

Marshall University

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### Graduate Catalog, 2000-2002

Marshall University

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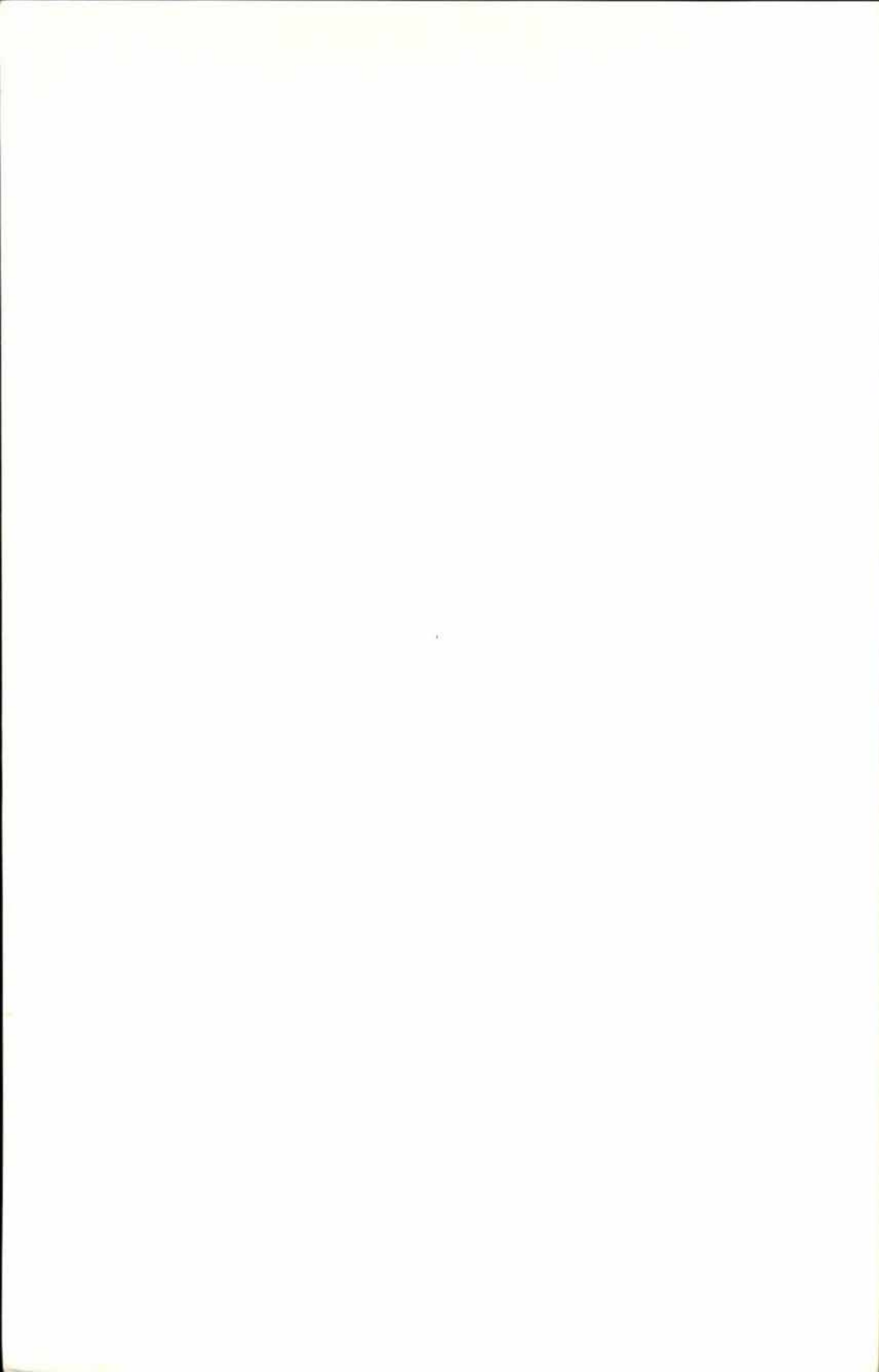
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CATALOG  
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MARSHALL UNIVERSITY



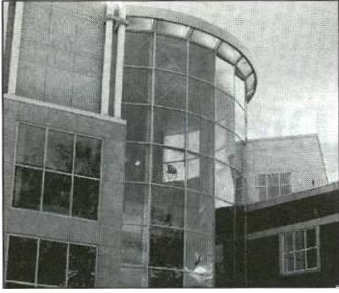
**MARSHALL UNIVERSITY  
GRADUATE CATALOG**

**2000-2002**

**Huntington and South Charleston, West Virginia**







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# Contact Directory

For specific information about academic or student services at Marshall University, the following telephone numbers are provided. All are in area code 304.

## Academic

Academic Affairs .....	696-6690
Admissions, Undergraduate (Huntington) .....	696-3160 1-800-642-3499 (in-state only)
Admissions, Graduate (South Charleston) .....	746-1901
Lewis College of Business .....	696-2314
College of Education & Human Services ...	696-3130
College of Fine Arts .....	696-6433
College of Information Technology and Engineering (Huntington) .....	696-5453
College of Information Technology and Engineering (South Charleston) ....	746-2041
College of Liberal Arts .....	696-2350
College of Nursing & Health Professions ..	696-6750
College of Science .....	696-2372
Community & Technical College .....	696-3646
Enrollment Management .....	696-2206
Graduate College (Huntington) .....	696-6606
Graduate College (S. Chas.) .....	746-2500
Graduate School of Education and Professional Development .....	746-2030
Graduate School of Management .....	746-1960
School of Extended Education .....	696-4723
W. Page Pitt School of Journalism & Mass Communication .....	696-2360
Joan C. Edwards School of Medicine .....	696-7000

## Department/Division

Accounting .....	696-2310
Adult and Technical Education .....	696-2380
Anatomy and Cell Biology .....	696-7382
Anthropology .....	696-6700
Applied Science Technology .....	696-3064
Archaeology Lab .....	696-2802
Art .....	696-6760
Biochemistry and Molecular Biology .....	696-7322
Biological Sciences .....	696-3148/5413
Biomedical Sciences .....	696-7326/7394
Business Technology .....	696-5431
Center for Academic Excellence .....	696-6763/5421
Center for Environmental, Geotechnical and Applied Sciences .....	696-5453

Chemistry .....	696-2430
Classical Studies .....	696-6749
Clinical Laboratory Sciences .....	696-3188
Communication Disorders .....	696-3640
Communication Studies .....	696-6786
Continuing Education .....	696-3113
Counseling Undergraduate/Graduate in Huntington) ...	696-2383 746-1925
Graduate in South Charleston .....	746-1925
Criminal Justice .....	696-3196
Developmental/General Studies .....	696-3027
Early Childhood Education .....	696-3101
Economics/Finance .....	696-2311
Educational Foundations .....	696-3630
Elementary Education .....	696-3101
Engineering (undergraduate) .....	696-2695
Engineering (graduate) .....	746-2087
English .....	696-6600/6601
Environmental Science (undergraduate) ...	696-2372
Environmental Science (graduate) .....	746-2045
Exercise Science, Sport and Recreation ....	696-6490
Finance/Economics .....	696-2311
Geography .....	696-2500
Geology .....	696-6720
German .....	696-2744
Greek .....	696-6749
History .....	696-6780
Family and Consumer Science .....	696-2386
Human Dev. & Allied Technology .....	696-2380
Information Systems (graduate) .....	746-2044
Latin .....	696-6749
Management/Marketing .....	696-5423
Marketing/Management .....	696-5423
Mathematics .....	696-6482
Medicine .....	696-7000
Medical Tech./Medical Lab. Tech .....	696-3188
Military Science .....	696-6450
Modern Languages .....	696-6730
Music .....	696-3117
Nursing .....	696-6750
Obstetrics/Gynecology .....	696-7136
Pathology .....	696-7346
Pediatrics .....	696-7081

Pharmacology .....	696-7313	Bookstore (Huntington) .....	696-3622
Philosophy .....	696-6749	Bookstore (South Charleston) .....	746-2501
Physics & Physical Science .....	696-6738	Cafeteria:	
Physiology .....	696-7362	Holderby Hall .....	696-4895
Political Science .....	696-6636	Twin Towers .....	696-4894
Psychiatry .....	696-7077	Campus Christian Center .....	696-2444
Psychology .....	696-6446	Career Counseling .....	696-2370
Public Service/Allied Health Tech. ....	696-3022	Center for Instructional Technology	
Radiation Safety .....	696-6755	(South Charleston) .....	746-1948
Radiology .....	696-7246	Computing Services (Help Desk) .....	696-3200
Religious Studies .....	696-6749	Disabled Students .....	696-2271
Safety Technology .....	696-4664	Greek Affairs .....	696-2284
Social Work .....	696-2792	Information Technology .....	696-6671
Sociology & Anthropology .....	696-6700	Instructional Television (ITVS) .....	696-2977
Spanish .....	696-2743	Learning Center .....	696-6213
Special Education .....	696-2340	Learning Disorders .....	696-6252
Surgery .....	696-7029	Library (Huntington) .....	696-2320
Teacher Education .....	696-2333	Library (South Chas.) .....	746-8910
Technology Management (graduate) .....	696-6007	MUGC Community	
Theatre/Dance .....	696-6442	Clinical Services Center .....	766-2674
Tutoring Office .....	696-6622	Residence Services .....	696-6765
		Student Activities .....	696-6770
		Student Center .....	696-6472
		Student Consumer Protection Agency/	
		Off-Campus Housing .....	696-6435
		Student Financial Assistance .....	696-3162
		Student Government .....	696-6435
		Student Support Services .....	696-3164
		Substance Abuse Education Program .....	696-3111
		Theatre .....	696-6442
<b>Student Services</b>			
Academic Advising Center .....	696-3169		
Adult Student Services (S. Chas.) .....	746-1901		
Alumni Affairs .....	696-3134		
Artists Series .....	696-6656		
Athletic .....	696-5408		
Ticket Office .....	696-4373		
Attorney for Students .....	696-2285		

### ***Toll-Free Numbers and World Wide Web Sites***

The Graduate College has a toll-free telephone number for use by MUGC students anywhere in West Virginia. Information about the Graduate College, including a telephone number and e-mail address directory, is available at the college's World Wide Web site (below).

Toll-free telephone number:      1-800-642-9842  
 (Graduate Admissions Office, South Charleston)

World Wide Web sites:            <http://www.marshall.edu/mugc>  
 (Graduate College)  
<http://www.marshall.edu> (University)





# Policy Statements About This Catalog

## **The Marshall University Graduate Catalog fulfills two primary functions:**

1. The rules and regulations, policies and procedures of the University, its divisions and its governing body, all of which apply to all students, are contained in this document. These rules apply during the publication year of the document and are subject to change during that year upon recommendation of the various divisions and approval of the president or governing body of the University.
2. The Catalog contains the specific requirements for all degrees and certificates awarded by the University. These are normally in effect for a period of ten consecutive years for undergraduate degrees and certificates and seven consecutive years for graduate degrees and certificates. Students are cautioned that programs leading to licensure may be altered by the outside licensing agency and are not subject to this provision.

## **AFFIRMATIVE ACTION POLICY STATEMENT**

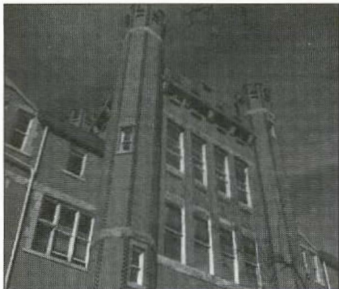
It is the policy of Marshall University to provide equal opportunities to all prospective and current members of the student body, faculty, and staff on the basis of individual qualifications and merit without regard to race, color, sex, religion, age, handicap, national origin, or sexual orientation.

This nondiscrimination policy also applies to all programs and activities covered under Title IX, which prohibits sex discrimination in higher education. Marshall University strives to provide educational opportunities for minorities and women in the graduate student body which reflect the interest, individual merit and availability of such individuals. The University ensures equality of opportunity and treatment in all areas related to student admissions, instructions, employment, placement accommodations, financial assistance programs and other services.

Marshall University also neither affiliates with nor grants recognition to any individual, group, or organization having policies that discriminate on the basis of race, sex, religion, age, sexual orientation, handicap, or national origin. Information on the implementation of the policy and/or the Title IX Amendment should be addressed to: Director of Equity Programs, Old Main, Marshall University, Huntington, West Virginia 25755, (304) 696-2592.

### **Disclaimer**

The provisions of this catalog do not constitute a contract, expressed or implied, between any applicant or student and Marshall University. The University reserves the right to change any of the provisions, schedules, programs, courses, rules, regulations, or fees whenever University authorities deem it expedient to do so.



# The Marshall University Story

Marshall University, one of West Virginia's two state universities, encourages individual growth by offering programs and instruction in attainment of scholarship, acquisition of skills, and development of personality.

The University provides students with opportunities to understand and to make contributions to the culture in which they live; to develop and maintain physical health; to participate in democratic processes; to learn worthwhile moral, social, and economic values; to develop intellectual curiosity and the desire to continue personal growth; and to share in a varied cultural program.

Professional, technical, and industrial career studies are available through the various departments of the University.

Marshall also recognizes an obligation to the state and community by offering evening courses, off-campus classes, lectures, musical programs, conferences, forums, and other campus and field activities.

## MISSION OF THE UNIVERSITY

### Statement of Philosophy

While institutions of higher education differ in size and function, they share a common core of values; these help shape and guide their academic life. Marshall University is committed to seven basic principles.

- The first and most basic commitment of Marshall University is to undergraduate education.
- A second and major commitment of Marshall University is the enhancement of graduate education.
- Third, Marshall University is committed to expanding the body of human knowledge and achievement through research and creative arts activities.
- A fourth characteristic of Marshall University is its commitment to society through public service.
- A fifth commitment of this University is diversity in its student body, its faculty and staff, and its educational programs.
- A sixth commitment of Marshall University is to academic freedom and shared governance.
- Finally, Marshall University is committed to assuring the integrity of the curriculum through the maintenance of rigorous standards and high expectations for student learning and performance.

### Identification of Areas of Current Emphasis

The following areas of emphasis will command the commitment of institutional resources.

- A commitment to high **quality undergraduate liberal arts education**, broadly defined.

- A commitment to **rural health care**, including medicine, nursing, nutrition, health education, health care management, etc.
- A commitment to **schools and schooling**, including teacher education and the setting of the agenda for education in southern West Virginia.
- **Economic development**, which includes programs in education, science, business, engineering, the Community and Technical College, and a broad range of other fields.
- A commitment to the **fine arts and humanities** because Marshall is — and should be — the cultural center of this region.
- A new commitment to high quality **graduate programs** (master's, specialist, and doctoral degrees).
- Finally, a university concerned with **environmental issues** which, unquestionably, will be a dominant factor of life in the 21st Century.

In accord with the first and most basic commitment of Marshall University as outlined in the Statement of Philosophy of the Mission Statement and the above seven areas of emphasis, Marshall University will strive to develop programs that will be recognized nationally for their excellence. Toward this goal strong emphasis will be placed on high quality teaching and interaction with the individual student. Uniform guidelines for monitoring instruction and corrective measures will be developed and implemented by college deans. Programs that have University commitment to independent accrediting will be brought into compliance and maintain accrediting agency guidelines.

## HISTORY

July 1, 1997 was a landmark day in the history of two extremely diverse West Virginia higher education institutions.

On that day, the West Virginia Graduate College, headquartered in South Charleston, formally merged with Marshall University, creating the Marshall University Graduate College. The merged institution has an enrollment of more than 15,000, including more than 4,000 graduate students, on two campuses and several learning centers throughout central and southern West Virginia.

