clinically trained, and licensed to examine, diagnose, and treat conditions or impairments of the human vision system. Optometrists examine the eyes and related structures to determine the presence of vision problems, eye disease, and other ocular abnormalities.

Optometrists are the major providers of vision care. They provide treatment by prescribing ophthalmic lenses or other optical aids, provide vision therapy to preserve or restore maximum efficiency in vision, and in some states including Missouri, are authorized to prescribe drugs in the treatment of certain eye diseases.

Optometrists can also detect certain general diseases of the human body such as diabetes, hypertension, and arteriosclerosis that have the potential capacity to affect vision. When an eye examination reveals diseases in other parts of the body, the optometrist will refer patients to the appropriate health care practitioner for treatment. Like physicians and dentists, optometrists are primary health care professionals.

The scope of optometry requires an understanding of the development of vision from infancy through adulthood, and the therapeutic and rehabilitative methods required to care for the problems of vision from infancy through the decling years.
Optometry is the largest eye care profession and one of the largest independent health care professions in the United States. Currently, some 25,000 doctors of optometry practice in America. They are widely distributed across the nation, practicing in more than 6,600 different municipalities. As such, optometrists provide the major portion of primary eye care services in the United States. Nationwide, optometrists' services are available in more than 75 percent of all counties.

Optometric studies indicate that a ratio of one practicing optometrist to every 7,000 people (a ratio of 14.3 practicing optometrists per 100,000 population) is a reasonable average for the United States. Despite recent growth in the profession, few states meet this criteria.

As our society becomes more technically oriented, vision requirements become more exacting. The number of persons needing professional help for reading and other near-point visual tasks, including both older citizens and school children, is steadily growing. Increased demands for vision care result not only from population growth, but also from increased understanding of how good vision relates to industrial production, student achievement, adjustments to aging, and other areas crucial to modern society.

The patients whom the practicing optometrist treats may have varied and challenging needs. On any given day, an optometrist might be involved in restoring vision to a partially sighted patient; fitting glasses for a child whose vision problem is affecting academic achievement; treating an eye infection with antibiotics; improving the function of a patient's eyes through vision training; helping an elderly patient in a nursing home cope with changing vision through critical eye health education; and performing comprehensive eye examinations for those who need glasses or contact lenses to correct astigmatism, nearsightedness, and numerous other vision problems.

The practice of optometry offers independence, flexibility, and diversity. Optometrists have a wide range of modes of practice. They may choose to practice in the inner cities, suburbs, and rural areas. Opportunities exist for solo practice, associateship, optometric or multidisciplinary group practice, government or military service, and clinical or hospital settings. Additional optometric employment opportunities may be found in teaching, research, or both.

Optometry is a rewarding career, both economically and personally. Based on data from the Bureau of Labor Statistics and surveys by professional associations, optometry is one of the top ten income-earning professions in the country.

Graduate Degrees
The Master of Science program provides research-oriented training beyond that offered in the professional program in optometry. Many optometry schools require that applicants for faculty positions hold an M.S. or Ph.D. degree as well as an O.D. degree. Additional employment possibilities for individuals with M.S. degrees are found in industry and in both public and private research foundations.

The Ph.D. program prepares students as research professionals in vision science. Employment opportunities are available in college or university teaching and research, in research institutes, and in industry. Within academic optometry, individuals with both O.D. and Ph.D. degrees are in high demand as faculty members.
**General Information**

The Honors College's goal is to enrich significantly the educational experience of a select group of highly motivated and intelligent undergraduates. With this in mind, it enrolls promising students who give clear indication that they are ready to accept academic challenges and become creatively involved in the learning process together with a team of similarly committed instructors.

Given this special mission, the College has a unique structure and identity. Unlike the University's other schools and colleges, it has no academic departments or areas or faculty of its own, and it grants no degrees. Instead, it brings together a cross section of the University's students and teachers in a special curriculum.

Beginning with the Fall 1991 semester, the College will offer two academic formats:

1) **A Four-Year Program** open to entering freshmen and extending over a student's entire undergraduate career;
2) **A Two-Year Program** open to a select group of third-year students who are either continuing at or have transferred to the University and are engaged in work on a major.

**Faculty**

Honors College instructors are drawn from the various academic departments and areas in those colleges and schools which have an undergraduate component. What these teachers have in common is a willingness to work closely with a select, diverse group of intellectually curious and academically high-achieving students. They demonstrate this by designing courses directed toward such an audience. This faculty is an organic body. Each term it adds members to its roster. The newcomers invariably include individuals whose teaching and scholarship have been singled out for special distinction. Their talents add to the Honors College's already rich instructional pool.

**Honors Scholars**

The Honors College's student Scholars are highly qualified graduates from a broad range of public and private secondary schools predominantly in the St. Louis metropolitan area. They enter the College with different interests and remain part of it while simultaneously enrolling in classes and pursuing Bachelor of Arts and Bachelor of Science degrees in other academic divisions.

Many students major in liberal arts areas spanning the humanities, social sciences, and natural sciences, while others focus on preparing for careers in business or education. Among the Scholars are prospective engineers, lawyers, and doctors. Several plan to go on to graduate study or professional schools.

**Curriculum**

**Four-Year Program**

Approximately 40 percent of the 120 hours Honors Scholars earn toward graduation carries Honors credit. Most of this is associated with a sequence of Honors courses designed specifically for them, the majority of which are taken during the first two years. During this period, these students fulfill virtually all of the University's General Education Requirements, usually in innovative ways. In their junior and senior years, Honors Scholars also earn Honors credit for work done within their major fields.

**First Year**

- Honors 10, Freshman Composition
- Honors 20, Contemporary Issues and Events Symposium
- Honors 30, Critical Analysis
- Honors 101, Western Traditions
- Honors 102, American Traditions
- Honors 103, Non-Western Traditions

**Second Year**

Scholars take four of the following classes:

- Honors 201, Inquiries in the Humanities
- Honors 202, Inquiries in the Fine and Performing Arts
- Honors 203, Inquiries in the Social and Behavioral Sciences
- Honors 204, Inquiries in Business and Economics
- Honors 205, Inquiries in Mathematics and the Natural Sciences

During the first two years, a typical Honors Scholar will also take additional course work in other areas such as mathematics, natural science, foreign language, and major prerequisite classes to satisfy various University, Honors College, and specific degree requirements. Scholars must satisfy special mathematics and natural science requirements.

**Third and Fourth Years**

- Honors 300, Honors Seminar
  Six hours of work in the major field taken for Honors credit.

**Two-Year Program**

Scholars in this program will take a combination of Honors College courses and also earn Honors credit for work done in their major field. They must also satisfy the College's special mathematics and natural science requirements if this has not been done prior to their admission into the College.

**Third Year**

- Honors 20, Contemporary Issues and Events Symposium
- Honors 200 (one course in this sequence)
- Honors 300, Honors Seminar
  Six hours of work in the major field taken for Honors credit

**Fourth Year**

Same as for Third Year with the exception of Honors 20.