The university traces its origin to 1837 when residents of Guyandotte and the nearby farming country created Marshall Academy under the leadership of lawyer John Laidley. They named their school, designed to provide for the basic educational needs of the area's youngsters, in honor of Laidley's friend, United States Supreme Court Chief Justice John Marshall, who had died two years earlier.

At a spot called Maple Grove, located in the area that later would become Huntington, they chose one and one-quarter acres of land, paying \$40 for the site. On March 30, 1838, the Virginia General Assembly formally incorporated Marshall Academy and its first full term was conducted in 1838-39.

The fledgling, often troubled, school was renamed Marshall College in 1858. It was forced to close during the Civil War, but in 1867 the West Virginia Legislature renewed its vitality by creating the State Normal School at Marshall College to train teachers. It was not until the tenure of President Lawrence J. Corby, 1896-1915, that the college began its real growth.

Since then, Marshall's expansion has been consistent and sometimes spectacular. The Teachers College was organized in 1920 and the first college degree was awarded in 1921. Other colleges and schools were added over the years and the West Virginia Legislature designated Marshall a university in 1961. The School of Medicine was established in 1974 and a Community College component was created in 1975. The University was authorized to grant its first doctoral degree—the Ph.D. in biomedical sciences—in 1992.

More than \$150 million in physical improvements and expansion have taken place in the 1990's, and the curriculum has been changed to better prepare students for life and work in a 21st Century global economy. What is now an "interactive" university has intensified its efforts to assist the region's economic development.

The Marshall University Graduate College was born in 1958 when West Virginia University was authorized by the Legislature to establish the Kanawha Valley Graduate Center, which began



offering courses in chemistry and chemical, mechanical and civil engineering in 1958-59.

In July 1972, the Legislature established the college as a separate entity, the West Virginia College of Graduate Studies (COGS). Two years later, the Board of Regents further defined its mission by specifying geographical areas of responsibility, designating COGS to serve 16 counties of central and southern West Virginia with graduate programs—an area containing about 39 percent of the state's population.

On July 1, 1989, a restructured University System of West Virginia was implemented and COGS became the University of West Virginia College of Graduate Studies. With the advent of a new statewide mission approved by the Board of Trustees in 1991, the name was modified in March 1992 to West Virginia Graduate College.

Now it is part of the Marshall University Graduate College, headquartered in two new buildings in South Charleston, and serving as a key component of Marshall University.

## ACCREDITATIONS

- **North Central Association of Colleges and Schools** (30 North LaSalle Street, Suite 2400, Chicago, IL 60602; toll-free 1-800-621-7440) accredits Marshall University as an institution of higher learning
- **Accreditation Board for Engineering Technology** accredits the Engineering Technology program and the Safety Technology undergraduate degree program
- **Accreditation Council for Continuing Medical Education** accredits the Joan C. Edwards School of Medicine's Continuing Medical Education program
- **Accreditation Council for Graduate Medical Education** accredits the Joan C. Edwards School of Medicine's Residency Programs in Internal Medicine, Pathology, Transitional Year, Surgery, Pediatrics, Family Practice and Obstetrics/Gynecology
- **AACSB/The International Association for Management Education** accredits the Elizabeth McDowell Lewis College of Business
- **American Chemical Society** accredits the Department of Chemistry
- **Accrediting Council on Education in Journalism and Mass Communication** (University of Kansas School of Journalism, Stauffer-Flint Hall, Lawrence, KS 66045; telephone 913-864-3986) accredits the W. Page Pitt School of Journalism & Mass Communications
- **American Medical Association's Commission on Accreditation of Allied Health Education Programs** and the **Council on Education of the American Health Information Management Association** accredit the Health Information Technology program
- **Association of Collegiate Business Schools and Programs** accredits the Community & Technology College programs in Banking and Finance, Management Technology, and Office Technology
- **Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association** (Trans Potomac Plaza, 1111 North Fairfax Street, Alexandria, VA 22314; telephone 703-684-3245) accredits the physical therapist assistant program
- **Commission on Accreditation of Allied Health Education Programs** (35 East Wacker Drive, Suite 1970, Chicago, IL 60610; telephone 312-553-9355) accredits the Athletic Trainer program
- **Council on Academic Accreditation of the American Speech-Language-Hearing Association** (10801 Rockville Pike, Rockville, MD; telephone 301-897-5700) accredits the Communication Disorders graduate program
- **Council on Accreditation of Allied Health Education Programs** (35 East Wacker Drive, Suite 1970, Chicago, IL 60610; telephone 312-553-9355) and the **American Society of Cytology** accredit the Cytotechnology program
- **Council on Social Work Education** (1600 Duke Street, Alexandria VA 22314; telephone 703-683-8080) accredits the Social Work program

*(continued)*



- **Liaison Committee on Medical Education of the American Medical Association** and the **Association of American Medical Colleges** (515 North State Street, Chicago, IL 60610; telephone 312-464-4657) accredit the Joan C. Edwards School of Medicine
- **National Accrediting Agency for Clinical Laboratory Sciences** (8410 West Bryn Mawr Avenue, Suite 670; Chicago, IL; 312-714-8880) accredits the Medical Technology program and the Medical Laboratory Technician program
- **National Association of Schools of Music** (11250 Roger Bacon Drive, Reston, VA 22090; 703-437-0700) accredits the Department of Music
- **National Council for Accreditation of Teacher Education** and the **West Virginia State Department of Education** accredit the teacher education program
- **National League for Nursing Accreditation Commission** (350 Hudson Steet, New York, NY 10014; toll-free 1-800-669-1656) accredits programs for the Bachelor of Science in Nursing and the Master of Science in Nursing
- **National Recreation and Park Association** and the **American Alliance of Leisure and Recreation** accredit the Park Resources and Leisure Service program
- **Related Accreditation Commission of the Accreditation Board for Engineering & Technology** (111 Market Place, Suite 1050, Baltimore, MD 21202; telephone 410-347-7700) conditionally accredits the Safety Technology undergraduate program
- **World Safety Organization** accredits undergraduate and graduate programs in Safety Technology

## APPROVALS

- **American Association of University Women** approves Marshall University
- **American Bar Association** approves the Legal Assisting program
- **American Dietetic Association Council on Education Accreditation/Approval** approves the Didactic Program in Dietetics
- **Federal Immigration and Nationality Act** approves Marshall University for attendance of nonimmigrant international students

## MEMBERSHIPS IN MAJOR ORGANIZATIONS

- AACSB/The International Association for Management Education
- American Association for Affirmative Action
- American Association of Colleges for Teacher Education
- American Association of Community and Junior Colleges
- American Association of Family & Consumer Sciences
- American Association of State Colleges and Universities
- American Council on Education
- American Library Association
- Association of American Medical Colleges
- Association of Departments of English, MLA
- Association of Schools of Journalism and Mass Communications
- Council of Colleges of Arts and Sciences
- Council of Graduate Schools in the United States
- International Council of Fine Arts Deans
- NACUBO-SACUBO
- National Collegiate Athletic Association
- Southern Council on Collegiate Education for Nursing
- Teacher Education Council of State Colleges & Universities

## DIVISIONS

The university functions through eleven divisions: the Lewis College of Business, the College of Education and Human Services, the College of Fine Arts, the College of Liberal Arts, the College of Science, the W. Page Pitt School of Journalism and Mass Communications, the Community and Technical College, the Joan C. Edwards School of Medicine, the College of Nursing and Health Professions, the College of Information Technology and Engineering, and the Graduate College.

## MARSHALL UNIVERSITY LIBRARIES

The Marshall University Library System consists of the John Deaver Drinko Library, the James E. Morrow Library, the Health Science Library at the Cabell-Huntington Hospital location, the Music Library in Smith Hall, the Hoback Chemistry Library in the Science Building, and the Marshall University Graduate College Library in South Charleston. Together, the University Libraries' holdings support graduate level research needs, with more than 1.7 million volumes and in excess of 3,000 periodical titles.

Students may utilize formats such as monographs, periodicals, documents, CD-ROMS, videocassettes, sound recordings, electronic journals, online reference materials and microforms. Access to electronic resources is done via the University Libraries' web pages. Each library operates as a branch of the university system and provides unique service to the appropriate clientele and program(s) with which it is associated. The libraries play an essential role in the educational and research activities of the individual university programs. Using the library as a gateway, graduate students have access to the tools to search multiple resources to obtain materials from a variety of sources. A dynamic interlibrary loan and documents express program provides materials from other libraries in electronic or print copy quality, usually in a matter of days. Courier services also enhance turnaround time and bridge the geographical limitations of the past.

*The John Deaver Drinko Library* houses more than 180,000 volumes, current subscriptions, a 24-hour computer lab, multimedia presentation facilities, an assistive technology center for the visually impaired, faculty and student instructional technology rooms, and a fully wired auditorium. Circulation, reference, and media are located in the Drinko Library with extensive collections and a team of qualified personnel. The Drinko Library, opened in 1998, is a state-of-the-art facility which also includes University Computing Services.

*The James E. Morrow Library*, situated between Smith Hall and the Science Building, houses Special Collections, Government Documents, and storage for approximately 200,000 volumes of lesser-used titles. Special Collections features the University archives, West Virginia collection of state and regional materials, and the Hoffman and Blake collections. Government Documents contains more than 900,000 items and provides materials in electronic and paper formats.

*The Health Science Library*, specializing in medical resources for the schools of medicine and nursing, maintains a current collection of medical monographs, periodicals and electronic resources. HSL librarians also provide a variety of document delivery services and searches on medical-related databases. The library is located in the new wing of the Cabell-Huntington Hospital on Hal Greer Boulevard.

*The Music Library*, supporting the instruction and research needs of the Music Department, includes more than 8500 sound recordings (tape, LP, and CD formats), 10,000 scores, music education materials, the *International Index to Music Periodicals* via the World Wide Web, and a sizeable reference collection. The library is located on the first floor of Smith Music Hall.

*The Hoback Chemistry Library*, consisting of chemistry journals and monographs, is accessible to students and faculty in the chemistry department in the Science Building. Maintained by a chemistry faculty member, access is by arrangement only and handled by department personnel at 696-2430.

*The Graduate College Library in South Charleston* opened in late 1997. Located in the Robert C. Byrd Academic and Technology Center, the library contains 6,000 books and 450 current journal subscriptions. There are eight public computer terminals where users can access the integrated

Marshall library catalog, bibliographic and full-text-journal databases, and the wide range of other resources available over the Internet.

Because of the Marshall University Graduate College's commitment to support students in distant locations, some non-traditional services are offered. These services include delivery of books and copies of journal articles directly to the student and e-mailing of articles when possible. These unique services are available to Marshall University Graduate College students only and can be requested from the Graduate College library's home page or by contacting the library service office. Access to items held in the libraries on the Huntington campus is facilitated by a daily courier service and by the electronic transmission of journal articles between the sites. Traditional interlibrary loan services are also available.

## **INFORMATION TECHNOLOGY**

The Marshall University Information Technology Office is located in the third floor administrative suite of the Drinko Library. Information Technology is committed to improve the efficiency and effectiveness of every aspect of technology throughout Marshall University by promoting and supporting Information Technology applications as a means of enhancing teaching/learning and administrative operations. The IT Office integrates instructional technology, web delivery methods, distance education, library and computing resources for all Marshall University campuses and leads the development of an integrated information technology environment. By actively aiding and enhancing the academic and support activities of the University, IT delivers support and services that help faculty, staff, and students achieve Marshall University technology goals.

## **COMPUTING SERVICES**

### **Computing Facilities**

The Marshall University Computing Services (UCS) administrative offices are located on the fourth floor of the Drinko Library on the Huntington Campus and the second floor of the Administration Building in South Charleston. The mission of Computing Services is to "provide and facilitate quality computing, networking, and information services for the students, faculty, and staff of Marshall University in support of instruction, research, administration, and economic development, and community service needs."

UCS manages a number of computing facilities which provide access to MUnet connected terminals, Windows personal computers, and Apple Macintoshes for the campus community. Facilities are currently available in Corbly Hall, Harris Hall, Smith Hall, residence halls, Gullickson Hall, and the Drinko Library and Information Center in Huntington, and in the Administration Building in South Charleston. All UCS sites provide printing and scanning facilities. Other specialized facilities are available at selected sites.

### **Computer Accounts**

As a Marshall student you are automatically entitled to a computer account on MUnet at no extra cost. You should pick up the information you need to activate your account as soon as you have registered. Just follow these steps:

- Take your Marshall University ID to one of these University Computing Facilities: Corbly Hall 331, Smith Hall 211, Harris Hall 444, or the Drinko Library and Information Center;
- Tell one of the assistants that you would like your Computer Account;
- The assistant will print an account sheet that activates your account. The account sheet will contain details about your MUnet Account, which will consist of your last name followed by a number [e.g., SMITH12, JONES1, or HENDERSON1 (the first account assigned to a student with the last name of HENDERSON)]. The pre-assigned user-id and password contained on the account sheet will give you access to everything you need to make full use of the campus network and the Internet.



## **Computing Services Technical Assistance Line ("Help Desk")**

UCS provides a Help Desk for MUnet account holders, which is available by calling 696-3200 or 746-2068; or by e-mail at [helpdesk@marshall.edu](mailto:helpdesk@marshall.edu). Help is available to MUnet and dial-up account holders on a variety of subjects ranging from network connection to application software assistance.

## **Internet Access Off Campus**

University Computing Services, in conjunction with WVNET (the West Virginia Network for Educational Telecomputing), also sponsors dial-up Internet service with local dial access in Huntington, Charleston, and many other sites in West Virginia. There is a charge for this service. The service is managed jointly by Marshall University and WVNET and is available to all students. For information call the Help Desk: 696-3200.

## **MUnet**

MUnet is a fiberoptic Gigabit Ethernet and ATM-based network providing ethernet connections to every campus building, to residence hall rooms, and to most campus computing labs, meeting rooms, office desktops, and classrooms. Currently, every faculty member has network access via a desktop computer. MUnet is linked to the Internet via high-speed digital ATM service. A number of classrooms also support networked labs and two-way video capabilities.

## **Servers and Systems**

Central timeshare and server facilities include more than fifty servers and systems consisting of a mix of Digital/CompaqALPHA processors running Open VMS and Digital UNIX, and Intel-based processors running Microsoft Windows NT and Linux. These systems provide timeshare, file, print, database, CD-ROM, mail, Library, and web services to personal computers and workstations. A wide variety of software products is available to MUnet users including administrative software based on SCT corporation's BANNER products, office automation products (word processors, spreadsheets, electronic mail, document production, electronic filing, calendar/time management, and other groupware functions), computer based instruction, programming languages, query/data base packages, CD-ROM databases, graphical/presentation products, courseware delivery, and electronic publishing packages.

## **CENTER FOR INSTRUCTIONAL TECHNOLOGY**

The Marshall University Center for Instructional Technology (CIT) was created to bring information technology to bear on the educational mission of the university by providing support for faculty in designing courseware, in using technology-enhanced classrooms, and in applying computer-based communication to extend classroom discussion. It represents a comprehensive and collaborative model for instructional innovation on Marshall University campuses.

- Through training, support, and a commitment to excellence, CIT fosters and nurtures continual learning and innovative ideas to enhance the quality of education for a diverse population.
- CIT provides leadership, training, and resources for faculty and adjunct development and instructional design and instructional technology through one-on-one consultation, faculty development workshops, and by providing state-of-the-art technological resources in the faculty development suites, located on both the South Charleston and Huntington campuses. CIT also assists faculty and adjuncts in CD-ROM or web-based development, assists in the development of new or revised instructional materials, and provides assistance in the areas of multimedia and digital content production.

## **INSTRUCTIONAL TELEVISION AND VIDEO SERVICES**

The ITVS staff of professionals can assist faculty in the design, development, production, and evaluation of a wide range of video materials for instruction. ITVS provides a wide variety of media services to both the university and to local business groups. The department continues to explore new possibilities in order to support the university with advanced technological functions well into the future.