The satisfactory/unsatisfactory option does not apply to any course work undertaken for Honors credit.
Pierre Laclede Honors College

Admission and Retention

To be considered for admission into either the Four-Year or Two-Year Honors Program, a candidate must file a special Honors College application. Prospective freshmen must also submit a regular application for admission into the University. These forms and additional information concerning scholarship and stipend awards, general eligibility guidelines, the admission process, and other features associated with participation in the Honors College can be obtained by contacting the College’s administrative office: 389-0096.

To remain in good standing, a student must maintain both a cumulative and Honors GPA of at least 3.00 while remaining actively engaged in Honors studies.

Additional Honors College Features

Community Mentorship Program
Since students at UM-St. Louis are part of a thriving metropolis and most are likely to remain so, the Honors College seeks to instill a high degree of urban awareness in them. Based on their intellectual and career interests, Honors Scholars are matched with appropriate role models working in various sectors of the community. Some of these relationships may eventually lead to internships.

Scholarships and Stipends
Every new freshman admitted into the Honors College is awarded some form of academic scholarship and also receives a special Honors stipend. Scholars continue to receive these awards as long as they meet the criteria associated with them. Scholars in the Two-Year program also receive a stipend.
UM-St. Louis/UM-Rolla
Cooperative Engineering Center

Faculty
James H. Hahn, P.E., Associate Professor, Interim Director
Ph.D., University of Missouri-Rolla
C. Ben Basye, P.E., Professor
Ph.D., Iowa State University
Victor Birman, Associate Professor
Ph.D., Israel Institute of Technology
Anton deS. Brasunas, P.E., Professor Emeritus
Sc.D., Massachusetts Institute of Technology
Shirley N.C. Cheng, Assistant Professor
Sc.D., Washington University
Herbert A. Crosby, Professor Emeritus
D.Sc., Washington University
Chaman L. Sabharwal, Professor
Ph.D., University of Illinois-Urbana
Daniel C. St. Clair, Professor
Ph.D., University of Missouri-Rolla
David A. Shaller, Assistant Professor
J.D., Cleveland State University

General Information
The cooperative engineering program of UM-St. Louis and UM-Rolla was approved in 1990 by the University and the Coordinating Board for Higher Education. While a pre-engineering curriculum has been in place for more than ten years, the new program will support non-traditional, place-bound students who wish to pursue a bachelor's degree in engineering.

The program, tentatively scheduled to begin during the 1991-92 academic year, is designed to offer course work beyond the pre-engineering programs at UM-St. Louis and the St. Louis Community College. Students will be admitted into this upper division program only after they have completed an acceptable pre-engineering program. They can earn a Bachelor of Science in Electrical Engineering (BSEE) or a Bachelor of Science in Mechanical Engineering (BSME).

Master of Science degree areas are as follows:
- Aerospace Engineering
- Chemical Engineering
- Civil Engineering
- Computer Science
- Electrical Engineering
- Engineering Mechanics
- Engineering Management
- Environmental Engineering
- Mechanical Engineering
- Metallurgical Engineering
- Nuclear Engineering
- Geology and Geophysics

Admission
Admission to candidacy for these degrees is granted by the University of Missouri-Rolla in cooperation with the University of Missouri-St. Louis.

Normally admission is granted to persons holding B.S. degrees in engineering from ABET-accredited schools (this does not apply to Computer Science) and whose undergraduate GPA places them in the upper third of their graduating class.

Degree Requirements
An appropriately selected program of 30 credit hours is required for the Master of Science degree with thesis, and a 33 credit hour program is required for the nonthesis Master of Science degree.

Course Listings
Course listings for the various semesters may be obtained by writing or phoning the Cooperative Engineering Center. Course descriptions are also listed in the UMR graduate catalog.

The Cooperative Engineering Center also provides information to St. Louis area residents about UMR programs in Rolla. The Center can assist area pre-engineering students with transfer to the Rolla campus and with entry into the Cooperative Training Programs that exist between UMR and numerous U.S. industries. This co-op program allows engineering students to gain valuable industrial experience during their school years and to be partially or totally self-supporting.

Fees
Registration fees for Engineering Center programs are different from those on the UM-St. Louis campus. For information about the Engineering evening program on the UM-St. Louis campus, write to Cooperative Engineering Center, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121, or phone (314) 553-5431.
Reserve Officers’ Training Corps

Students interested in Reserve Officers’ Training Corps (ROTC) programs may enroll in either the Army ROTC program at UM-St. Louis or the Air Force ROTC program sponsored at UM-St. Louis through Parks College of St. Louis University. These programs provide undergraduate and graduate students with the opportunity to combine academic study with a military officer training program.

For further information concerning the Army ROTC program, contact the ROTC office at UM-St. Louis, telephone 553-5176 or call collect (314) 263-1253. For information on the Air Force ROTC program, contact the Air Force ROTC Department at Parks College of St. Louis University, telephone (800) 851-3048, Ext. 311. In Illinois, call (800) 851-7878, Ext. 311.

Army ROTC

The purpose of the Military Science Department is to develop young men and women into junior commissioned officers for positions of responsibility in the Army Reserve, Army National Guard, or Active Army.

Informal Cross-Enrollment Agreements

An informal cross-enrollment agreement, effective as of Winter Semester 1989 (January 1989), exists between the Department of Military Science, University of Missouri-St. Louis, and Lindewood College, St. Charles, Missouri, as well as Southern Illinois University-Edwardsville.

Benefits

Army ROTC offers UM-St. Louis and cross enrolled students:

1) A challenging, important, well-paid job at graduation in one of the many professional fields that the modern Army has to offer. Army officers serve in such fields as aviation, procurement, personnel management, intelligence, military police, communications, engineering, transportation management, finance, combat arms, hospital administration, nursing, and research and development. Starting salary of an active duty Second Lieutenant is approximately $18,500. Within four years he/she should be promoted to Captain with a salary of nearly $30,000. Reserve officers attend one weekend per month and an annual two-week training camp.

2) College financing. All students receive $100/month during the final two years of college (up to $2,000) plus another $750 for attendance at summer camp. Also, advanced course students may join the Reserve Officers’ Training Corps program will earn commissions as Second Lieutenants in the U.S. Army. The ROTC program may be completed in several different ways as outlined below. 

The Program

College students who complete the Reserve Officers’ Training Corps program will earn commissions as Second Lieutenants in the U.S. Army. The ROTC program may be completed in several different ways as outlined below.

1) Four-Year Program. The Military Science program is traditionally offered as a four-year program. It is best to start as a freshman, but special arrangements can be made for those who start as sophomores. The first two years of Military Science are voluntary without service obligation, and designed to give the student a perspective of their leadership ability and what the Army can offer them. The student who decides to continue in ROTC and pursue a commission signs an agreement with the Department of the Army to accept a commission upon completion of the last two years of Military Science. In return the Army agrees to provide a subsistence allowance (up to $2,000) and to provide all necessary uniforms and Military Science books.

2) Two-Year Program. The two-year program is designed to provide greater flexibility in meeting the needs of students desiring commissions in the U.S. Army. UM-St. Louis students who did not participate in the four-year program and junior college transfer students are eligible for enrollment. Basic prerequisites for entering the two-year program are:

(A) Students must be in good academic standing (minimum 2.0 GPA) and pass an Army medical examination, and

(B) The student must have two academic years of study remaining (undergraduate, graduate, or combination).

The student will attend a six-week summer camp to catch up with the students in the four-year program. Attendance at the basic camp does not obligate the student in any way and is only intended to give the student a look at Army life and opportunities. The student will be paid approximately $750 for attendance at basic camp.

Veterans

Veterans of any of the Armed Forces may qualify for advanced placement and should contact the Military Science Department for details.

Scholarships

The Army Reserve Officers’ Training Corps currently has 12,000 scholarships in effect, which pay toward tuition, fees, and books, and provide $100/month for the academic year. These scholarships cover periods of four years and three years. UM-St. Louis freshmen and sophomores should apply in January for the two- and three-year scholarships. Special consideration for scholarships is given to students in engineering, nursing, business, and any physical science. Scholarship students may incur a four-year active duty obligation, however, they may request reserve duty to serve with the National Guard or Army Reserve.
Reserve Officers’ Training Corps

Qualifications
All students who desire to enter the Army Reserve Officers’ Training Corps must be United States citizens, in good physical condition, and have high moral character. Students must be at least 17 years old to enroll and not over 30 when they receive their commission. Additional qualifications to be admitted into the advanced course include an academic average of C or better, and passing an Army medical examination.

Academics
UM-St. Louis Army Reserve Officers’ Training Corps academics consists of two parts: (1) earning a degree in the student’s chosen academic subject, and (2) completing 18 credit hours (four-year program) or 12 credit hours (two-year program) of the Military Science curriculum. The courses in Military Science are college-level academic courses which receive full academic credit toward the student’s elective degree requirements in the Business School and the School of Education. The curriculum consists of classroom instruction and a leadership laboratory in which students receive leadership experience.

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/Air Force Military Ball, a fall canoe trip down the Meramec River, picnics, and informal parties. Army ROTC students also support various campus and community service activities. Interested students also participate in the Ranger Club, Drill Team, and Color Guard.

Military Science courses are described in detail in a companion booklet to this Bulletin, the Description of Courses.

The mission of the Army Reserve Officers’ Training Corps is to commission the future officer leadership of the United States Army. While there is much to be learned in the classroom, at leadership laboratories and during summer camp, there are still other opportunities for self-enrichment and personal satisfaction to be found through active participation in the various extracurricular activities sponsored by ROTC and through interaction and association with fellow cadets and cadre. Cadre instructors are active Army officers and non-commissioned officers working full time as instructors and mentors at the university.

Air Force ROTC
The objective of the Air Force Reserve Officer Training Corps (AFROTC) is to qualify students for appointment as active duty second lieutenants in the United States Air Force. However, any student may enroll in the freshman/sophomore-level aerospace studies courses, and students may also enroll in the junior/senior-level courses with permission of the professor of Aerospace Studies.

UM-St. Louis offers the two- and four-year AFROTC programs through an agreement with Parks College of St. Louis University.

The four-year program is tailored for students with three or more years of undergraduate studies remaining. 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.

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 Development of Air Power. The courses of the POC emphasize the professional development of the future Air Force Officer. The curriculum covers Air Force Management and Leadership and American Defense Policy. Field trips to Air Force bases supplement classroom instruction and familiarize the cadet with Air Force operations and organization.

To be commissioned, AFROTC students/cadets must:
- Pass a medical exam at a military medical facility.
- Obtain a favorable evaluation on an Armed Forces personal history security investigation.
- Flying applicants must complete commissioning requirements before age 26½, and non-flying applicants must complete commissioning requirements by age 30. However, the age limit for non-flying applicants may be extended to age 35 for outstanding individuals.
- Be of good character (as determined by a favorable record with law enforcement authorities).
Reserve Officers’ Training Corp

- Successfully complete all AFROTC course requirements.
- Complete at least a baccalaureate degree.

Air Force ROTC textbooks are loaned to all AFROTC students without charge. Students in the POC will receive a monthly subsistence allowance of $100 per month for a maximum of 20 months, an Air Force uniform, in excess of $700 for the summer field training course, and a travel allowance to and from the training location.

In addition to the AFROTC courses offered for academic credit, the Aerospace Studies Department sponsors the Arnold Air Society and Angel Flight. Arnold Air Society is a national honorary service organization open to selected AFROTC cadets. Angel Flight is an auxiliary organization of Arnold Air Society, and membership is open to anyone interested in bringing to the local community a better understanding of the Air Force mission and its leaders.

Field Training AFROTC field training is offered during the summer months at selected Air Force bases throughout the United States. Students in the four-year program participate in four weeks of field training, usually between their sophomore and junior years. 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 before 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.

Leadership Laboratory Leadership Laboratory is taken once per week throughout the student’s enrollment in AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experience designed to develop each student’s leadership potential. Leadership Laboratory involves the study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. It also includes field trips to Air Force installations throughout the United States.

Other Training Volunteers may attend various special cadet training programs such as light aircraft training, parachute jump training, and advance cadet training. Students participating in the latter, work with an Air Force unit during part of the summer.

Air Force Scholarships The Air Force offers four-, three-, and two-year scholarships to qualified students. These scholarships pay tuition, certain fees, and textbook cost. Scholarship recipients receive $100 per month subsistence allowance.

For further information on the Air Force ROTC program at UM-St. Louis, call (618) 337-7500, Ext. 311 or (800) 851-3048, Ext. 311. In Illinois, call (800) 851-7878, Ext. 311.
Programs at Other Universities

Reciprocal Programs

Unless otherwise stated, students interested in one of the following programs should contact the admissions office at the school where the program is offered.

Nebraska
The University of Nebraska in Lincoln offers programs for a limited number of Missouri residents in architecture, community and regional planning, construction management, and actuarial science where students may pursue bachelor’s degrees.

Illinois
A cooperative agreement exists between Southern Illinois University-Edwardsville and UM-St. Louis which permits students of one institution to take courses at the other institution as a regular part of their academic program. For further information consult the registrar’s office or the dean’s office.

Kansas
The following programs are offered to Missouri residents at various Kansas universities:

Humanities University of Kansas, Lawrence, with an M.A. in Oriental languages and literature, and a B.A. and M.A. in Slavic languages and literature (not Russian). A Ph.D. in Slavic languages and literature is also offered.

Grain milling and technology Kansas State University, Manhattan, with a B.S., M.S., or Ph.D. in bakery science and management, feed science and management, or milling science and management.

Horticulture Kansas State University, Manhattan, with a B.S. in horticulture therapy.

Joint Programs in Law and Dentistry

The University of Missouri-St. Louis and the University of Missouri-Kansas City provide joint programs in law and dentistry for academically able students who are committed to public service. These special programs are designed to serve students seeking a career in public-service law or students who wish to practice dentistry in medically underserved communities.

UM-Kansas City will hold a reserved seat in its School of Law or in the School of Dentistry for qualified UM-St. Louis entering freshmen and make it available to them after they complete the required undergraduate studies at UM-St. Louis.

Study Abroad Programs

Through agreements of academic cooperation with international universities, special opportunities for study abroad are available to qualified UM-St. Louis students. Agreements are in force with universities in France and Germany. Also, other exchange programs may accept UM-St. Louis students.