### **ITVS Services:**

- Delivery of interactive Distance Education courses
- Training videos
- Television commercials
- Satellite uplinks and downlinks
- Video teleconferencing
- Digital video (AVI, MPEG, JPEG)
- Digital editing
- CD-ROM duplication and creation
- The production of instructional modules
- Video and radio equipment maintenance
- Media engineering services
- A six-channel, campus-wide playback network
- Video taping and copying
- Location shoots
- Post-production editing/packaging
- Technical support facilities (JMC classes/labs)

Marshall is a member of the Satellite Network of West Virginia (SATNET), which allows its academic departments to both originate graduate and undergraduate courses for the network and receive courses from other institutions. Course delivery features live one-way video and two-way telephone communications. Some courses include e-mail and other Internet components.

## **STUDENT AFFAIRS**

The student as a planner, participant, leader, and presenter is best exemplified in the area called Student Affairs. Staff strives to create environments for students where they can practice leadership skills and responsible citizenship, clarify their values, and generally become full participants in the learning process. The division is divided into two components: Student Development and Student Activities.

Staff provides advising, leadership development, support services in a variety of settings including but not limited to student social-cultural events, student governance, fraternities and sororities, legal aid, judicial affairs, and off-campus and commuting students.

### **Student Development**

The Student Development Center is best described as the educational support service area of the Division of Student Affairs. Its major goal is to enhance and support a student's personal and academic development. This assistance is accomplished through developmental, remedial, and preventive programs, activities, services which include, but are not limited to personal and social counseling; educational and career counseling; reading and study skills development; tutorial services; minority, women and international student programs; health education; returning students and disabled student services.

### **Education Records: Rights of Parents and Students**

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student's education records within forty five days of the day the University receives a request for access.

Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.

Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception that permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Marshall University to comply with the requirements of FERPA. The name and address of the office that administers FERPA are:

Family Policy Compliance Office  
U.S. Department of Education  
600 Independence Avenue, SW  
Washington, DC 20202-4605

## **Liability**

Marshall University, as a state agency, cannot assume responsibility for loss of or damage to the personal property of students. Furthermore, the University cannot assume responsibility for personal injury to students.

## **Judicial Affairs**

The faculty and administration recognize the rights and responsibilities of students. These include the privilege and obligation of maintaining high standards of social and personal conduct. While encouraging students to develop independence, the University embraces the concept that liberty and license are not synonymous, and it therefore accepts the obligation to maintain standards which will provide for the welfare of the individual and the campus community at large.

For Marshall University to function effectively as an educational institution, students must assume full responsibility for their actions and behavior. Students are expected to respect the rights of others, to respect public and private property, and to obey constituted authority. A student's registration constitutes acceptance of these responsibilities and standards; thus registration serves as an agreement between the student and the University. Failure to adhere to the policies and conduct regulations of the University places the student in violation of the Marshall University Code of Conduct (as published in the *Student Handbook*) and may, therefore, subject the student to disciplinary action such as disciplinary warning, a period and degree of probation, suspension, or expulsion. All registered students are subject to the Code at all times while on or about university-owned property, or at university sponsored events.

Students are expected to be thoroughly familiar with the rights, regulations, and policies outlined by the Board of Trustees and all University rules and regulations as expressed in this catalog and in *The Student Handbook*. Copies of *The Student Handbook* are available in the office of the Dean of Student Affairs.

## **Student Health Service**

Student Health Service (SHS) is provided by University Physicians and Surgeons Inc., an affiliate of the University's Joan C. Edwards School of Medicine. The clinic is located at the Joan C. Edwards School of Medicine's facility and is open from 8:00 a.m. to 5:00 p.m. Monday through Friday. The clinic is closed on Saturday, Sunday, and holidays. Students seeking after hours medical care will be financially responsible for the cost.

Student Health Service will be provided from the first day to the last day of each fall, spring, and summer class session to students who pay full student activity fees and attend classes scheduled between semesters (intersession). Marshall University students who present current validated activity and identification cards are eligible to use this service.

## **Counseling and Psychological Services**

The Department of Psychology staffs a clinic which provides consultation and services on a wide range of psychological problems for Marshall students and staff, as well as the general public. The clinic is located in 449 Harris Hall. Inquiries and appointment requests should be directed to (304) 696-2772. This clinic is staffed by graduate students in psychology, but some faculty services are also available.

An additional clinic, operated by the Marshall University Graduate College, is located at the West Virginia Rehabilitation Center in Institute, West Virginia. In this setting, graduate students and faculty provide psychological services and/or counseling services on a referral basis to clients of the Rehabilitation Center and the general public, including students and staff of the Marshall University Graduate College. Inquiries and requests for appointments for this facility should be directed to (304) 766-2674. Services provided by graduate students are supervised by the faculty in Counseling and Psychology.

A nominal fee is charged at both clinics.

## **Speech and Hearing Center**

The Department of Communication Disorders operates the center which provides assistance to any Marshall students or members of their immediate family who want help with speech and hearing problems.

The Department of Communication Disorders also provides special training for students requesting assistance with dialect change or foreign dialect. People who have foreign dialect or who have non-standard speech patterns not considered to be clinically significant but which they wish to change may be scheduled in the clinic.

The center is located in Smith Hall 143 in Huntington; telephone 696-3640 for fees and other information.

## Higher Education for Learning Problems (H.E.L.P.)

H.E.L.P. is an individualized tutorial program for undergraduate students who have learning disabilities and/or Attention Deficit Disorder. Assistance is also available for all graduate students and medical students who have been diagnosed by a qualified professional person as having one or both of the above handicapping conditions. Assistance with coursework, study skills, note-taking skills, and appropriate accommodations in testing are available. Graduate assistants and master's-level tutors conduct tutorial sessions. Remediation in reading and spelling are available from LD specialists. Application to H.E.L.P. must be made separately from application to the university and should be completed 6 months to 1 year in advance. For information, including fees, call the H.E.L.P. program at (304) 696-6252.

## Graduate Student Council

The Graduate Student Council is an organization open to all graduate students. Meetings are designed to discuss problems common to graduate students and propose their administrative solutions. Probably the most attractive aspect of the GSC is its ability to initiate administrative changes favorable to graduate students. GSC appoints representatives to a number of Faculty Senate standing committees and to the Graduate Council. A second and related goal of the GSC is to provide an environment in which contact with graduate students in other disciplines is expanded. Above all, the GSC is concerned with enriching the academic and personal lives of its members. The council can be reached at [www.marshall.edu/gsc](http://www.marshall.edu/gsc).

## MULTICULTURAL AFFAIRS AND INTERNATIONAL PROGRAMS

Established in 1989, the Division of Multicultural Affairs and International Programs (MCAIP) is rooted in the part of the institution's mission which affirms commitment to an environment of teaching and learning which recognizes and welcomes diversity of race, color, sex, sexual orientation, age, religion, national origin, marital status, and political and ethnic backgrounds. MCAIP is organized to provide a diverse population of students, staff, and faculty with ongoing programs and initiatives that enhance their knowledge, skills, and awareness of functioning in a complex, global society. The effectiveness and appropriateness of these programs depend to a great degree upon the communication and interaction between MCAIP and the colleges, schools, and various university constituencies, as well as the community.

Some students, or faculty and staff, come to Marshall University from environments where they have had limited experience with various populations which are a part of Marshall University. Thus, the division seeks to provide opportunities for these students, faculty, and staff to interact with individuals from different backgrounds, values, and interests.

MCAIP is committed to developing the potential of all students by creating and maintaining an environment that promotes and fosters a multicultural, international global community in which multi-pluralism and international learning thrive, free from discrimination and harassment and which fosters social justice.

The Office of Multicultural Affairs and International Programs is located in Old Main, Room 111; telephone (304) 696-4677. The World Wide Web site can be accessed at <http://www.marshall.edu/mcip/> for more information.

## BOOKSTORES

Textbooks for Marshall University graduate courses are available from the Marshall University Bookstore in Huntington and the Marshall University Graduate College Bookstore in South Charleston. Students should contact the store at the campus location where they are enrolled, or in the case of off-campus locations, they may order books by mail or phone.



The Marshall University Bookstore in Huntington (telephone 304-696-3622 or toll free at 1-800-547-1262) is located at Fifth Avenue and Elm Street on the Huntington campus. The store is open from 8:00 a.m. to 6:30 p.m. Monday-Thursday, 8:00 a.m. to 5:00 p.m. on Friday, and 10:00 a.m.-5:00 p.m. on Saturday. Summer hours are 8:00 a.m.-5:00 p.m. Monday-Friday.

The Marshall University Graduate College Bookstore in South Charleston is located on the first floor of the Administration Building. Hours are 10:00 a.m.-6:00 p.m. Monday-Thursday and 9:00 a.m.-5:00 p.m. Friday.

Textbooks also may be ordered by mail or phone, with the addition of a shipping and handling charge. To order by mail, fill out the requested information on the book order form and return with the cost of the book and the required shipping and handling charge. To order by phone, call and use a credit card.

Both bookstores accept checks, MasterCard, VISA, Discover, and American Express. Point Card is accepted at the Huntington store. Third-party direct billing is accepted with a purchase order or written authorization from the funding agency.

Textbooks may be returned for refund or credit within 2-15 days of the date of purchase. Students should ask for a copy of the returns policy at the time of purchase. Used books are purchased at any time.

The Graduate College has established a textbook policy with the objective of minimizing textbook costs to students. This will be accomplished by repurchasing and reselling used textbooks, and using certain basic textbooks for a reasonable number of years, ordinarily not less than two years.

## UNIVERSITY RESIDENCE HALLS

The Department of Residence Services provides living space for approximately 2,000 students on the Huntington campus. Individual halls will accommodate from 100 to 500 residents in single and double rooms. All halls are located within easy walking distance of academic buildings. Each hall is managed by Director of Residence Services' staff in order to provide the students with the best possible living and learning conditions.

Housing for families, single graduate and married students is also provided in 78 furnished apartment-style dwellings owned and operated by the University. Family student housing is located approximately four miles from the Huntington campus.

For additional information concerning on-campus housing, please contact the Department of Residence Services at (304) 696-6765.

## POLICY REGARDING WEATHER-RELATED AND/OR EMERGENCY CLOSINGS AND DELAYS (Interim Executive Policy Bulletin No. 7, Effective Date: August 8, 1994)

Generally, it is Marshall University's policy to maintain its normal schedule, even when conditions are inclement. However, this is not always possible.

In those instances when it is necessary to alter the schedule in response to weather conditions, every effort will be made to notify all those affected, students, faculty, staff and the general public, as expeditiously and as comprehensively as possible in the following ways:

1. Television stations in Huntington and Charleston will be notified.
2. Radio stations in Huntington and Charleston will be asked to announce the delay or closing.
3. Time permitting, newspapers in Huntington and Charleston will be notified. Often, however, decisions must be made after the deadlines of newspapers.
4. The Assistant Vice President for Administration will place the weather-related message on the entire university AUDIX system, as well as the university response number, **696-3170**.

**Definitions:**

1. University Closed: All classes suspended and offices closed.
2. Classes Canceled: All classes suspended; offices open.
3. Delay: A delay in the beginning of activities, usually in the range of one to two hours. For example, since normal operations of the University begin at 8:00 a.m., a two hour delay would mean functions would begin at 10:00 a.m. As a result, Monday, Wednesday or Friday classes beginning at 8:00 a.m. or 9:00 a.m. would be canceled; 10:00 a.m. classes would meet. Tuesday or Thursday classes beginning at 8:00 a.m. would be canceled; those scheduled for 9:30 a.m. would begin instead at 10:00 a.m. in an abbreviated session. In most instances, delays on Tuesday or Thursday will be 90 minutes, enabling 9:30 classes to begin on schedule.

**Clarification:**

Since announcements in the mass media are subject to inadvertent distortion, incompleteness or misunderstanding, clarification may be obtained by telephoning Marshall University at 696-3170.

**Staff and Administration Personnel:**

The University will be completely closed only rarely and in extreme situations since it is essential that public safety be maintained, that buildings and equipment be protected and that services be provided for those students housed in campus facilities. Therefore, although classes may be canceled, all university staff and administrative employees will be expected to report to work, unless notified otherwise.

In the event of critical need, certain employees may be required to report to work or temporarily reside on campus to ensure human safety and preservation of university property and/or facilities.

Individual employees may, in their best judgment, determine the risk of travel to be too great and elect to remain at home. Those who do so should contact their respective supervisors and indicate they are: (1) taking annual leave that day, or (2) taking compensatory time, in the event compensatory time is owed them.

In the event a building, or a section of a building is closed (because of heat loss, power outage, etc.), employees working in the affected area will be permitted to take their work to another area or building on campus. Or, in consultation with the supervisor, the employee may elect to take annual leave that day, or take compensatory time off.

In the event of an extreme situation (tornado, flood, ice storm, campus disturbance, etc.) and if the employees' presence is not desired on campus, this information will be disseminated to the news media. A decision as to whether the missed time will be chargeable to annual leave, compensatory time, or a non-pay situation will be determined by the President and communicated through supervisors.

Supervisors must take steps to ensure offices and/or work stations are open to employees at all times when those employees are expected to be at work, including inclement weather situations and other disruptive situations.

**Faculty:**

Once operations are resumed, deans and departmental chairs must take steps to ensure that faculty meet their scheduled classes or substitutes are secured so that class schedules are met.

**Decision-making:**

Decisions on closings and/or delays will be made jointly by the Senior Vice President for Academic Affairs and the Senior Vice President for Operations following consultation with other appropriate officials, including the President. Should only one of those two Vice Presidents be available, that person will make the decision.

Every effort will be made to reach a decision to allow time for adequate notification to the news media and, in turn, those affected.



# The School of Extended Education

The School of Extended Education (SEE) serves primarily adult students and those students who are located at distances from the main campus. The school has evening office hours, and sponsors courses via telecommunications, non-credit computer and professional continuing education programs, weekend and accelerated classes and programs, dual credit high school programs, programs for military personnel, and off-campus instructional centers throughout the region.

SEE works with University academic departments to ensure the delivery of courses in time periods and at locations that increase student access to higher education.

Telecourses via public television (HEITV), satellite (Satellite Network of West Virginia), two-way interactive television, and the World Wide Web provide a variety of offerings with some full degree programs now available through distance education. For more information, contact the Satellite Network of West Virginia at (304) 696-3150 or SEE's office at (304) 696-6419.

In addition to its main office in Huntington, SEE operates several off-campus centers established to provide university services throughout southern West Virginia. For information on programs and services, contact the SEE office nearest you. The SEE World Wide Web site is located at <http://www.marshall.edu/aee>.