Fees UM-St. Louis students may pay standard UM-St. Louis fees during their term of study abroad. Transportation and living expenses abroad are the responsibility of the student, but in general, no further academic fees are required by the foreign university. Terms of study may not coincide with the regular academic calendar of the University of Missouri-St. Louis.

Application The UM-St. Louis student must be recommended by the Center for International Studies. The student’s qualifications typically include upper-division standing with a high grade point average, recommendations by faculty members, approval of the proposed course of studies via the departmental/divisional advisory process, and familiarity with or willingness to learn the foreign language of instruction/study. If selected, students must furnish evidence of good health, emotional maturity, and stability.

Expressions of interest are welcome throughout the year. Since the nomination process involves international mails, generally formal applications should be submitted not later than the beginning of class work of the winter term for the following fall term.

For further information contact the Study Abroad Office, Center for International Studies, 366 SSB, 553-5753.

Universities Participating in Student and Faculty Exchange

France
Université Jean Moulin, Lyon

Germany
University of Stuttgart, Stuttgart
University of Frankfurt, Frankfurt

Other Programs

The Center for International Studies cosponsors the Missouri-London Program, a semester abroad program offered during the Fall and Winter semesters, and has information on more than 2000 study abroad programs offered by other universities. UM-St. Louis students may participate in programs sponsored by CCIS (College Consortium for International Studies) institutions in Africa, Europe, Latin America, and the Far East. These programs vary in duration from several weeks to the full academic year and represent study opportunities in many disciplines. For further information, contact the Study Abroad Office.
Programs at Other Universities

CBHE Articulation Agreement

The Coordinating Board of Higher Education Articulation Agreement outlines statewide undergraduate general education requirements which satisfy the general requirements for students transferring into UM-St. Louis and students transferring out of UM-St. Louis to other public higher education universities in the state.

1) Communication skills in the English language, three (3) courses—at least two (2) of which must be written; one (1) oral communication course is recommended;
2) Humanities, three (3) courses from at least two (2) disciplines;
3) Physical and/or biological sciences, two (2) courses including at least one (1) with its associated laboratory component;
4) Mathematics, one (1) course—college algebra, an alternative course that includes a significant component of college algebra, or a course which has college algebra as a prerequisite; and
5) Social and behavioral sciences, three (3) courses from at least two (2) disciplines.

All institutions shall recognize the validity of other institutions' general education requirements when the minimum requirements as specified above are met. However, some foreign language and/or upper division general education courses or upper division graduation requirements may be required by the receiving institution whenever all native students are obligated to satisfy the same requirements.

Baccalaureate professional schools or programs may specify exceptions to the credit hour and course distribution minimums established in this section by promulgating these exceptions and by establishing specialized articulation programs related to associate of science degrees as detailed in that section of these transfer guidelines. In these instances, transferring students are not exempted from satisfying the specialized lower division requirements of departments or divisions of an institution into which a student wishes to transfer.
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Code of Student Conduct

Standard of Conduct Amended March 20, 1981

A student enrolling in the University assumes an obligation to conduct himself in a manner compatible with the University’s function as an educational institution.

A. MISCONDUCT—For which students are subject to discipline falls into the following categories:

1. Dishonesty, such as Cheating or Plagiarism — 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 and shall report such incidents to the Primary Administrative Officer.

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, disciplinary procedures, or other University activities, including its public service functions, or of other authorized activities on University premises.

4. Physical Abuse of any person on University-owned or -controlled property or at University-sponsored or -supervised functions, or conduct which threatens or endangers the health or safety of any such person.

5. Theft of or Damage to Property of the University or of a member of the University community or campus visitor.

6. Unauthorized Entry to or use of University facilities.

7. Violation of University Policies or of Campus Regulations including campus regulations concerning the registration of student organizations, the use of university facilities, or the time, place and manner of public expression.

8. Use, Possession or Distribution of Narcotic or Dangerous Drugs, such as marijuana and lysergic acid diethylamide (LSD), except as expressly permitted by law.

9. Violation of Rules Governing Residence in University-owned or -controlled property.

10. Disorderly Conduct on or off campus, indecent, or obscene conduct or expression on University-owned or -controlled property or at University-sponsored or -supervised functions.

11. Failure to comply with directions of University officials acting in the performance of their duties.

12. Conduct which adversely affects the student’s suitability as a member of the academic community.

B. DEFINITIONS—As used in these rules, the following definitions shall apply:

1. Primary Administrative Officers — As used in these procedures, “Primary Administrative Officer” is charged with the responsibility for the administration of these disciplinary procedures and refers to the person or persons on each campus designated.

2. Disciplinary 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.


4. Disciplinary Probation — A status resulting from misconduct apart from academic performance. The student remains enrolled but under stated conditions.

5. Disciplinary Suspension — An involuntary separation of the student from the institution for misconduct apart from academic performance for a specified period of time.

6. Discipline Panel — A panel of students appointed by the Chancellor, from which shall be selected by the Chairman, upon the request of a student charged before the Student Conduct Committee, not more than three students to serve with the Student Conduct Committee.

7. References to Gender — Any use of grammatical gender reference shall be interpreted as applying equally to males and females.

8. Student — A person having once been admitted to the University who has not completed his course of study and who intends to or does continue his 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.

9. Student Conduct Committee — As used in these procedures, “Student Conduct 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.

10. Review — The exercise by the student or Primary Administrative Officer of the right to request the review by the Chancellor whether or not discipline is imposed and when the discipline imposed, if any, is other than expulsion, dismissal, or suspension.

11. Appeal — The exercise by the student or the Primary Administrative Officer of the right to have reviewed by the Chancellor the full record of the Student Conduct Committee where discipline of expulsion, dismissal or suspension is imposed.

C. POLICY AND PROCEDURES

1. Primary Administrative Officers — The Chief Student Personnel Administrator on each campus or his designee is the primary officer for administration of discipline for unacceptable conduct or infraction of University rules and regulations, except in cases of academic dishonesty, where the Chief Academic Administrator (Provost or Vice Chancellor for Academic Affairs) or his designee is the primary officer.

Student Disciplinary Matters

Rules of Procedures in Student Disciplinary Matters
Adopted November 8, 1968, Amended March 20, 1981 and December 8, 1989

A. PREAMBLE — The following Rules of Procedure in Student Disciplinary Matters are hereby adopted in order to assure insofar as possible and practicable that the requirements of procedural due process in student disciplinary proceedings will be fulfilled by the University, that the immediate effectiveness of Article V of the Bylaws of the Board of Curators relating to student conduct and discipline may be secured for all students in the University of Missouri, and that so that procedures shall be definite and determinable within the University of Missouri.

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Student Disciplinary Matters

2. Preliminary Procedures—The Primary Administrative Officer shall investigate any reported student misconduct before initiating formal disciplinary procedures and give the student the opportunity to present his 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 which he shall consider in exercising the authority vested in him.

3. Informal Disposition—The Primary Administrative Officer shall have the authority to impose appropriate discipline 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 his signed statement shall be forwarded to the Committee. The Primary Administrative Office may refer cases to the Student Conduct Committee without first offering informal disposition.

4. Temporary Suspension—Either the President or Chancellor of a campus may at any time temporarily suspend or deny readmission to a student from the University pending formal procedures when he 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 the University. The appropriate disciplinary procedure will be initiated within five days.

5. Formal Procedures and Disposition:
   a. Student Conduct Committee
      (1) The Student Conduct Committee shall be appointed by the Chancellor and shall have the authority to impose appropriate discipline upon any student or students appearing before it, including, but not limited to, probation, suspension, dismissal, or expulsion.
      (2) The Committee, when appropriate or convenient, may be divided by the Chairman of the Student Conduct Committee into Hearing Panels, each panel to be composed of at least five members present at the hearing, including a designated chairman. A Hearing Panel has the authority of the whole Committee in those cases assigned to it by the Chairman of the Student Conduct Committee. The Chairman of the Committee or of a Hearing Panel shall act as one member of the Committee or Hearing Panel and have, in addition to his rights as Chairman, the same voting and other rights as other members of the Committee or Hearing Panel.
      (3) Each Chancellor shall appoint a panel of students for his campus, to be known as the Discipline Panel. Upon written request of a student charged before the Student Conduct Committee, made at least forty-eight (48) hours prior to the hearing, the Chairman of the Committee or Hearing Panel shall appoint from the Discipline Panel not more than three students to sit with the Committee or Hearing Panel for that particular case. When students from the Discipline Panel serve at the request of a student, they shall have the same rights as other members of the Committee or Hearing Panel, including the right to vote.
   b. General Statement of Procedures—A student charged with a breach of University rules or regulations and conduct in violation of the General Standards of Student Conduct is entitled to a written notice and a formal hearing unless the matter be disposed of under the rules for informal disposition. Disciplinary proceedings are not to be construed as judicial trials, 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 Student Conduct Committee and the Primary Administrative Officer.
   c. Notice—The Primary Administrative Officer shall initiate disciplinary actions by arranging with the Chairman to call a meeting of the Student Conduct 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, the conduct to be inquired into, and the date, time, and place of hearing before the Student Conduct Committee. Notice by certified mail may be addressed to the last address currently on record with the University. Failure by the student to have his 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 is fixed by the Chairman for good cause. Any request for continuance shall be made in writing to the Chairman, who shall have the authority in his discretion to continue the hearing. If the student does not appear at the scheduled time, the Committee may hear and determine the matter in his absence.

6. Right of Appeal (Expulsion, dismissal, or suspension only):
   a. In all cases where the discipline imposed by the Student Conduct Committee is other than expulsion, dismissal or suspension, the Primary Administrative Officer or the student may petition the Chancellor or his designated representative in writing for a review of the decision within five (5) consecutive calendar days after 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) consecutive calendar days if he so desires.
   b. The Chancellor or his designated representative may grant or refuse the right of review. In all cases where the Petition for Review is refused, the action of the Student Conduct Committee shall be final. If the Chancellor or his designated representative reviews the decision, the action of the Chancellor shall be final unless it be to remand the matter for further proceedings.

7. Right of Appeal (Expulsion, dismissal, or suspension only):
   a. When a student is expelled, dismissed or suspended from the University by the Student Conduct Committee, the Primary Administrative Officer or the student may appeal such decision to the Chancellor of the campus or his designated representative by filing a written petition for review with the Chancellor within ten (10) consecutive calendar days after notification of the decision of the Student Conduct Committee. A copy of the Notice of Appeal will be 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 in support of it, and the Chancellor shall grant a reply to such memorandum by the appropriate party.
   b. The Chancellor or his designated representative shall review the full record of the case and the appeal documents and may affirm, reverse, or remand the case for further proceedings and shall notify the Primary Administrative Officer and the student in writing of the decision on the appeal. The action of the Chancellor shall be final unless it be to remand the matter for further proceedings.
Student Disciplinary Matters

8. 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 the University community. In such event, however, any final disciplinary action imposed shall be effective from the date of the action of the Student Conduct Committee.

9. Student Honor Systems—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 statement 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 therein before stated as appropriate and adaptable to the particular situations 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 C.6 and 7.

D. HEARING PROCEDURES

1. Conduct of Hearing—The Chairman 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 his adviser any special or extraordinary procedures to be employed during the hearing and permit the student to make suggestions of or objections to any procedures for the Student 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 his 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, at his election.

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, his adviser or counselor may question witnesses or examine evidence at the conclusion of the University's presentation.

c. Student Evidence—The student shall have the opportunity to make a statement to the Committee about the charge and may then present further evidence through witnesses or in the form of written memoranda as he desires. 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 any matter in rebuttal of the other's presentation.

2. Students Rights Upon Hearing—A student appearing before a Student Conduct Committee shall have the right:
   a. To be present at the hearing;
   b. To have an adviser or counselor of his choice appear with him and to consult with such adviser or counselor during the hearing;
   c. Upon timely request, to have students from the Discipline Panel sit with the Committee or Hearing Panel in his case;
   d. To hear or examine evidence presented to the Committee against him;
   e. To question witnesses present and testifying against him at the hearing;
   f. To present evidence by witness or affidavit of any defense the student desires;
   g. To make any statement to the Committee in mitigation or explanation of his conduct in question that he desires;
   h. To be informed in writing of the findings of the Student Conduct Committee and any discipline it imposes;
   i. To request review or to appeal to the Chancellor as herein provided.

3. Determination by Committee—The Student Conduct 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 discipline, if any, to be imposed. No discipline 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 and should be disciplined therefore.
Student Disciplinary Matters

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 Chairman, whose ruling shall be final unless the Chairman 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 Chairman.
   b. The Chairman will rule on all requests and points of order and may consult with Committee’s legal adviser prior to any ruling. The Chairman’s ruling shall be final and all participants shall abide thereby, unless the Chairman 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 Chairman after recognition.

7. Record of Hearing—A taped or stenographic record of the hearing shall be maintained. The hearing record shall be maintained and kept as long as the discipline imposed shall be in force, or for five (5) years, whichever is earlier. 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.

Appeals Procedures

Financial Aid Waiver (Appeals)

The University of Missouri-St. Louis has an established financial aid waiver (appeals) procedure. An aid applicant can raise questions or appeal the offer, or lack of an offer, of financial aid if not satisfied. The general provisions for appeals procedures are as follows:

1) An aid applicant who is not satisfied with the fact that no aid was offered, or was not pleased with the type and/or amount of aid that was offered, may make a written appeal to the campus Director of Student Financial Aid for reconsideration of the aid request and 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 director can make a revised offer which is satisfactory, the case can be closed.

3) If the director cannot provide a satisfactory solution, he/she refers the written appeal with all pertinent information to the next step. The written record is reviewed by the Director of Admissions, and the applicant may appear in person. Where academic progress is an issue, the student may ask an academic adviser or counselor to write or speak in the student’s behalf. If a satisfactory solution is worked out, the case is closed.

4) If step three did not solve the problem, it is referred to the campus Faculty-Student Committee on Student Aid. In ordinary practice it is rare for a case to be appealed beyond this step.

5) If, however, the applicant is still not satisfied after review by committee, the case is to be referred to the Chancellor.

6) The next appeal is the President.

7) The final University appeal would be for the President to refer a case to the Board of Curators.