#### *Main Office, Huntington:*

School of Extended Education  
Marshall University  
224 Pritchard Hall  
400 Hal Greer Blvd.  
Huntington, WV 25755  
Tel.: (304) 696-4723  
Toll-free 800-906-GRAD (4723)  
FAX: (304) 696-6419  
E-mail: [aee@marshall.edu](mailto:aee@marshall.edu)

#### *Regents B.A. Degree Program*

Marshall University  
400 Hal Greer Blvd.  
Prichard Hall 218  
Huntington, WV 25755-2050  
Tel: (304) 696-6400  
FAX: (304) 696-6419  
E-mail: [holbrook@marshall.edu](mailto:holbrook@marshall.edu)

#### *Beckley Center*

Marshall University  
400 Stanaford Road  
Woodrow Wilson High School "D" Wing  
Beckley, WV 25801  
Tel: (304) 252-0719  
FAX: (304) 252-9740  
E-mail: [lbrowning@marshall.edu](mailto:lbrowning@marshall.edu)

#### *Bluefield Center*

Marshall University  
Mahood Hall  
Bluefield State College Box 19  
Bluefield, WV 24701  
Tel: (304) 327-7382  
FAX: (304) 327-5884  
E-mail: [lbirchfield@mail.bluefield.wvnet.edu](mailto:lbirchfield@mail.bluefield.wvnet.edu)

#### *Mid-Ohio Valley Center*

Marshall University  
1 John Marshall Way  
Point Pleasant, WV 25550  
Phone: (304) 674-7200  
Fax: (304) 674-7222  
E-mail: [movc@marshall.edu](mailto:movc@marshall.edu)

#### *Southern Mountain Center*

Marshall University  
P.O. Box 2900  
Mount Gay, WV 25637  
Tel: (304) 792-7098, x-303  
FAX: (304) 792-7028

#### *Teays Valley Regional Center*

Marshall University  
Carriage Pointe, Suite 101  
Hurricane, WV 25526  
Tel: (304) 757-7223  
FAX: (304) 757-7292  
E-mail: [prisk@marshall.edu](mailto:prisk@marshall.edu)



## The Center for Environmental, Geotechnical, and Applied Sciences

The Center for Environmental, Geotechnical, and Applied Sciences was established in May 1993 through the cooperative effort of the presidents of Marshall University and West Virginia Graduate College (effective July 1, 1997 West Virginia Graduate College became Marshall University Graduate College - MUGC). The Center, as of July 1, 1998, became an affiliated organization of the College of Information Technology and Engineering. The goal of the center is to forge close working relationships among the business community, higher education institutions, and government agencies, in technology related endeavors. The center has been involved since its inception with educational offerings, research, service, and long-term planning for regional development.

The Center, as of May 2000, has obtained more than 4 million dollars in external contracts with participation of other MU departments and local businesses. The contracts and grants include efforts in software engineering, geographic information systems, environmental engineering, and development of the Environmental Management Incubator for area businesses.

Feel free to contact the Environmental Center at (304) 696-5453 for further information.





# The Graduate College

In October, 1938, the West Virginia Board of Education authorized Marshall University to conduct graduate instruction leading to the Master of Arts and the Master of Science degrees. Graduate work was first offered during the summer session of 1939, and the first master's degrees were conferred at the commencement of 1940. The Graduate School was organized in 1948. The first Ph.D. degree was conferred in 1992.

On July 1, 1997 Marshall University and the West Virginia Graduate College merged, producing the Marshall University Graduate College.

## Mission of the Graduate College

The graduate mission of Marshall University is to provide quality educational opportunities at times and places convenient to students, employing alternative delivery systems and rich learning resources. The institution promotes excellence in instruction, research and public service in the interest of enhancing the intellectual, professional, and personal growth of students, faculty, and staff. Throughout the state Marshall University offers masters' degrees, post-masters' programs, doctoral degrees and professional development options according to needs and without duplication.

In support of its graduate mission, Marshall University values

- excellence in teaching and advising;
- support services for students;
- the expansion of knowledge through research and inquiry;
- an interactive and collaborative relationship with the community;
- open access to quality educational opportunities;
- lifelong learning;
- cultural diversity;
- the continuous review of our programs and administrative processes;
- innovation and efficiency in the use of resources; and
- personal and institutional accountability.

To fulfill its graduate mission, Marshall University supports the commitment of institutional resources to ensure

- quality in existing graduate programs;
- adequate library resources for meeting accreditation requirements, electronic library needs and program initiatives;
- access to graduate programs within the state, region and nation;
- promotion of technological delivery of courses and programs;
- development of new graduate programs at the master's, post-master's, and doctoral levels according to need;
- recruitment and retention of a strong and diverse graduate faculty;

- recruitment and retention of a strong and diverse graduate student population; and
- development of student life initiatives appropriate for graduate students.

## ADVANCED DEGREES

The Graduate College awards the Master of Arts, the Master of Science, the Master of Arts in Teaching, the Master of Arts in Journalism, the Master of Business Administration, the Master of Science in Engineering, the Master of Science in Nursing, the Education Specialist, and the Ph.D. degrees. A graduate degree may be earned in the graduate programs which follow. For specific majors, areas of emphasis and certificates within these degree programs, please see the departmental listings.

Adult and Technical Education	M.S.	Industrial and Employee Relations	M.S.
Art	M.A.	Information Systems	M.S.
Biological Sciences	M.A., M.S.	Journalism	M.A.J.
Biomedical Sciences	M.S., Ph.D.	Leadership Studies	M.A.
Business Administration	M.B.A.	Mathematics	M.A.
Chemistry	M.S.	Music	M.A.
Communication Disorders	M.A.	Nursing	M.S.N.
Communication Studies	M.A.	Physical Science	M.S.
Counseling	M.A.	Political Science	M.A.
Criminal Justice	M.S.	Psychology	M.A.**
Education	Ed.S.	Reading Education	M.A.
Education, Early Childhood	M.A.	Safety	M.S.
Education, Elementary	M.A.	School Psychology	Ed.S.
Education, Secondary	M.A.	Sociology	M.A.
Educational Administration	Ed.D.*	Special Education	M.A.
Engineering	M. S. E.	Teaching	M.A.T.
English	M.A.	Technology Management	M.S.
Environmental Science	M.S.		
Exercise Science	M.S.		
Family and Consumer Sciences	M.A.		
Forensic Science	M.S.		
Geography	M.A., M.S.		
Health and Physical Education	M.S.		
Health Care Administration	M.S.		
History	M.A.		
Humanities	M.A.		

\*The Doctor of Education in Educational Administration is available in cooperation with West Virginia University. The Master of Forestry (M.F.) and the Master of Environmental Management (M.E.M.) are offered in cooperation with Duke University. The Doctor of Medicine Degree (M.D.) is offered by the Marshall University School of Medicine.

\*\*The Psy.D. is scheduled to become available in Fall 2001.

## Education Specialist

In addition to the master's and Ph.D. degrees, Marshall University also offers the Education Specialist (Ed.S.) degree in Education and in School Psychology. Under the Ed.S. in Education, students may select areas of emphasis in Adult and Technical Education, Counseling, Curriculum and Instruction, Leadership Studies, and Reading Education. For more information, check the appropriate program description in this catalog, or contact the department offering the degree.

## CERTIFICATE PROGRAMS

As a supplement to the degree programs, Marshall University offers several graduate certificate programs. Those for teachers who already hold master's degrees include Mathematics through Algebra I, Elementary Science Education, Teaching English as a Second Language, Early Childhood Education, and Educational Computing. Additional information on these programs is available from the Graduate School of Education and Professional Development.

Marshall University also offers certificate programs in Post Master's Nursing Administration, Post Master's Family Nurse Practitioner, Ergonomics, Industrial Hygiene, Technology Management, and Post Bachelor's Dietetic Internship.

## RESEARCH

The Graduate College has a particular interest in research by students and faculty. It is the responsibility of the Graduate Dean to promote research by all available means. A Research Committee composed of faculty members advises the Dean on such matters. Students and faculty interested in research opportunities or who need assistance in their research activities may contact the Graduate Dean's office in Huntington.

Training in the Marshall University Graduate College is based upon the students' active participation in the teaching and research programs in their major areas of interest. It may not always be possible to provide all students with financial aid. However, the Graduate College encourages all students, regardless of receipt of financial assistance or its ultimate source, to participate in the departmental programs (teaching, research, etc.) as an integral part of their advanced training.

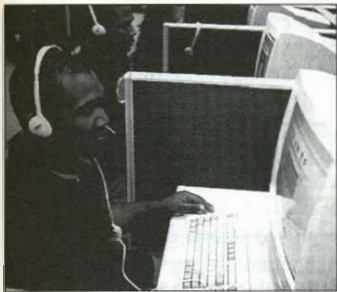
### Animal and Human Subject Research

Graduate students conducting research involving experiments that utilize animals must work under the supervision of faculty advisors who have written permission from the Institutional Animal Care and Use Committee (IACUC) before the students can start the research. Information about procedures and protocol forms may be obtained from the Office of Research and Graduate Education in the Joan C. Edwards School of Medicine, 696-7326.

Graduate students who conduct research involving the use of human subjects must have the approval of the Institutional Review Board (IRB) before starting the research and must work under the supervision of faculty advisors. Information about procedures and approval forms may be obtained from the IRB secretary at 696-7320.

### Hazardous Substances

Graduate students who will be using, or who will be generating, hazardous substances in their research must work under the supervision of faculty advisors who obtain permission for such research through the appropriate college safety committee. The college will arrange for proper disposal of these materials. Proposals must be submitted to the appropriate safety committee for approval.



# Admission Information

## ADMISSION TO THE GRADUATE COLLEGE

Prospective graduate students should apply for admission as early as possible. The first step for a student interested in a degree program is to obtain admission information from the department offering the program desired or from the Graduate Admissions office. Admission information will include instructions for applying to and the admission requirements of the particular program.

Admission to the Graduate College is based on receipt of a baccalaureate degree from a regionally accredited college or university, the Grade Point Average, the scores on required Admissions examinations and the information provided on the "Application for Graduate Admissions" form.\* The only exception to the baccalaureate degree requirement pertains to students in the 3+2 joint Bachelor's/MBA degree program in the Lewis College of Business. Students who have previously taken graduate coursework at another institution must submit all transcripts and also meet undergraduate and examination requirements. Poor academic performance in prior graduate work may serve as the basis for the denial of admission to Marshall University Graduate College, at the discretion of the faculty.

The application for admission form accompanied by payment of a non-refundable application fee must be filed in the Graduate Admissions Office at least two weeks prior to the opening of the term of enrollment. One official copy of the applicant's undergraduate transcript showing the degree earned and the date on which it was conferred must be mailed directly from the student's undergraduate college or university to the Graduate Admissions Office when the application is filed. An official transcript from each college or university previously attended must be received in the Graduate Admissions Office before the applicant can be considered for admission to a degree program.

In some academic programs, applicants may enroll for one semester with conditional status based upon submission of the application form, an official undergraduate transcript that certifies the receipt of a bachelor's degree, and the application fee. However, students with conditional status will not be eligible for subsequent registration unless they have completed all requirements for admission and have been admitted to their requested program. Credit for coursework taken will not be applied toward a degree unless the admission process is completed. Certain programs, including those in the Graduate School of Management, Nursing, Biomedical Sciences, Communication Disorders, Technology Management, and others require that all admissions requirements be completed and that the applicant be admitted to the program before being permitted to enroll for courses in those fields.

The university reserves the right, even after the arrival and enrollment of students, to make individual curricular adjustments whenever particular deficiencies or needs are found. These deficiencies will be determined by the student's advisor or the program director/department chair. Students may be required to take such courses without credit toward the master's degree

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\*For international students, a baccalaureate degree from the equivalent of an appropriately accredited institution is required. See International Students, point number 5.



and at their own expense. This could also apply to additional coursework in Speech and/or English whenever necessary.

Further requirements or exceptions applicable to special fields are noted in the program statements in this catalog.

## **ADMISSIONS EXAMINATIONS**

The Graduate Record Examinations (GRE) General Test is required of applicants to some programs. M.B.A. students are required to take the Graduate Management Admission Test (GMAT) prior to admission to that program. Other programs may accept the Miller Analogies Test (MAT) in lieu of the GRE. Specific test requirements are indicated in the program or departmental description later in this catalog. Test scores must be sent by the appropriate testing agency directly to the Graduate Admissions Office, Marshall University Graduate College, 100 Angus E. Peyton Drive, South Charleston, WV 25303-1600.

The GRE and GMAT are available through computer-based testing (CBT) programs at the Sylvan Technology Center in South Charleston and on the Marshall University campus in Huntington. Call Sylvan at (304) 744-4144 or the Marshall testing center in Huntington at (304) 696-2604 for information and to register for the test. Additional information is available in the GRE Information and Registration Bulletin and the GMAT Information Bulletin, which may be obtained from the Graduate Dean's office and the Graduate Admissions Office.

The MAT is administered weekly during the school year and during summer sessions at the Graduate College in South Charleston and on request at the Psychology Department in Huntington. There is no preregistration required for the MAT, but the registration fee must be paid at the time the test is taken. For a recorded message about MAT administration information in South Charleston, call (304) 746-1944 or 1-800-642-9842, extension 1944. For information on taking the test in Huntington, call either 696-2777 or 696-6446 in Harris Hall.

### **Waiver of Admissions Examination**

If a student has a master's or higher degree from a regionally accredited institution of higher education, the admissions examination requirement may be waived for any future master's program at Marshall University. Ultimate responsibility for this decision rests with the faculty of the program in which the student proposes to enroll.

## **ADMISSION CLASSIFICATION OF GRADUATE STUDENTS**

**DEGREE-SEEKING**—A student who desires admission as a degree-seeking graduate student must have an overall undergraduate Grade Point Average (GPA) of 2.5 on a 4.0 scale. Individual schools and programs may require higher Grade Point Averages. A degree-seeking student must also meet all criteria for full admission to the program of his/her choice.

**PROFESSIONAL DEVELOPMENT**—Students who do not want to be enrolled in degree programs but who wish to enroll in certificate/licensure programs or other programs that require the completion of specified sequences of courses must apply as professional development students.

In most cases, requirements for admission to professional development programs are the same as for admission to degree programs. However, requirements for admission to these programs can vary and are explained in the degree programs section of this catalog.

**PROVISIONAL**—A student may be admitted as provisional in a degree program after submission of all required application materials when he or she possesses a baccalaureate degree and shows academic promise but does not meet the criteria for regular admission. An academically provisional student must be reclassified as a regular student no later than the completion of the 12th graduate credit hour. This is accomplished by meeting the conditions established by the academic program and by maintaining at least a 3.0 GPA in courses identified by the program faculty and approved by the appropriate dean.

**NON-DEGREE ADMISSION**—Persons who desire university instruction without becoming graduate degree candidates may attend as non-degree students, provided they present transcripts or diplomas denoting graduation with a bachelor's degree from a regionally accredited undergraduate college or university. Before enrolling in a class, non-degree graduate students must obtain permission from the instructor. Students wishing to take courses offered by the Lewis College of Business must secure approval of the MBA academic advisor. The fees for attendance as a non-degree student are the same as those set for other graduate students. Non-degree enrollment for graduate courses is not available to persons under suspension by the university.

A non-degree student who does not hold a master's or higher degree may take a maximum of 15 semester hours. Permission for non-degree students to register for additional hours beyond 15 can be granted by the Dean of the Graduate College or the appropriate school dean. Applicants for non-degree status will complete a Graduate Application for Admission, pay the application fee, and submit proof of having received a bachelor's or higher degree not later than the scheduled time of registration. A person holding a graduate degree may take an unrestricted number of additional courses for which he/she has the prerequisites and departmental permission.

Non-degree graduate students may apply later for admission to degree programs by filing the necessary documents, provided they meet the admission requirements described in the current Marshall University Graduate Catalog. However, work taken as a non-degree student cannot in itself qualify a person for admission as a degree candidate. Only credit approved by the assigned program advisor and the appropriate dean will be counted toward a degree awarded by the University.

**TRANSIENT**—A graduate student who is duly enrolled at another regionally accredited graduate institution may, upon submission of an admission application and a letter of good standing from the home university, enroll for Marshall University graduate course work. This admission is valid for one semester only. The student must submit a new application and letter of good standing each semester he/she wishes to attend.

Normally, up to twelve credit hours of coursework may be transferred back to the home institution. Permission to transfer credits is arranged with the home university. Transient students who wish to register for coursework beyond twelve credit hours at Marshall are required to obtain the approval of Marshall University's Graduate Dean.

**STAFF DEVELOPMENT**—School personnel approved by their county school systems may use a special form to be admitted in the Staff Development category. Students admitted in this category are restricted to registering for Staff Development classes (560 series) in the College of Education for which they will receive credit/non-credit or satisfactory/unsatisfactory grades. Such classes cannot be used in degree, professional development or licensure programs. Students who wish to mix regular and Staff Development classes must seek regular admission to the Graduate College.