Grievance About Grade

Recourse for a Student Who has a Grievance About a Given Grade

The following grievance procedure is to be followed by any student who believes he/she has received an unjustified grade in a course and wants a review of the matter. It is to be understood that the establishment of criteria for grades is the responsibility of the instructor. The purpose of this grievance procedure is to determine whether the criteria for grading were fairly applied. If these procedures lead to the conclusion that the grading criteria were improperly applied, then the instructor is to be requested to reconsider the grade.

1) The student’s first recourse is to review the issue fully with the instructor involved and then with the department chairperson. This must be done within, at most, one month after the beginning of the succeeding regular academic semester.

2) If the issue has not been resolved within, at most, two weeks, the student should bring the matter to the dean of the school for adjudication by whatever appeals committee the dean’s office has established. It is anticipated that nearly all cases would be settled at the department or College or School level.

3) A student may take his/her case to the Chancellor.
Student Organization Policy

Policy on Student Organizations

The University recognizes that the acquisition of knowledge is not confined to the formality of the classroom and that much can be gained through the activities of student organizations. To assure maximum freedom for students and to assure that organizational activities are orderly, responsible, and appropriate to the mission of the University, certain principles and procedures are established through which organizations gain University recognition.

I Procedures for Recognition

A. To obtain recognition or to register, an organization shall submit to the Vice Chancellor for Student Affairs, through the Office of Student Activities, a recognition or registration form which shall include:

1) The name of the organization.
2) A statement of the general purpose of the organization and the means for accomplishing it. The statement should demonstrate that the organization's purpose is to broaden the scope of general learning, extend knowledge of specialized areas, or to serve the professional, cultural, social or recreational interests of the University community, consistent with the educational goals of the University. The statement must not conflict with policies governing recognized organizations as listed below.
3) The names of at least three officers or responsible representatives, including student numbers, addresses and telephone numbers; these persons must be students registered at the University of Missouri-St. Louis.
4) A statement of any affiliation with any other organization not registered with the University, and a copy of the organization's constitution.
5) Organizations seeking recognition must include a copy of their constitution and/or by-laws, the name of a UM-St. Louis faculty or staff member who agrees to serve as an advisor, and the name of a student member of the organization who will serve as the organization's representative on the Student Government Association.
6) Upon submission of the recognition or registration form, the organization shall be granted temporary privileges until the request for recognition is acted upon by the Senate Student Affairs Committee or the request to register is approved by the Director of the University Center or his/her designee.

B. To maintain recognition or registration, an organization must update their recognition form or reregister with the Office of Student Activities no later than two weeks following the beginning of the fall semester.

II Privileges of Recognized Organizations

1) Use of campus facilities and services for organizational activities as provided in the University regulations.
2) Use of the University name in connection with publicity, but only for identification purposes, and in no way to imply support of the University for any position of the organization.
3) Participation in University-sponsored events.
4) Application for supplemental financial assistance.
5) Participation as a voting member of Student Government Association. Organizations who register may not apply for supplemental assistance and may not be voting members of Student Government Association.

III Policies Governing Recognized or Registered Organizations

1) Organizations shall comply with the Rules and Regulations of the University of Missouri and the St. Louis campus.
2) Organizations' membership policy shall not discriminate for reasons of color, creed, national origin or sex. Any organization may petition to the Vice Chancellor for Student Affairs for exemption from the requirement as it applies to sex. Academic and professional organizations which have discriminatory membership policy based on sex shall not be recognized.
3) Organizations' membership shall not be subject to approval by anyone other than the local campus membership.
4) Organizations are expected to maintain fiscal responsibility.
5) Registered organizations are encouraged to seek the advice of faculty and other members of the University community.
6) Recognized organizations are required to seek the advice of faculty and other members of the community.
7) Recognized organizations are required to participate in the Student Governance process.

IV Procedure for Review of Grievances

A. Any member of the University community may bring charges against a recognized organization for breach of the above policies or procedures.

B. Such charges, except those pertaining to discrimination, are brought initially to the Vice Chancellor for Student Affairs, who may:

1) Dismiss the charges, in which case an appeal may be made to the Senate Student Affairs Committee.
2) Settle the charges in a way acceptable to both parties or,
3) Refer the charges to the Senate Student Affairs Committee.

C. Penalties may range from withdrawal of recognized status 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 following University policies are governed by the Affirmative Action Office:

**Affirmative Action on Committee Appointments Policy** — As a part of the implementation of the Affirmative Action Plan of the University of Missouri, any person appointing any committee for the University or any campus, in selecting the membership, shall give due consideration to the inclusion in such membership of women and minorities unless membership therein is ex-officio.

**Equal Employment Opportunity Policy** — The Curators of the University of Missouri do hereby reaffirm and state the policy of the University of Missouri on Equal Employment/Educational Opportunity.

1. 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.

2. Equal opportunity is and shall be also provided for all students and applicants for admission in compliance with existing legislation.

**Sexual Harassment**

The following policy has been developed by the University of Missouri in order to respond to an increased awareness regarding sexual harassment by providing information on the subject and guidance for members of the University community.

**Policy** — It is the policy of the University of Missouri, in accordance with providing a positive discrimination-free educational and work environment, that sexual harassment in the work place or the educational environment is unacceptable conduct and will not be condoned.

**Definition** — For the purposes of this policy, sexual harassment may be defined as unsolicited nonreciprocal behavior by an employee who is in a position to control or affect another employee's job or a student's status as a student and who uses the power or authority of that position to cause that student or employee to submit to sexual activity, or to fear that he or she would be punished for the refusal to submit.

1. Sexual harassment also includes employee conduct of a sexual nature unreasonably interfering with another employee's job performance or student's status as an offensive working or educational environment.

2. Sexual harassment may consist of a variety of behaviors by University employees or students including, but not limited to, subtle pressures for sexual activity, inappropriate touching, inappropriate language, demands for sexual favors, and physical assault.

**Procedure** — Each campus shall develop and publish such informal procedures as needed to implement this policy. Any formal procedures shall use the existing grievance procedures.

**Auxiliary Aids for Handicapped Students**

The University maintains its commitment to the education of qualified handicapped students by providing them an equally effective opportunity to participate in or benefit from its educational programs as afforded non-handicapped students.

As a part of this commitment and upon the request of a qualified handicapped student, the Chief of Student Personnel Administrator or designee will arrange for an assessment of the student's abilities and his or her need for some type of auxiliary aid.

This assessment will include an evaluation of the extent of the student's disability and the requirements of the particular course or education program in which the student is enrolled or plans to be enrolled.
Equal Opportunity Policies

If after the assessment of the student and the course, the University determines that some type of auxiliary aid is required, it will assist the qualified handicapped student in obtaining the necessary auxiliary aid from other sources.

If the necessary auxiliary aid is not available from other sources, the University, at its option, shall provide the necessary auxiliary aid or reimburse the student for the reasonable cost of the necessary auxiliary aid.

Requests by students for such assessments must be made no later than six weeks prior to the beginning of the next semester in order to provide sufficient time for the assessment and for obtaining any necessary auxiliary aid.

Unfavorable determinations made pursuant to this policy may be appealed by the handicapped student through the University of Missouri Discrimination Grievance Procedures for Students, a copy of which will be provided to any student whose request for auxiliary aid is denied.