**SENIORS**—Seniors at regionally accredited baccalaureate institutions with a cumulative GPA of 2.75 may register for graduate classes (500 and 600 series) after they have received approval from their undergraduate dean, the chair of the department offering the course, and the appropriate graduate college/school dean. Complete applications must be on file in the appropriate graduate dean's office and permission secured prior to the opening of the term of enrollment. Credit for graduate courses completed as a senior can be applied to either an undergraduate or a graduate degree at Marshall University but not to both.

# **POLICY REGARDING CLASSIFICATION OF STUDENTS AS RESIDENTS AND NONRESIDENTS FOR ADMISSION AND FEE PURPOSES (Board of Trustees Series No. 34)**

## **POLICY REGARDING CLASSIFICATION OF STUDENTS AS RESIDENTS AND NONRESIDENTS FOR ADMISSION AND FEE PURPOSES (Board of Trustees Series No. 34)**

### ***Section 1. General***

1.1 Scope - Policy regarding residency classification of students for admission and fee purposes.

1.2 Authority - West Virginia Code (18B-1-6 & 18B-1-7 18B-10).

1.3 Filing Date - June 1, 1990

1.4 Effective Date - July 2, 1990

1.5 Repeal of Former Rule - Revises and Replaces Policy Bulletin No. 3 dated February 2, 1971; Policy Bulletin No. 34, April 8, 1986. Repeals Policy Bulletin No. 37, adopted May 1, 1974.

### ***Section 2. Classification for Admission and Fee Purposes***

2.1 Students enrolling in a West Virginia public institution of higher education shall be assigned a residency status for admission, tuition, and fee purposes by the institutional officer designated by the President. In determining residency classification, the issue is essentially one of domicile. In general, the domicile of a person is that person's true, fixed, permanent home and place of habitation. The decision shall be based upon information furnished by the student and all other relevant information. The designated officer is authorized to require such written documents, affidavits, verifications, or other evidence as is deemed necessary to establish the domicile of a student. The burden of establishing domicile for admission, tuition, and fee purposes is upon the student.

2.2 If there is a question as to domicile, the matter must be brought to the attention of the designated officer at least two weeks prior to the deadline for the payment of tuition and fees. Any student found to have made a false or misleading statement concerning domicile shall be subject to institutional disciplinary action and will be charged the nonresident fees for each academic term theretofore attended.

2.3 The previous determination of a student's domiciliary status by one institution is not conclusive or binding when subsequently considered by another institution; however, assuming no change of facts, the prior judgment should be given strong consideration in the interest of consistency. Out-of-state students being assessed resident tuition and fees as a result of a reciprocity agreement may not transfer said reciprocity status to another public institution in West Virginia.

### ***Section 3. Residence Determined by Domicile***

3.1 Domicile within the State means adoption of the State as the fixed permanent home and involves personal presence within the state with no intent on the part of the applicant or, in the case of a dependent student, the applicant's parent(s) to return to another state or country. Residing with relatives (other than parent(s)/legal guardian) does not, in and of itself, cause the student to attain domicile in this State for admission or fee payment purposes. West Virginia domicile may be established upon the completion of at least twelve months of continued presence within the state prior to the date of registration, provided that such twelve months' presence is not primarily for the purpose of attendance at any institution of higher education in West Virginia. Establishment of West Virginia domicile with less than twelve months' presence



prior to the date of registration must be supported by evidence of positive and unequivocal action. In determining domicile, institutional officials should give consideration to such factors as the ownership or lease of a permanently occupied home in West Virginia, full-time employment within the state, paying West Virginia property tax, filing West Virginia income tax returns, registering of motor vehicles in West Virginia, possessing a valid West Virginia driver's license, and marriage to a person already domiciled in West Virginia. Proof of a number of these actions shall be considered only as evidence which may be used in determining whether or not a domicile has been established. Factors militating against the establishment of West Virginia domicile might include such considerations as the student not being self-supporting, being claimed as a dependent on federal or state income tax returns or on the parents' health insurance policy if the parents reside out of state, receiving financial assistance from state student aid programs in other states, and leaving the state when school is not in session.

#### ***Section 4. Dependency Status***

4.1 A dependent student is one who is listed as a dependent on the federal or state income tax return of his/her parent(s) or legal guardian or who receives major financial support from that person. Such a student maintains the same domicile as that of the parent(s) or legal guardian. In the event the parents are divorced or legally separated, the dependent student takes the domicile of the parent with whom he/she lives or to whom he/she has been assigned by court order. However, a dependent student who enrolls and is properly classified as an in-state student maintains that classification as long as the enrollment is continuous and that student does not attain independence and establish domicile in another state.

4.2 A nonresident student who becomes independent while a student at an institution of higher education in West Virginia does not, by reason of such independence alone, attain domicile in this state for admission or fee payment purposes.

#### ***Section 5. Change of Residence***

5.1 A person who has been classified as an out-of-state student and who seeks resident status in West Virginia must assume the burden of providing conclusive evidence that he/she has established domicile in West Virginia with the intention of making the permanent home in this state. The intent to remain indefinitely in West Virginia is evidenced not only by a person's statements, but also by that person's actions. In making a determination regarding a request for change in residency status, the designated institutional officer shall consider those actions referenced in Section 3 above. The change in classification, if deemed to be warranted, shall be effective for the academic term or semester next following the date of the application for reclassification.

#### ***Section 6. Military***

6.1 An individual who is on full-time active military service in another state or a foreign country or an employee of the federal government shall be classified as an in-state student for the purpose of payment of tuition and fees, provided that the person established a domicile in West Virginia prior to entrance into federal service, entered the federal service from West Virginia, and has at no time while in federal service claimed or established a domicile in another state. Sworn statements attesting to these conditions may be required. The spouse and dependent children of such individuals shall also be classified as in-state students for tuition and fee purposes.

6.2 Persons assigned to full-time active military service in West Virginia and residing in the State shall be classified as in-state students for tuition and fee purposes. The spouse and dependent children of such individuals shall also be classified as in-state students for tuition and fee purposes.

#### ***Section 7. Aliens***

7.1 An alien who is in the United States on a resident visa or who has filed a petition for naturalization in the naturalization court, and who has established a bona fide domicile in West Virginia as defined in Section 3 may be eligible for in-state residency classification, provided that person is in the state for purposes other than to attempt to qualify for residency status as a



student. Political refugees admitted into the United States for an indefinite period of time and without restriction on the maintenance of a foreign domicile may be eligible for an in-state classification as defined in Section 3. Any person holding a student or other temporary visa cannot be classified as an in-state student.

### **Section 8. Former Domicile**

8.1 A person who was formerly domiciled in the State of West Virginia and who would have been eligible for an in-state residency classification at the time of his/her departure from the state may be immediately eligible for classification as a West Virginia resident provided such person returns to West Virginia within a one year period of time and satisfies the conditions of Section 3 regarding proof of domicile and intent to remain permanently in West Virginia.

### **Section 9. Appeal Process**

9.1 Each institution shall establish procedures which provide opportunities for students to appeal residency classification decisions with which they disagree. The decision of the designated institutional official charged with the determination of residency classification may be appealed in accordance with appropriate procedures established by the president of the institution. At a minimum, such procedures shall provide that:

9.1.1 An institutional committee on residency appeals will be established to receive and act on appeals of residency decisions made by the designated institutional official charged with making residency determinations.

9.1.1a The institutional committee on residency shall be comprised of members of the institutional community, including faculty and student representatives, and whose number shall be at least three, in any event, an odd number. The student representative(s) shall be appointed by the president of the institutional student government association while the faculty representative(s) shall be selected by the campus-wide representative faculty organization.

9.1.1b The student contesting a residency decision shall be given the opportunity to appear before the institutional committee on residency appeals. If the appellant cannot appear when the committee convenes a meeting, the appellant has the option of allowing committee members to make a decision on the basis of the written materials pertaining to the appeal or waiting until the next committee meeting.

9.1.2 The residency appeal procedures will include provisions for appeal of the decision of the institutional committee on residency appeals to the president of the institution.

9.1.3 Residency appeals shall end at the institutional level.

*Adopted: West Virginia Board of Trustees, February 2, 1971  
Revised: February 8, 1973; November 13, 1973; October 2, 1981  
Revised: October 8, 1985; April 8, 1986; February 14, 1990*

## **ADMISSION OF INTERNATIONAL STUDENTS**

Marshall University is authorized under U. S. Federal law to enroll nonimmigrant students with F-1 or J-1 visa status.

International applicants must submit the following documents to be considered for admission:

1. A Marshall University application form, which is obtained by writing to the Director of International Students and Scholars Program, Marshall University, Huntington, West Virginia 25755-1054, U.S.A.
2. Official transcripts in English of all high school, college or university academic credits and grades. The transcripts must be sent directly by the institution attended to the Director of International Students and Scholars program.

3. Evidence of proficiency in the English language as indicated by one of the following:
  - a. The Test of English as a Foreign Language (TOEFL) minimum score of 525 reported directly to Marshall University Admissions Office by the Educational Testing Service, Princeton, New Jersey 08540. Results from the test taken more than two years prior to the date submitted will not be considered. Students taking the computer-based test need a score of at least 195. If a program mandates a score higher than 525, that requirement will be found in the degree requirements section of this catalog.
  - b. Michigan Test of English Language Proficiency (MTELP) equated score of 82 minimum.
  - c. Completion of the advanced level in an intensive English language program comparable to level 9 of an English Language School (ELS).
  - d. A degree or diploma from an accredited high school, college or university in which the language of instruction is English.
  - e. English is the official native language of the country of permanent residence (England, Canada, New Zealand, etc.)
4. An affidavit of financial support either from a personal sponsor (parent, relative, friend, etc.) or scholarship agency (government, corporation, etc.) stating the availability of funds and the intention to support the educational and living expenses of the applicant for the duration of studies at Marshall University. Applicants who are self-supporting should provide a statement so indicating and accompany the statement with documentary evidence (bank statement, letter of employer, verifying study leave and salary arrangements, etc.) that funds are available for study.
5. The American Association of Collegiate Registrars and Admissions Officers (AACRAO) World Education Series Books will be used to determine admissibility of international students.

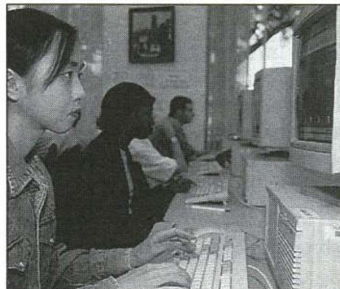
Assuming that an evaluation of the above documents indicates that the student meets degree program requirements, a letter of admission and I-20 Certificate of Eligibility are sent; however, an \$11,000 deposit must be received in the International Students' Program Office before an I-20 form is issued to applicants from countries of proven credit risk, including Ghana, Iran, and Nigeria. Of this deposit, one-half (1/2) of the full-time tuition and fees for one year, and room and board for one year, if contracted with the University, is to remain on deposit as long as the student is enrolled. If the student subsequently moves off campus, the money held for room and board will be refunded.

All nonimmigrant student applicants currently in the United States are required to submit an "International Student Advisor's Report" which should be completed by an official at the United States educational institution last attended or currently being attended in the United States. Forms may be obtained from the Marshall University Admissions Office.

The International Student Office will provide a list of courses designed to enable students to improve English proficiency and aid them in their studies. Special courses include: Diction for International Students; and Independent Skills Study offered by the Community and Technical College.

The international student must meet the measles/rubella vaccination requirement of the University of West Virginia Board of Trustees.

International students should address questions regarding their immigration status or other areas to the Coordinator for International Students' Programs, 212 Old Main (304-696-2379).



# Financial Information

## FEES

The university and its governing board reserve the right to change fees and rates without prior notice. Fee assessments are calculated on student level, not course level.

*Please Note:* All fee listings in the fee section of this catalog show the rates authorized and in effect for the 2000-2001 academic year. (Note that separate schedules apply to Huntington and South Charleston classes.) Fee schedules are available in the Office of the Bursar and the Office of the Registrar in Huntington, and in the Office of Business Affairs in South Charleston.

## ENROLLMENT FEES

### Regular Semester-Huntington Campus

	Resident Rate	Metro Fee <sup>1</sup> Rate	Nonresident Rates
Tuition Fee	\$155.00	\$550.00	\$550.00
Registration Fee	50.00	250.00	250.00
Higher Education Resources Fee	238.00	274.00	600.00
Faculty Improvement Fee	35.00	105.00	105.00
Student Center Fee	36.00	36.00	36.00
Activity Fee	112.00	112.00	112.00
Athletics/Title IX	82.00	82.00	82.00
Operations Fees	507.00	944.00	1822.00
Library/Computing Fee	95.00	145.00	145.00
<b>Total Regular Student Fees</b>	<b>\$1310.00</b>	<b>\$2498.00</b>	<b>\$3702.00</b>
College of Business Fee <sup>2</sup>	150.00	300.00	300.00
Health Professions Fee <sup>2</sup>	200.00	600.00	600.00
Health Sciences <sup>2</sup>	50.00	100.00	100.00
CITE <sup>2</sup>	100.00	200.00	200.00

<sup>1</sup>Fee is applicable to students with residency classifications in the counties of Gallia and Lawrence, State of Ohio, and the counties of Boyd, Carter, Floyd, Greenup, Johnson, Lawrence, Martin, and Pike, Commonwealth of Kentucky.

<sup>2</sup>Program Specific Fees. College of Business Fee is assessed to all Business majors. Health Professions Fee is assessed to College of Nursing and Health Professions majors. Health Science Fee is assessed to all in Clinical Lab Science, Communication Disorders and Dietetics majors. CITE Fee is assessed to all College of Information Technology and Engineering majors.