Additional resource materials are available through the Affirmative Action Office.

AIDS Policy Statement

Current knowledge indicates college and university students or employees with AIDS, ARC, or a positive antibody blood test do not pose a health risk to either students or employees in a usual academic or residential setting. The policy of the University of Missouri is to permit students and employees with AIDS to continue to engage in as many of their normal pursuits as their condition allows. Managers should be sensitive to the medical problem and ensure that such employees are treated consistent with the treatment of other employees. Students will be allowed to continue their enrollment and activities (including continued residency in student housing) as long as they continue to meet academic standards and medical evidence indicates their conditions are not a threat to themselves or others. Every effort will be made to maintain confidentiality at all times.

The University also has a legitimate interest in the welfare of all students, employees, and visitors to the campus. Every reasonable precaution will be taken to minimize the risk that an employee's or student's condition will present a health and/or safety hazard to others.

The University will not discriminate against individuals with HIV infection, AIDS or ARC, but this protection does not include individuals with secondary infections or diseases that would constitute a direct threat to the health or safety of others or who may because of the disease or infection be unable to perform duties of their employment. In such cases, the appropriate University personnel or student policy will determine what changes, if any, will be made in the student's or employee's academic or work program.

In the event of public inquiry concerning AIDS on campus, the Chancellor or the Chancellor's designee will provide appropriate information on behalf of the University. Existing policies regarding confidentiality of employee and student records will be followed.

Consistent with its concern for students and employees with AIDS, the University offers a range of resources through the AIDS Task Force on each campus and through other campus services.

a. Student, employee, and management education and information.

b. Referral to agencies and organizations that offer supportive services for life-threatening illnesses.

c. Consultation to assist employees in effectively managing health, leave, and other benefits.

The AIDS Task Force on each campus will continue to meet periodically to review and update policy and to make recommendations as new medical facts become available. Each Task Force will continue to encourage programs to educate all members of the campus community about the reality of AIDS.

To address specialized needs, each campus is authorized to adopt and implement special policies related to AIDS which are consistent with this policy statement.

The Affirmative Action Office is located in 440 Woods Hall. The telephone number is 553-5695.

University of Missouri Equal Opportunity Statement

The University of Missouri-St. Louis is committed to equal employment and educational opportunities without regard to conditions of race, color, sex, religion, national origin, age, physical ability, veteran status, or individuals with HIV, AIDS, or ARC.

Each administrative unit of the University employing personnel, admitting students, or entering into contracts is charged with implementation of the University's commitments, and maintenance of records to demonstrate good faith efforts, in admission and training, recruiting and hiring, compensating and promoting, layoff and dismissal, granting of tenure, contracting and purchasing, and access to facilities and programs.

As an employer of persons and as an institution accountable to taxpayers and the general public, the University must have administrative and management practices that are designed for the best use of talent for operational effectiveness and efficiency.

(1) Recruitment and employment of personnel

a. Recruitment of professors and academic personnel in research and continuing education/extension is primarily the responsibility of deans, directors, chairpersons, and department heads.

b. Recruitment of administrative, service, and support staff, except for top-ranking administrative personnel, is primarily the responsibility of the personnel office of each campus, and the director of Human Resources for the University of Missouri-St. Louis administration. Selection is the responsibility of the administrative head of the employing unit.

c. Administrative efforts are made to recruit and employ minorities, women, the handicapped, and members of protected age groups.

d. The University maintains relationships with governmental agencies, community groups, and other organizations which may be of assistance in furthering recruitment and employment of minority groups, handicapped persons, and women into departments and units which have imbalances. Personnel sources are advised of the University's commitment to equal opportunity and affirmative action.

e. Imbalances exist when available talent among specified minorities, women, handicapped, or protected age group members is proportionately underrepresented in a particular personnel category in the University. Underrepresentation is determined by an analysis of the appropriate employment market which is generally national or regional for major administrators, professors, and academic personnel in research and continuing education/extension. The appropriate employment market is generally the state or local community for most administrative positions and for service and support staff.

f. Advertisement and notices of employment opportunities indicate a filing date for consideration.

g. Notice of employment and training opportunities are made to existing personnel.

h. Employment applications meet federal and state requirements relating to equal opportunity.

i. The Office of Affirmative Action maintains records to demonstrate efforts and results of efforts to achieve equity and to act affirmatively and reasonably to correct imbalances.
Equal Opportunity Policies

(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 assure 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 Affirmative Action Office 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 accordance with policies on equal employment and affirmative action. Admissions applications are retained for one year and employment applications are retained for one year. University business involving contracts and bids for various services are retained in compliance with University of Missouri record management policies.
c. Those responsible for recruiting, admitting, and retaining students—undergraduate, graduate and professional—maintain files and records documenting efforts to provide equal opportunity and act affirmatively to attract and retain minority group members, women, and older and handicapped persons. A report is made annually to the appropriate administrative committee.
d. Campus administrative officers have records demonstrating efforts to provide equal opportunity and show affirmative action in the interests of minority group members, women, and handicapped and older persons in the availability and use of University facilities, including recreational facilities.
e. Those responsible for personnel recruitment and employment personnel, including graduate teaching and research assistants, have records that reflect their adherence to equal opportunity and affirmative action practices.
f. Academic or administrative units receiving complaints or grievances based on allegations of discrimination report those cases to the Affirmative Action Office.

(8) Reviewing and monitoring
a. A University Committee on Equal Employment Opportunity and Affirmative Action (EEO/AA) is appointed annually by the Chancellor.
b. The EEO/AA committee membership includes a representative cross section of personnel, including a representation of women, minorities, and the handicapped.
c. The EEO/AA committee advises the Director of Affirmative Action on matters relating to affirmative action and University equal 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.
Equal Opportunity Policies

(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 policy.

Other Procedures or Regulations

Professional Responsibility, Protest & Political Activities

Statement of Professional Responsibilities, Protest and Political Activities Adopted September 5, 1970

A. In a community of learning, willful disruption of the educational process, destruction of property, and interference with the rights of other members of the community will not be permitted.

B. DISCIPLINARY ACTION—Academic and administrative procedures of this University provide for prompt and appropriate disciplinary action against those who abuse such rights as provided in the statement by the President regarding student demonstrations adopted by the Board of Curators on June 30, 1968. That statement as well as the Standard of Conduct and Rules of Procedure in Student Disiplinary Matters is available to all students.

C. CLASSES DURING CAMPAIGN & ELECTION—Classes will continue as usual throughout the campaign and election. There will be no recess from the normal and routine operations on any of the campuses and already approved academic calendars will be fully maintained on each campus.

D. FACULTY RESPONSIBILITY—We endorse the statement submitted August 26, 1970, suggested by a special committee of the Inter-campus Faculty Council charged by the President with the development of a statement on faculty responsibility, as follows:

1. The Board of Curators and the Faculty affirm their intention of keeping the University of Missouri in full operation throughout the coming academic year. The Board expects that the faculty will meet their professional obligations in accordance with already existing regulations and principles of academic responsibility regarding the meeting of classes and the awarding of grades and credit.

2. The Board of Curators hereby charges the faculty to re-examine and re-affirm its professional responsibilities and to develop procedures for dealing with cases in which those responsibilities are not fulfilled. We ask that this task be completed with full faculty consultation and with reasonable speed.