## Regular Semester-South Charleston Campus

	Resident Rate	Metro Fee <sup>1</sup> Rate	Nonresident Rates
Tuition Fee	\$155.00	\$550.00	\$550.00
Registration Fee	50.00	250.00	250.00
Higher Education Resources Fee	238.00	274.00	600.00
Faculty Improvement Fee	35.00	105.00	105.00
Operations Fees	507.00	868.00	1793.00
Library/Computing Fee	125.00	175.00	175.00
<b>Total Regular Student Fees</b>	<b>\$1110.00</b>	<b>\$2222.00</b>	<b>\$3473.00</b>
College of Business Fee <sup>2</sup>	150.00	300.00	300.00
College of Information Tech./Eng. (CITE) <sup>2</sup>	100.00	200.00	200.00

## Regular Semester-Medical Science Preparatory Program

	Resident Rates	Metro Fee <sup>o</sup> Rates	Non-Resident Rates
Tuition Fee	\$155.00	\$550.00	\$550.00
Registration Fee	50.00	250.00	250.00
Higher Education Resources Fee	200.00	200.00	600.00
Faculty Improvement Fee	35.00	105.00	105.00
Student Center Fee	36.00	36.00	36.00
Activity Fee	112.00	112.00	112.00
Athletics/Title IX	82.00	82.00	82.00
Health Professions – Med Science	1850.00	2500.00	3850.00
<b>Total Regular Fees</b>	<b>\$2520.00</b>	<b>\$3835.00</b>	<b>\$5585.00</b>

## RESIDENCE HALLS FEES

### Room and Board Total Per Semester

### Regular Semester - 16 weeks

	19-Meal	15-Meal	10-Meal
Double Occupancy:			
Buskirk, Twin Towers	2425.00	2386.00	2303.00
Hodges, Holderby, Laidley	2303.00	2264.00	2181.00
Single Occupancy:			
Buskirk, Twin Towers	2776.00	2737.00	2654.00
Hodges, Holderby, Laidley	2495.00	2456.00	2373.00
Deluxe Single Occupancy:			
Buskirk, Twin Towers	2834.00	2795.00	2712.00
Hodges, Holderby, Laidley	2799.00	2760.00	2677.00

### Summer Term - 5 Weeks

Double Occupancy	\$759.00
Single Occupancy	869.00



## COMMUTER MEAL PLANS

Sixty Meals	\$320.00
Thirty Meals	163.00
Twenty Meals	114.00

## RATES FOR MARRIED STUDENT HOUSING

Efficiency Apartment	\$292.00
One Bedroom Apartment - Building One	326.00
Two Bedroom Apartment - Building One	359.00
Renovated One Bedroom - Building One	359.00
One Bedroom Apartment - Building A, B, & C	437.00
Two Bedroom Apartment - Building A, B, & C	471.00
Storage Rooms in A, B, & C (per month)	25.00

## SPECIAL STUDENT FEES

### \*Application Fees:

Resident - Graduate	\$ 20.00
Non-Resident - Graduate	\$ 30.00
Resident - School of Medicine	\$ 40.00
Non-Resident - School of Medicine	\$ 80.00
Physical Therapy Program - CC	\$ 30.00
Nursing	\$ 30.00
Dietetic Internship Program	\$25.00
Clinical Lab Fee - College of Education	\$100.00
College of Fine Arts - Art Fee	\$ 25.00

### Damage Deposits:

Married Student Housing	\$ 150.00
Dormitories	\$ 50.00

\*Diploma Replacement \$ 30.00

Electronic Course Fee/Graduate (per credit hour) \$143.00

### \*Graduation Fees:

Master's Degree	\$ 30.00
First Professional Degree	\$ 50.00

\*Improper Dormitory Check-out Fee \$ 50.00

### Laboratory Fee:

CTC-CISCO	\$ 50.00
CTC-Eng Tech/Medical/Paramed/Environ	\$ 30.00
CTC-Transition Institute	\$ 20.00
Graduate Psychology	\$ 30.00
Journalism	\$ 30.00
Physical Therapy Assistant Program	\$ 30.00
Science	\$ 50.00

Late Fee-Rent - After 15th of Month \$ 10.00

Late Registration/Payment Fee \$ 20.00

Mail Box - Re-Key (per lock) \$ 15.00

Meal Card/ID Replacement \$ 10.00

MUGC Alternative Assessment (per credit hour) \$ 25.00

Off Campus Course Fee (per credit hour) \$30.00

Orientation Fee	\$ 40.00
Placement Fee - English/Math CTC	\$ 10.00
Regents B.A. Degree Evaluation	\$ 200.00
Reinstatement Fee - Course Schedule	\$ 20.00
Reservation Deposit - Dormitory	\$ 100.00
Returned Check Fee	\$ 15.00
Room Re-Key - Per Lock	\$ 20.00
Transfer Evaluation Fee	\$ 50.00
Transcript (After First)	\$ 5.00
Validation Exam Fee	\$100.00

\*Non-refundable

## PAYMENT OF FEES

Tuition fees for a regular semester, a Summer Term, an Intersession, and any special class are due and payable to the Office of the Bursar in accordance with dates established and listed in the Marshall University Schedule of Courses, the University's official Bulletin of Course Listings and Registration Instructions as published by the Office of the Registrar for each term of enrollment. Enrollments (registrations) not paid on or before the official due dates will be cancelled and the student will be subject to withdrawal from the University (see Withdrawal/Reinstatement Policy). Failure to receive an invoice will not be accepted as a reason for missing the payment deadline. Reregistration for enrollments not paid by the official due dates will be required when allowed and approved by the appropriate academic dean and the Office of the Registrar.

Students may pay fees by VISA/MasterCard or Discover at the Office of the Bursar, 101 Old Main or by phone at (800) 696-MILO or (304) 696-MILO.

Student deferred payment plans for tuition will be offered for the fall and spring semester. All available financial aid from the term must be credited to the student's account prior to determining the amount available for deferral. Contact the Office of the Bursar for current deferred payment plan information. A student's residence services fees (room and board) are due at a semester rate payable in accordance with dates established by the Office of Residence Services.

Huntington campus students who are recipients of financial aid through the University's loan or scholarship program, the University's Department of Intercollegiate Athletics, or any governmental agency, or by private loan or scholarship, must complete arrangements for payment through the Director of Student Financial Aid (Room 122, Old Main Building) and the University Bursar (Room 101, Old Main Building).

A student's registration is not complete until all fees are paid.

A student's registration will be cancelled when payment is made by a check which is dishonored by the bank. A charge of \$15.00 will be made for each check returned unpaid by the bank.

A student who owes a financial obligation to the University will not be permitted to enroll in subsequent semesters until the obligation is paid.

Students who withdraw properly and regularly from the institution will receive refunds of fees paid in accordance with the student refund policy published each semester in the University schedule of courses.

A student who is required to withdraw from the institution for disciplinary reasons may not receive refunds of fees paid.

# REFUND PROCEDURE

During the period designated by the Office of the Registrar for Registration, Late Registration, and Schedule Adjustments for a regular semester or a summer term and published in the Marshall University Schedule of Courses Bulletin, enrollment fees (tuition fees) will be refunded to students for:

1. Classes officially dropped from the student's course schedule which results in a reduction of the student's total scheduled semester hours from full-time status to part-time status. Example: Graduate enrollment dropping of classes to adjust course schedule from 9 or more hours to fewer than 9 hours.
2. Classes officially dropped from the student's course schedule (when the enrollment is in a current part-time status) which results in a reduction of the student's total scheduled semester hours. Example: Graduate enrollment dropping classes to adjust course schedule from 9 hours to 8 hours to 7 hours, *etc.*
3. Official complete withdrawals from all classes in the student's course schedule. Example: Graduate withdrawal from enrollment from 9 or more hours to 0 hours, 8 hours to 0 hours, 7 hours to 0 hours, *etc.*
4. Title IV Financial Aid first-time enrollees who officially withdraw before or during their first period of enrollment shall have their refund calculated in accordance with the provisions contained in the 1992 amendments to the federal Higher Education Act.

At the conclusion of the Late Registration and Schedule Adjustment period, refunds will be processed only to students who completely withdraw from the semester or summer term.

## Cancellation of Class:

When it becomes necessary to cancel a class by administrative and/or faculty action, a student is granted a full refund of the fee for the class cancelled unless he/she registers in another course of like value in terms of semester hours. This action does not apply to withdrawals due to disciplinary action or withdrawals due to nonpayment of financial obligations.

## Residence Services

Request for withdrawal from Marshall University on-campus housing must be addressed in writing to the Department of Residence Services. Refunds, if applicable will be based on the date cancellations are received. Fall cancellations must be received before July 1 and Spring or Summer cancellations must be received ten (10) business days or more prior to the official opening date of Housing, in order to receive deposits back. Voluntary withdrawal following these dates and prior to the opening of residence halls will result in a full refund less the one-hundred dollars (\$100.00) reservation deposit. Withdrawal between the opening day for Housing and the first Friday will result in a refund of fifteen weeks room and board. Withdrawals after the first Friday will result in a forfeiture of monies paid for room. A prorated refund will be processed for any unused portion of the Board plan. Students whose residence is terminated automatically forfeit all monies paid for that semester. Students who are denied admission, declared academically ineligible to return, or are unable to return for medical reasons, will be refunded on a prorated basis.

**Refunds to students called to armed services - enrollment fee only will be processed in accordance with policy established by the Office of the Registrar.**

**Late fees are nonrefundable.**

# WITHDRAWAL/REINSTATEMENT FOR NONPAYMENT OF FEES AND OTHER FINANCIAL OBLIGATIONS

## A. ENROLLMENT AND RESIDENCE HALL FEES

1. Through late registration each semester, a schedule of withdrawal for nonpayment will be included in the Marshall University Schedule of Courses. Following late registration, the Bursar will send written notification to the student advising of administrative withdrawal for nonpayment of Enrollment or Residence Hall Fees.
2. Upon notice from the Bursar, the Registrar will initiate a complete withdrawal for students not paying fees. The withdrawal will be "Administrative-Nonpayment of Enrollment Residence Hall Fees".
3. The Registrar will notify the instructors that the student should not be permitted to continue attendance in the class.
4. If the student fulfills the financial obligation, the Bursar's Office will notify the student and his/her academic dean. The academic dean will have discretion to approve registration. In case of approval by the dean, the student, the instructors, and the Registrar will be notified in writing immediately.
5. Upon receipt of notice from the academic dean, the Registrar will initiate the procedure to register the student in the courses for which the student was enrolled at the time of withdrawal.
6. Students who do not meet their financial obligation for enrollment and residence hall fees will have all entries of that registration on the Registrar's permanent record erased.
7. A student who owes a financial obligation to the University will not be permitted to enroll in subsequent semesters until the obligation is paid.
8. If a student disputes an administrative withdrawal, he/she may file an appeal with the Student Grievance Board through the Office of Student Affairs. (The Student Grievance Board is a subcommittee of the Student Conduct and Welfare Committee). This appeal must be filed before the effective date of withdrawal established by the Bursar. The administrative withdrawal will be suspended until the President of the University acts upon the recommendation of the Student Grievance Board.

## B. OTHER OBLIGATIONS

1. Failure to properly fulfill other types of financial obligations may result in administrative withdrawal from the University.
2. Upon notice from the Bursar, the Registrar will initiate a complete withdrawal for a student not paying financial obligations. The withdrawal will be "Administrative-Nonpayment of Financial Obligations" and will be dated with the effective date of processing of the withdrawal. Under these conditions, the procedures outlined under A-3, A-4 and A-5 above will be followed.
3. Students who do not meet these "Other Financial Obligations" and who are administratively withdrawn from the University will receive the grade determined by the withdrawal policy in effect at the time the administrative withdrawal was initiated.
4. A student who owes other types of financial obligations to the University will not be permitted to enroll in subsequent semesters until the obligation is paid.
5. If a student disputes an administrative withdrawal, he/she may file an appeal with the Student Grievance Board through the Dean for Student Affairs. (The Student Grievance Board is a subcommittee of the Student Conduct and Welfare Committee). This appeal must be filed before the effective date of withdrawal established by the Bursar. The administrative withdrawal will be suspended until the President of the University acts upon the recommendation of the Student Grievance Board.

*(continued)*



# GRADUATE ASSISTANTSHIPS AND FINANCIAL ASSISTANCE

Most departments offering graduate degrees have funds for graduate assistantships. The amount of the award may vary but includes the waiver of tuition and some fees. Graduate assistants will normally carry a nine hour load. Special permission to carry a reduced load must be obtained from the appropriate department chair and the Graduate Dean. Information about graduate assistantships may be secured by contacting the department chair or the Graduate College Office.

Note: By an act of Congress, all graduate assistants must submit an approved I-9 form. Payment of the GA stipend will not be authorized until this form is accepted by the Human Resources Office.

Inquiries about graduate fellowships, work-study opportunities, loans, and other forms of financial assistance for graduate students should be directed to the Graduate College Office or to the Office of Student Financial Assistance, Marshall University, Huntington, WV 25755.

A limited number of **graduate and professional tuition waivers** are available through the Graduate College in line with Board of Trustees Series 49. Announcements are made at the appropriate time concerning procedures and deadline dates for each term.

## SPECIAL FINANCIAL ASSISTANCE CONCERNS

**Satisfactory Academic Progress Standards for Financial Assistance Eligibility - Graduate Students:** In order to be able to receive financial assistance, Federal Regulations require that a student be making satisfactory progress toward the completion of his/her degree or program. Marshall University has adopted standards by which to monitor financial aid recipients' progress. (These standards insure the proper distribution of financial assistance to eligible students.)

Satisfactory academic progress will be questioned of graduate students only when their Grade Point Average drops below 3.00 or the completion ratio drops below 67%. Students will be eligible for a maximum of six (6) full-time semesters. Students attending on less than a full-time basis will be given a maximum of ten (10) regular semesters of eligibility. (Please note that regular semesters include only the fall and spring semesters and that full-time is enrollment for nine (9) semester hours or more.) Eligibility for graduate students seeking a master's degree will cease with the completion of the first master's degree. Students seeking a second degree at the doctoral or professional degree level will be given consideration on a case by case basis.

Withdrawing from classes after the drop/add period can have a negative effect on continued eligibility as it can serve to increase the time required to complete one's program. Repetitions will be dealt with according to the University's policy governing Grade Point Averages and will be included in classes registered for and completed. Audits will be dealt with similarly.

Students not meeting the above standards will receive notification from the Director of Financial Aid as soon as such status is discovered. This notification will indicate ineligibility for financial aid, suggest that academic assistance can be found through the Student Development Center, and inform the student about his or her right to appeal. All appeals must be made in person to the Director of Financial Aid.

Financial assistance recipients who are eligible for refunds of fees paid to the University for tuition, fees, room and/or board will receive a refund only after the assistance disbursed to the student for the payment period has been recovered.

Answers to questions regarding these and other concerns with financial assistance, including more specific information are available from the Office of Student Financial Assistance, phone 1-800-438-5390 (in-state only) or (304) 696-3162.



# Academic Information

## CATALOG TERMS AND DEFINITIONS

Following are definitions of terms used in the academic sections of this catalog.

**AREA OF EMPHASIS:** A specific subject area of study which has defined course offerings within an approved degree program and major.

**CERTIFICATE PROGRAM:** A professional continuing education program of normally 12 to 18 credit hours as designated by the program faculty and available to students admitted under the Professional Development and Degree-seeking categories.

**CREDIT HOUR:** One lecture credit hour is given normally for each 15 classroom contact hours plus 30 hours of outside preparation or equivalent. One laboratory credit hour requires at least 30 hours of laboratory work per one lecture credit plus necessary outside preparation or equivalent. Laboratory experiences are complements to classroom courses that focus on the theory and principles of the discipline. They are organized activities involving the observation and verification of experiments and experimental techniques.

**DEGREE PROGRAM:** A degree program is a unified, complementary series of courses or learning experiences that lead to a degree.

**FULL-TIME GRADUATE STUDENT:** The West Virginia Board of Trustees defines a full-time graduate student at Marshall University as carrying nine or more semester hours in a regular semester. During a single summer term a full-time graduate student carries four or more semester hours. This may differ from the definition for fee purposes. (See Fees and Expenses.)

**INDEPENDENT STUDY:** Independent Studies are tutorials, directed and independent readings, directed and independent research, problem reports, and other individualized activities designed to fit the needs of students within the major. Written objectives of each independent study course, approved by the chair and dean, must be maintained in departmental files.

**INTERNSHIP:** Internships are supervised, contractual work-study arrangements with professional agencies or institutions.

**MAJOR:** A major is a field of study within an approved degree program, having its own prescribed curriculum. A degree program may have more than one major.

**MINOR:** A minor is a program of study outside the major department requiring at least 6 semester credit hours for completion.

**PRACTICUM:** A practicum is a learning activity that involves the application of previously learned processes, theories, systems, etc. Generally, credit is assigned on the same basis as that of a laboratory.

**PROGRAM:** See **DEGREE PROGRAM**, above.

**SEMESTER HOURS:** The semester hour is the basis of college credit within the institution. A semester hour is the credit received for passing a subject taken one hour per week for one semester. Laboratory courses require two or three hours per week for each semester hour of credit.

**SEMINAR:** A seminar is a small group of students engaged in advanced study of the original research or some important recent advancements in the field. Seminars are organized under the direction of a

faculty member, and credit is allowed according to university regulations for granting semester-hour credit.

**SPECIAL TOPICS:** Special Topics are experimental courses that may be offered twice by a given department with no prior committee approval. Such courses may satisfy university, college or department requirements toward a given degree and may carry specific requisites.

**TRANSCRIPT:** A transcript is a copy of the student's permanent academic record. An official transcript can only be issued by the Office of the Registrar. For additional information on the procedure for obtaining a transcript, see Transcripts of Academic Record.

**WORKSHOP:** Workshops are highly practical, participatory courses usually designed for advanced students or professionals. They provide experience or instruction in a new technique, theory or development in a given discipline. If credit is granted, appropriate university guidelines will be followed.

## **STUDENT SCHEDULES AND COURSE INFORMATION**

### **Student Course Load**

A normal course load for graduate students is nine to twelve semester hours in the Fall and Spring semesters, and four to six semester hours in each of the summer terms. Any student seeking registration beyond this limit must obtain permission in the Graduate College office.

### **Part-Time Graduate Students**

Graduate students who are employed should limit their schedules in proportion to the time available for graduate study. As a general practice, the maximum graduate load recommended for a student who is employed full-time is six hours in a regular semester or three hours in a summer term.

### **Schedule Adjustment**

Schedule adjustment is the adding of courses or dropping of courses, or the changing of class hours or days after a person has registered in any semester or term. The specific Schedule Adjustment Period for any semester or term is specified in the Schedule of Courses for that semester or term. After the conclusion of the Schedule Adjustment Period, students are not permitted to add classes or make changes in class hours or days, nor are late registrations permitted except with the permission of the Graduate Dean. Dropping of classes after the Schedule Adjustment Period is discussed in the section entitled "Regulations on Dropping Courses. . ."

### **Course Numbering**

Graduate courses numbered 500-599 are similar to certain undergraduate 400-499 series courses and may meet jointly. A Marshall University course taken at the 500 level will not meet degree requirements if it was already taken at the 400 level. Courses numbered 600-699 and 700-899 are open only to graduate students. Exceptions to this policy sometimes are granted to seniors with excellent academic records.

### **Course Prerequisites**

The purpose of prerequisites for certain courses is to assure adequate preparation of the student for the information to be presented in any particular course as well as to insure a coherent, balanced, sequential, and unified set of learning experiences. Course prerequisites may be either previous undergraduate or graduate preparation.

In general, course prerequisites will not be waived except by written approval of the instructor and program director or dean.



## Staff Development Courses

Courses in the 560-564 S/U series in the College of Education may not be used to satisfy graduate degree requirements.

## In-Service Teacher Restriction

In addition to offering teacher preparation programs, Marshall University is actively involved in the continuing education of all professional teachers. The West Virginia Board of Education has approved a program of continuing education for teachers and school service personnel. Information relative to a teacher's renewing a professional certificate is available from the certification specialist, College of Education and Human Services, (304) 696-2857 in Huntington and (304) 746-1909 in South Charleston. The teacher must have approval of his/her renewal advisor prior to enrolling in any course which is to be utilized for certificate renewal, salary classification, or additional endorsements.

## Residence Requirements

Except for transfer credit, all work counted toward a master's degree must be taken in courses offered or approved by the Graduate College of Marshall University. Such courses shall be considered as resident credit whether they are taken on or off the Huntington or South Charleston campuses.

# REGULATIONS ON DROPPING COURSES OR COMPLETELY WITHDRAWING FROM THE UNIVERSITY

### 1. Dropping of Courses

Dropping a course after the schedule adjustment period requires that a drop form bearing the instructor's signature be submitted to the Registrar's Office. Students on academic probation must have the Dean's approval to drop a course.

Off-campus or night courses may be dropped by mailing a request to drop to the Registrar's Office. The postmark on such a request will be the official date of withdrawal.

### 2. Withdrawal from the University

Withdrawal from the University is defined as dropping all classes for which a student is registered.

Withdrawal requires that a withdrawal form be submitted to the Registrar's Office or that a request for withdrawal be mailed to the Registrar's Office. It is not possible to withdraw by telephone.

The effective date of withdrawal is the date that the withdrawal form is submitted to the Registrar's Office. The postmark on mail requests will be the official date of withdrawal.

### 3. Grades Assigned in Case of Dropping Courses or Withdrawal from the University

In all cases of dropping courses or withdrawal from the University the instructors will report grades as follows:

- a. A student dropping courses or withdrawing from the University on or before the tenth Friday after the first class day of the regular semester will receive a grade of "W". For eight-week courses, summer sessions and other courses of varying lengths, the "W" period ends the Friday immediately following the two-thirds point in the course. Exact "W" dates are identified in the annual University Academic Calendar.
- b. A "W" grade (withdrew) will have no bearing on the student's Grade Point Average.
- c. Students who drop courses without approval, or who do not follow regulations provided in the preceding paragraphs, receive a grade of "F" at the end of the Semester or summer term.

*(continued)*



#### **4. Final Date for Dropping or Withdrawing**

The final date for dropping an individual class is the tenth Friday in a regular term. The last date for complete withdrawal from the University is the last day of classes. In both cases, "W" grades are assigned.

#### **5. Military Service**

Men and women called to active duty in the armed services of the United States shall be granted full refund of fees, but no credit, if the call comes before the end of the first three-fourths of the semester or term, and full credit, but no refund of fees, shall be granted if the call comes thereafter; provided, however, that credit as described above will be granted only in those courses in which the student is maintaining a passing mark at the time of departure to military service. The term "called to active duty" is herein defined as being called to active duty as the result of the federal activation of a total reserve component, National Guard unit, or any portion thereof which involves a particular student or an individual who is a bona fide member of the reserve component or a National Guard unit. The final grades, both passing and failing, for three-fourths of a semester or more are to be shown on the student's permanent record.

### **Mandatory Withdrawal for Medical Reasons (initiated by the University)**

1. A student will be subject to a mandatory medical withdrawal if it is determined by the Dean of Student Affairs and/or designee that the student is endangering him/herself or other members of the University community by his/her continued membership in the University community.
2. Through an approved designee, the Dean of Student Affairs reserves the right to request a complete mental or physical evaluation if it is reasonably believed that said student's behavior or health habits warrant it.
3. The student shall be referred to the appropriate health physician and a written document of evaluation and recommendations will be requested and forwarded to the University designee. The University will then act upon the evaluation and recommendations with regard to the student's continuation at Marshall University.
4. If evaluation supports or indicates a recommendation for a medical withdrawal from the University, the appropriate Student Affairs office will facilitate the withdrawal.
5. Students will be accorded an informal hearing before the Dean of Student Affairs or a designee to obtain an understanding of the evaluation and rationale for the mandatory withdrawal.
6. In the event that the student declines the opportunity for such an evaluation, a withdrawal for medical reasons may be unilaterally effected by the University.
7. Withdrawal for medical reasons will be done without academic penalty to the student. Fees will be refunded in accordance with university policy.
8. A decision to withdraw may be appealed to the Student Conduct and Welfare Committee or a special subcommittee thereof appointed by the chairperson.

*Adopted by Student Conduct and Welfare Committee, December 7, 1984;  
approved by the President, January 22, 1985.*

### **Request for Medical Withdrawal (initiated by the student)**

In cases when students withdraw from the University for medical reasons, their request for withdrawal must be supported by certification from the attending physician. (The Office of Student Affairs provides a form for the physician to use for this purpose.) In order to be readmitted after this withdrawal, the student must provide a letter and supporting documentation from

the attending physician that indicates that the student is able to return. Confidentiality will be maintained at all times except on a need-to-know basis.

Requests for medical withdrawals from the University or from an individual class will be handled on a case-by-case basis through the Associate Dean/Director of Counseling located in Prichard Hall in Huntington. Students in South Charleston may submit documentation to their school deans.

Students who receive a medical withdrawal shall receive a grade of "W."

## ELECTRONIC COURSES

E-courses are online versions of classes offered on the Marshall campus. They are courses you take totally through the Internet. These are identified in the Official Schedule of Courses by the letter *E* after the course number. E-courses may differ from regular semester courses in the start and end dates. Be sure to check the syllabus for each individual class for a beginning and ending date. You can register for E-courses using MILO Web and telephone registration systems during the designated registration periods each term. You can also register in person at the Registrar's Office or by mail. After the close of the registration period, you can register for E-courses by MILO telephone, in person at the Registrar's Office, or by mail. Hours of enrollment are reflected in the actual term in which you are registered. For all verification purposes, hours of enrollment are counted only in the term in which you are registered. You can visit <http://muonline.marshall.edu> for a list of available E-courses.

Note that the *W* period for E-courses parallels that of regular courses. You can withdraw from an individual E-course through 2/3 of the official course length. After that time only a complete withdrawal from the university is allowed. The refund policy for E-courses also parallels that of regular courses.

If you want to take an E-course, you must have basic computer skills plus a computer running at least WIN 95, a modem, an e-mail account, an Internet service provider, and Netscape 3.0 or Internet Explorer 4.0. E-course instructors may include additional requirements in the syllabus. E-courses are assessed a fee of \$102.00 (undergraduate) or \$136.00 (graduate) per credit hour (subject to change) regardless of residency or number of credit hours you may be carrying in addition to the E-course.

## COURSE SYLLABI POLICY

During the first two weeks of semester classes (or the first 3 days of summer term), the instructor must provide each student a copy of the course requirements which includes the following items: 1) attendance policy, 2) grading policy, 3) approximate dates for major projects and exams, and 4) a description of the general course content.

This policy may not apply to the following types of courses: thesis, seminar, problem report, independent study, field work, internship, and medical clerkship.

*Adopted by University Council, March 12, 1980;  
amended by Academic Planning and Standards Committee,  
April 10, 1980; approved by the President, May 5, 1980.*

In many cases, syllabi will be available on the World Wide Web. In the case of an **Independent Study**, the student must complete the necessary form, obtain the required signatures, and submit it or a permission to enroll form to the Registrar before enrolling.

## **CLASS ATTENDANCE POLICY**

It is the responsibility of each individual instructor to evaluate the importance of student class attendance. Accordingly, each instructor prepares at the beginning of each semester a written statement setting forth his or her policy for consideration of unexcused absences, make-up examinations, and related matters, which will be in force for the semester. This statement is filed with the chair of the department and a statement of policy on attendance appropriate to each class is made available to students.

Absences such as those resulting from illness, death in the family, or institutional activities (those approved by the academic deans, such as debate, artistic performances and athletics) are to be excused when a student reports and verifies them to the instructor. For such excused absences, the student should not be penalized. Instructors should make reasonable accommodation for professional, work-related absences.

## **ABSENCES FROM EXAMINATIONS**

Students are required to take all regular examinations. If a student attends a course throughout the semester and is absent from the final examination without permission, the instructor counts the examination as zero and reports the final grade of F. If the absence is the result of illness or some other valid reason beyond the control of the student, the grade of I is reported, and the student may, upon application, take the examination at a later date. (See "Incomplete" under Grade Information and Regulations.)

## **AUDITING COURSES**

Audit students are those who enroll only for purposes of refreshing or acquainting themselves with the material offered in the course. Audit students receive no academic credit. Auditing is allowed only when there is space available in the class and the instructor authorizes audit status. Enrollment for audit is limited to the regular registration period for the semester or term. Students who want to audit classes must enroll and pay fees in the same manner and at the same tuition rate as students enrolling for credit. Faculty members wanting to audit courses must secure approval of the instructor of the course and must enroll in the regular manner.

Attendance and other requirements for auditors shall be determined by the instructor of the course being audited. It is the prerogative of the instructor to notify the respective Dean and the Registrar's Office to withdraw the auditor from the class if attendance or other requirements are not met. It is the responsibility of the instructor to discuss the requirements of the course with the auditor.

Staff Development courses are offered exclusively as Credit/No Credit and S/U. They may not be taken under the audit option and may not be applied toward the credit hour requirement for a graduate degree.

It is not possible to change a registration from credit to audit or audit to credit after the close of the schedule adjustment period at the beginning of a semester or summer term

## **CONTINUING EDUCATION**

Marshall University offers non-college credit Continuing Education Unit (CEU) programs designed to give recognition to persons continuing their education through certain types of short courses, seminars, and conferences. These programs are designed for industrial, business, educational, civic, professional, and other groups.

Continuing Education Units from Marshall University are offered in Huntington through the Community and Technical College (CTC). CTC may also facilitate Continuing Education programs for other University departments or organizations.



One CEU is defined as: Ten contact hours of participation in an organized educational experience under responsible sponsorship, capable direction and qualified instruction. CEU's may be awarded as whole units or as tenths of units. For example, a fifteen contact-hour course would produce 1.5 CEU's, while a ten contact-hour course would produce 1.0 CEU.

A permanent record of CEU's earned will be maintained by the University. Records are maintained in Huntington by the Community and Technical College.

For further information, please contact the Director of Continuing Education, Marshall University Community and Technical College in Huntington (304-696-3646).

## ACADEMIC COMMON MARKET

### Out-of-State Programs at Reduced Tuition

West Virginia provides for its residents who wish to pursue academic programs not available within the State through the Academic Common Market and through contract programs. Both options provide for West Virginians to enter out-of-state institutions at reduced tuition rates. Contract programs have been established for study in veterinary medicine, optometry, architecture, and podiatry. The Academic Common Market, which provides access to numerous graduate programs, is restricted to West Virginia residents who have been admitted to one of the specific programs at designated out-of-state institutions. Further information may be obtained through the Office of Academic Affairs, the Graduate College Office, or the West Virginia Board of Trustees.

## GRADE INFORMATION AND REGULATIONS

### Grades and Quality Points

The following system of grades and quality points is used for graduate courses:

- A** For achievement of distinction. Four quality points are earned for each semester hour with a grade of *A*.
- B** For competent and acceptable work. Three quality points are earned for each semester hour with a grade of *B*.
- C** For below average performance. Two quality points are earned for each semester hour with a grade of *C*. (No more than six hours of *C* may be applied toward a master's or an Ed.S. degree.)
- D** For patently substandard work. One quality point is earned for each semester hour with a grade of *D*. (No grade of *D* may be applied toward a graduate degree.)
- F** Failure, given for unsatisfactory work. No quality points.
- W** Withdrawn on or before the tenth Friday after the first class day of the regular semester or the Friday after the two-thirds point in the summer session. "W" grades are assigned for complete withdrawals.
- I** An *I* grade (Incomplete) is given to students who do not complete course requirements because of illness or for some other valid reason. The *I* grade is not considered in determining the Grade Point Average. The student has the responsibility of completing the work within the period defined by the instructor, not to exceed twelve calendar months from date of receipt of the incomplete. If the work is completed satisfactorily, one of the four passing marks will be awarded. If the work is unsatisfactory or the student fails to complete the work within the twelve-month period, an *F* or failing grade will be recorded. All grades remain on the student's permanent record as originally submitted by the course instructor. Any grade change is added to the permanent record.



- CR/NC* Recorded as *CR* (for satisfactory performance) or *NC* (for unsatisfactory performance) for courses designated by the department or division for credit/no credit grading. *CR* and *NC* are not considered in determining the Grade Point Average.
- S/U* For certain courses, which are so designated in the catalog, every student is given a grade of *S*, which denotes satisfactory completion of the course, or *U*, which denotes unsatisfactory work. *S* and *U* are not considered in determining the Grade Point Average.
- PR* Indicates progress on a thesis, dissertation or chemistry research. It is replaced by the final grade upon completion up to established credit limits.

## Reporting of Final Grades

Grades of the current semester or summer term and the cumulative Grade Point Average are mailed to the student as soon as possible following each semester or term of enrollment by the Office of the Registrar. Grades usually are available on the University's voice response system (MILO) within 48 hours of the deadline for submission of the final grades each term.

## Transcripts of Academic Record

Every student is entitled to one free official transcript of his or her record. Each additional copy costs \$5 in cash, check or money order. Two weeks may be required to process an application for a transcript at the close of a semester or summer term. At other times the service is approximately 24 hours from receipt of the request.

Students who default in the payment of any university financial obligation forfeit their right to claim a transcript.

An application for a transcript of credit earned must furnish the date of last attendance at Marshall University and student identification number. A married woman should supply previous last names if different from her married name.

All requests for transcripts must be sent directly to the Registrar.

Transcript requests must be in writing; no phone requests are accepted.