3. Until each campus develops a full set of procedures for dealing with alleged violations of professional ethics, the Board charges each campus faculty governing body to establish immediately a temporary group for handling such cases as may arise.

E. The Board of Curators recognizes that any definition of faculty responsibility developed by a faculty group or groups on any campus must provide that the initial and primary responsibility for the effective function of the academic unit, including disciplinary action, resides in the administrative officers of the department, division, school, or college.

F. Students, faculty, administrators, and employees who are not in sympathy with the basic philosophy expressed herein and do not intend to abide by the rules and regulations of the University should not attend the University nor become associated with the institution nor continue to be associated with the University.

Discrimination Grievance Procedure for Students

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, disability, or Vietnam era veteran status. Sexual harassment shall be considered discrimination because of sex.
Other Procedures or Regulations

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 administered by 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 precedes 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 re-admission, 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;
   c. Is regarded as having such an impairment.

For purposes of this definition, "major life activity" means any mental or physical function or activity which, if impaired, creates a substantial barrier to employment and/or education.

Any reference in this document to written materials or to written or oral presentations within the student discrimination grievance procedure may be adjusted to accommodate persons with disabilities for whom the stated materials or required presentations would not be appropriate. Cost of such accommodation will be borne by the University, with no charge to the individual.

5. Appropriate Administrative Officer—The primary administrative officer on the staff of the Chancellor and academic administrative officer having administrative responsibility for the unit in which the discrimination is alleged to have occurred.

6. Grieving Consultant—At any step the Director of Equal Opportunity or of Affirmative Action may be asked to serve as a consultant by any of the parties involved in this grievance procedure.

C. COMPLAINTS

1. Policies and Procedures—A student with a complaint will be provided with copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief Student Personnel Administrator or his/her designee and the Officer for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an advisor participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.

2. Joint Complaint—If more than one student is aggrieved by the same action, these students may, by mutual written agreement among themselves, file a joint complaint to the Chief Student Personnel Administrator or for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an advisor participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.

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 in 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 student may pursue 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. If a satisfactory resolution is not reached, the student may pursue the matter 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 have a written record at the University of Missouri at the time of the alleged discrimination.

6. Complaints Involving Admissions (Graduate) — Applicants to the Graduate School may request a meeting with the academic department head of the program to which the applicant was seeking admission. The official shall explain the reasons for the denial of recommendation for admission. If a satisfactory resolution is not reached, the applicant may appeal the decision to the Graduate School or the appropriate admissions committees. 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 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.
Other Procedures or Regulations

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. The University official shall compare the person's financial and academic qualifications against the official University financial aid criteria and review the award, amount, or denial of the aid. If the original judgment is sustained, the applicant may appeal this decision to the official's immediate supervisor or to the appropriate financial aid committee.

D. INITIATING A GRIEVANCE

1. Policies and Procedures - A student with a grievance will be provided copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief of Student Personnel Administrator or designee and the Office for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an advisor participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.
   a. Joint Grievance - If more than one student is aggrieved by the same action, these students may, by mutual written agreement among themselves, file with the Chief Student Personnel Administrator a grievance and pursue their grievances jointly under this grievance procedure. If the number of students in such a case is so large as to make it impractical for them to be heard individually in a joint proceeding, they may, by mutual agreement, elect one or more of their number to act on behalf of all of them.
   b. Regardless of their nature, all discrimination grievances are to be filed with the Chief Student Personnel Administrator. A grievance must be 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 dates 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.
   c. 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.
   d. 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.

3. 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 impanelled as called for in Section 390.010 E.

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 without satisfaction to the grievant.

2. A grievance hearing panel shall be established by October 1 of each year from which a grievance committee should be constituted. The panel shall consist of ten (10) faculty, ten (10) staff and ten (10) students. Selection of the panel will be made by the Chief Student Personnel Administrator from recommendations by the appropriate faculty, staff and student associations. Selection of membership will consider sex, race, disability, academic rank, student classification and employee classification. Membership on the hearing panel shall be for two years. A member's term shall expire on September 30 of the second year unless he/she is serving at that time on a hearing committee still in the process of reviewing an unresolved grievance. In such case, the member's term shall expire as soon as the committee has submitted a written report of its findings and recommendations to the Appropriate Administrative Officer.

3. A hearing committee shall be composed of five (5) members. The grievant shall select two (2) members from the grievance hearing panel provided by the Chief Student Personnel Administrator. The responding faculty/staff/organization shall select two (2) members from the grievance hearing panel. Both parties should have their selections made within fifteen (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
Other Procedures or Regulations

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 provided by Section 390.010 E.3 and E.4 must attend the opening and closing session of the hearing.

F. HEARING PROCEDURES FOR FORMAL GRIEVANCES
1. It shall be the responsibility of the Appropriate Administrative Officer to coordinate the procedures contained herein, to make provisions for hearing rooms, to coordinate secretarial and recording services and to otherwise serve the grievance committee as needed.

2. At the first organizational meeting of the grievance committee, the committee shall elect a chairperson from among the members to preside over subsequent meetings. Then the chairperson shall schedule a hearing at the earliest convenient time when all affected parties can be present.

3. A quorum consists of a minimum of four members of the committee except as provided by Section 390.010 E.4.

4. The grievance committee shall invite the grievant and the responding person to all hearings. Attendance at the hearings shall be limited to persons who have an official connection with the case as determined by the chairperson. The grievant and the responding person may choose to be accompanied by an advisor. Others whose participation in the hearing is considered essential in order to assist the committee in establishing the facts of the case shall appear before the committee only long enough to give testimony and to answer questions of committee members.

5. It is within the duties and responsibilities of all members of a grievance committee to commit themselves to observe procedures consistent with fairness to all parties concerned. For example, it is a matter of principle that members of the grievance committee will not discuss a case with anyone outside of the hearing process and that their finding will not be influenced by anything other than the evidence presented to them in meetings in which all affected parties are present.

6. The grievance committee shall set forth the rules of procedure for the hearing within the guidelines set forth herein. The chairperson may, for good cause and with the concurrence of a majority of the entire committee, authorize deviation from the suggested format, in which case the principal parties shall be notified.

a. The grievant shall be heard first in all phases of a grievance hearing and shall be primarily responsible for the presentation of his/her position.

b. The advisor of the grievant or respondent may advise that person and may briefly explain his or her position but shall not be permitted to testify or to cross-examine.

c. A reasonable time limit should be established for opening and closing statements and shall be announced prior to the hearing.

d. Length of hearing sessions may be established in advance; every effort should be made to conduct the hearing as expeditiously as possible, with equal fairness to both parties.

e. The interested parties shall provide the chairperson with the names of the advisor and potential witnesses at least forty-eight (48) hours prior to the hearing. It is the responsibility of the interested party, working with the chairperson, to ensure the presence of these individuals in a timely manner.

f. After initial witnesses for both parties have been heard, such witnesses may be recalled for additional questioning if requested by either party or the grievance committee. The committee may call new witnesses whose testimony it deems relevant or helpful.

g. In order to promote the truthful, unfeigned 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 and the responding personnel. 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 such rejection 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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