All requests must be signed by the student.

# ACADEMIC REGULATIONS

## Plan of Study

Each degree-seeking student at the master's or Ed.S. level is required to develop a "Plan of Study" with his or her graduate advisor. A Plan of Study approved by the department/program must be filed with the appropriate dean no later than the semester in which the student completes his/her 18th credit hour. Students who fail to do so will be barred from subsequent enrollment. Consult the degree programs section of the catalog for specific information about each program's Plan of Study.

## Advisement System

An advisement system allows the student to effectively interact with faculty to ensure that course work follows a coherent, balanced, sequential, and unified plan of academic study.

The advisement system provides not only academic guidance but also professional identification and educational enrichment to the student

At the time of admission, the student is assigned an academic program advisor whose duties are to assist the student in the preparation of a Plan of Study and to advise the student during the period of graduate work. The student and advisor prepare a Plan of Study during the semester the student is admitted. The program outlined in the Plan of Study should be chosen on the basis of the student's interests and needs and should meet program requirements.

Any unapproved deviations from the Plan of Study may result in delayed program completion and/or graduation. To amend the Plan of Study the student must consult with his or her academic program advisor. When a student applies for graduation or for certification there must be agreement between the Plan of Study and the record of courses taken by the student.

If the student writes a thesis or dissertation, the advisor or other designated person directs the student in that work. The advisor usually serves as chair of the committee to conduct the student's comprehensive assessment, assembles questions for any written and oral examination, and reports the result of the examination to the Graduate College office.

## **General Requirements for Master's Degree**

Only grades of *A B, C, CR, or S* are acceptable in fulfilling graduate degree requirements on any Plan of Study. Particular programs may require higher performance than *C* in certain courses.

All courses for which grades (quality points) are given shall be used in computing the Grade Point Average (GPA). A graduate student is expected to maintain a minimum cumulative GPA of 3.0. If, upon the completion of 12 hours or thereafter, a degree student's GPA is less than 3.0, the student may be subject to dismissal from the program.

In programs requiring a thesis, a student must earn a minimum of 32 hours credit in graduate courses. A department can require more than 32 hours including thesis. Of these hours, credit not to exceed 6 hours may be granted for the thesis. If a thesis is not required, the student must complete a minimum of 36 hours of graduate course work. Students majoring in chemistry must earn 32 hours of graduate credit. Of these 32 hours, no more than 12 hours may be in Chemistry 682, Research, which includes a thesis. A master's degree in Counseling requires a minimum of 48 semester hours. In Forensic Science, a minimum of 47-50 semester hours is required.

A minimum of 18 hours must be earned in the major subject. The major department may optionally require a minor with a minimum of 6 hours in another subject. Courses may be taken in a third closely related field if approved by the advisor. In special teacher-education curriculums, courses may be distributed among several fields with the approval of the advisor.

Graduate courses are numbered 500 to 899. Selected courses with 400 series numbers for undergraduate credit have 500 series numbers for graduate credit. A Marshall University course taken at the 400 level cannot be retaken at the 500 level; it will not be applicable to the master's degree. In courses open to both graduate and undergraduate students, graduate students are required to do more work than undergraduates. This may include more extensive reading, an extra research paper, and other individual work. At least one-half of the minimum required hours for the master's degree must be earned in classes above the 400/500 series level.

## **Transfer of Graduate Credit**

A student with an approved Plan of Study may be granted the privilege of transferring to Marshall University credit earned in graduate course work completed at another regionally accredited graduate institution provided that the courses are appropriate to the student's program and the grades earned are *B* or better or equivalent and acceptable to the advisor and Graduate Dean. On the master's and education specialist level, transfer credits may not exceed 12 hours. Graduate credits transferred from other institutions will not become a part of the Grade Point Average recorded on the student's Marshall University transcript and will simply meet credit hour requirements toward graduation. All transfer credits must have been earned within a seven year time limit counted from the date of enrollment in the first graduate course to be applied toward meeting degree requirements of the student's program.

## **Time Limitation**

All requirements established for any degree must be completed within a period of seven consecutive years from date of enrollment in the first graduate course to be used in a graduate degree program. These limits may be extended upon the recommendation of the appropriate program faculty and with the approval of the Graduate Dean or appropriate school dean. Absence

due to military obligations, long serious illness, or similar circumstances may be regarded as proper reasons for an extension of time.

Courses more than seven years old are considered outdated. It is the option of the major department to allow by special examination the validation of up to six credit hours of outdated course work. In such cases, validation cannot apply to workshop, practicum, or internship courses; and expertise to validate the course must reside within a Marshall University department whether the course was taken at this institution or elsewhere.

The minimum requirement of a validation exam shall be that it is equivalent to a comprehensive final exam for the course. In most cases, validation must be done by a written exam with the results reported to the Graduate College. The appropriate forms are available in the Graduate College Office.

Outdated courses will not be used in computing Grade Point Averages for graduation, but they remain on the record.

Students completing programs in the College of Education which lead to certification should contact the Dean of the College of Education for additional information on time limitations.

## **CREDIT BY EXAMINATION**

The Graduate College has procedures for credit by examination. Each program will identify the course(s), if any, to be available for credit by examination.

Examinations will be comprehensive in nature and assess all of the basic objectives or competencies listed on the master syllabus. Standards for examinations shall be of the quality as those required for courses offered traditionally.

A maximum of twelve (12) credit hours earned by examination may be credited toward a particular degree program. A program area, however, may restrict credit by examination to fewer than twelve hours.

## **GRADE POINT AVERAGE AND OTHER REQUIREMENTS FOR GRADUATION**

The Grade Point Average (GPA) is computed on all graduate coursework taken at Marshall University with the exception of outdated course work and courses with grades of *W*, *PR*, *NC*, *CR*, *S*, or *U*. The grade of *I* is computed as an *F* in determining qualifications for graduation.

To receive a master's or Ed.S. degree, students must have a GPA of not less than 3.0 (*B*) in all current work completed at Marshall University. (See Time Limitations for outdated coursework.) In addition, the student must have at least a 3.0 in the major or in CORE courses of an interdisciplinary program. All grades of *C* or less are counted in computing averages, but no more than six hours of *C* and no grades below *C* may be applied toward a master's or Ed.S. degree. Up to six hours of *CR* or *S* grades may be included within a degree program but they will not affect the GPA.

The requirements for graduation include completion of the program requirements, successful completion of required comprehensive assessments, a graduate Grade Point Average of at least 3.0 both overall and in the approved program of study, and satisfactory fulfillment of other academic requirements as may be established by the various program faculties.

Meeting minimum requirements in hours of credit does not necessarily constitute eligibility for the degree. The work taken must constitute a unified and approved program in the field. Students may be required to take appropriate national exams in order to graduate.

During the seven-year time limit, Marshall University reserves the right to advise students of their status on academic performance related to the probability of receiving a degree within the prescribed time limit.

Students planning to graduate in a particular semester or term must provide all data to be applied toward the graduation to the Graduate Dean's office in Huntington or the Office of Adult



Student Services in South Charleston by the advertised last day for the submission of the final grades for the semester or term. This documentation is to include official transcripts from institutions external to Marshall. Said transcripts must be received in the Graduate College Office by the (below) stated deadline. All incomplete grades must be officially removed by the accepted University procedure by this same deadline. Failure on the part of students to comply with this policy will result in their being removed from the graduation list for the term in question.

1. All transfer credit (and official transcripts) must be sent directly to the Graduate College Office and received no later than the date for submitting final grades established by the Registrar. Should the transcript not be received by this deadline, the student's name will be removed from the final graduation list.
2. All grades of *F* must be removed by the end of the term and the Grade Change Form for said grade must be received by the Graduate College Office no later than the date for submitting final grades established by the Registrar. This also applies to the recording of grades for thesis. Failure to meet this deadline will cause the student's name to be removed from the final graduation list.

## Multiple Degrees

A student who wishes to earn additional master's degrees at Marshall University must make formal application to the department in which the subsequent master's degree is sought. A maximum of 12 semester hours from a prior degree may be applied toward a subsequent master's degree, with the approval of the department from which the subsequent degree is sought. Such approval must be obtained in writing and put on file in the Graduate College Office at the time the student begins the subsequent master's degree program. All applicable coursework must meet time limitations.

## Application for Graduation

Applications for Graduation must be filed in the Office of the Graduate Dean (113 Old Main, Huntington) or the Office of Adult Student Services (South Charleston) not later than the date printed in the calendar of the final term or semester in which the degree requirements will be completed. Forms for applying for graduation may be obtained from the above offices. For master's and Ed.S. students, a receipt for a diploma fee of \$30.00, payable at the Bursar's Office, must be attached to the application before it will be accepted. Ph.D. students are required to pay a \$50.00 diploma fee when they apply for graduation.

## COMPREHENSIVE ASSESSMENT

In addition to the above listed general requirements for the master's and Ed.S. degree, a comprehensive assessment must be completed. The Comprehensive Assessment is not solely based upon the specific courses completed, but affords the student an opportunity to demonstrate broad comprehension and synthesis of the major subject. Depending upon the specific requirements of a particular program, the assessment may include such activities as a final project, written comprehensive exam or oral comprehensive exam. For additional information, see specific requirements in the appropriate program section.

Responsibility for development, scheduling and administration of the comprehensive assessment rests with the faculty of the student's program and the appropriate dean. Comprehensive Assessments are administered during the fall and spring semesters and once during the summer.

Every student will have no fewer than two readers or evaluators on his or her comprehensive assessment committee. The advisor or graduate program director will select readers/evaluators who hold Marshall University Graduate Faculty membership. The program will report the results of the comprehensive assessment to the appropriate dean in a timely manner and will maintain a



record of faculty participants. See your program advisor for more information about the comprehensive assessment.

In the case of written/oral examinations, the graduate advisor, who acts as chair of the assessment committee, prepares the questions for the written examination in consultation with other faculty on the committee, and conducts the oral assessment. In many cases sample examination questions are on file in each department office and are available for the graduate student to review.

A student's performance on the comprehensive assessment is reported to the Office of the Graduate Dean or school dean as follows:

- E* Pass with distinction, indicating superior performance.
- P* Pass, indicating satisfactory performance.
- PC* Pass with contingency, which may mean additional requirements for the student as determined by the faculty.
- U* Unsatisfactory, indicating that performance has not met the minimum standards of Marshall University Graduate College.

The decision on the grade is made by a majority vote of the members of the committee, and forwarded by the chair to the Graduate Dean or school dean on a form provided by the Graduate College Office. *All graduate students must pass a final comprehensive assessment to be eligible for graduation.* Unless more restrictive guidelines are specified in the program description in this catalog, no more than two reassessments are permitted. In the event students fail to pass an assessment, they will be placed on probation and, prior to reassessment, must meet with their examining committee to discuss deficiencies and steps to correct them. Students may be assessed only one time a term or semester. When students fail the second reassessment, the department will recommend their dismissal by the Graduate College.

## THESIS

### Regulations Governing Thesis Requirement

Degree program graduate students may elect the thesis option for the number of credits allowed by each program. The thesis advisor and student are guided by departmental requirements and the student's needs and interests in determining whether he/she is to write a thesis. Students who will profit more by doing additional coursework in lieu of a thesis must earn at least 36 course hours of credit.

When a student decides to prepare a thesis, written notice and approval must be obtained. Notification of approval will come from the appropriate program director, program coordinator, or dean after review and acceptance of a prospectus by the advisor and a thesis committee. The committee should have the same composition as the examining committee for the comprehensive assessment.

The maximum amount of credit that may be earned for the thesis is 6 hours for all departments except chemistry. Research and thesis in chemistry is permitted to a maximum of 12 hours. Students in departments other than chemistry register for thesis 681. Chemistry majors register for research 682. The student continues to register for thesis 681 or research 682 in chemistry, and pay tuition for the number of hours per semester as agreed to between the student and the thesis advisor. The thesis advisor reports a mark of PR (progress) for satisfactory work at the end of each term or semester for which the student is registered with the total amount of credit to be allowed.

The thesis must be prepared according to the form furnished by the Graduate College Office, or according to guidelines (available in the department) which have been approved by the Graduate Dean. When the thesis is completed, it is submitted to the advisor and thesis commit-

tee for tentative approval. The candidate must then give a presentation open to the academic community based upon the results of the thesis and give a satisfactory defense of the thesis before his/her thesis committee. Upon successful defense of the thesis, the advisor with the concurrence of the committee assigns a grade which applies to all hours earned for the thesis. The advisor may report a final grade of *F* at the end of any semester or term when in his/her opinion, because of irregular reports or unsatisfactory progress, the student should not be permitted to continue to register for research.

The mark of PR (progress) may be used only in reporting on thesis 681 or research 682 (chemistry). It may not be used in connection with other courses in the Graduate College. Three (3) unbound copies of the thesis must be submitted to the advisor and filed with the Graduate Dean. A receipt for the binding fee for the three (3) copies must accompany the thesis. The appropriate form must be completed and stamped paid or accompanied by a receipt from the Bursar's Office and then returned to the Graduate Office when a student applies for graduation.

Information on current binding fees is available through the Bursar's Office. These copies are to be bound through the library, with two (2) copies to be kept by the library and one (1) to be sent to the student's department. It is the student's responsibility to bind personal copies. (NOTE: These policies will be modified by the advent of electronic theses and dissertations.)

Submission of the thesis must occur by the dates printed in the calendar of the term in which the student intends to graduate. If the student fails to meet these dates, the Graduate Dean may postpone the student's graduation until the end of the following term.

## Value and Nature of Thesis

The experience of collecting, assembling and interpreting a body of information for a thesis is essential in developing the capacity to do independent work. This is a primary difference between graduate and undergraduate work. For capable graduate students, preparation of the thesis may be of great value. To be urged to write a thesis is a compliment to one's ability. The presentation and oral defense of the thesis is designed to emphasize the importance of graduate student research in the academic environment and give public credit to the student's achievements.

The objectives of a graduate thesis at the master's level include development of the ability to plan and execute a scholarly and/or analytical study and the development of expertise in a specific subject area. The thesis should illustrate that a graduate student has:

- Comprehended the essentials of a selected subject area;
- Demonstrated understanding of the problem selected;
- Obtained working knowledge of research techniques appropriate to the Master's or Ed.S. degree level;
- Demonstrated the ability to write in a professional and scholarly style;
- Produced a study which is of value to the subject field or professional education.

## PLAGIARISM

Plagiarism (submitting as one's own work or creation any oral, graphic, or written material wholly or in part created by another) is a form of academic dishonesty. Sanctions for academic dishonesty may range from an instructor-imposed sanction such as a failing grade in the course in which plagiarism has been documented to dismissal from the university. Refer to the following section for the complete university policy on academic dishonesty.

# COPYRIGHT COMPLIANCE

Marshall University complies with U.S. copyright law, which prohibits unauthorized duplication and use of copyrighted materials, including written, audio-visual, and computer software materials.

## GRADE APPEAL POLICY, ACADEMIC PROBATION, INELIGIBILITY FOR SCHOLASTIC DEFICIENCIES, AND ACADEMIC DISHONESTY

Marshall University's policies in regard to the academic rights and responsibilities of students are in keeping with the Board of Trustees Series 60. The Academic Rights and Responsibilities of Students policy statement provides details with respect to student rights and procedures on these and similar matters relating to academic appeals.

### Marshall University

#### Academic Rights and Responsibilities of Students

This policy statement implementing Board of Trustees Series 60 (July 11, 1986) supersedes previous policies which concern grade appeals, academic dishonesty, and any other procedures relating to academic appeals.

- I. *Statement of Philosophy:* Marshall University is an academic community and as such must promulgate and uphold various academic standards. Failure of a student to abide by such standards may result in the imposition of sanctions pursuant to Series 60 of the West Virginia Board of Trustees. A student, by voluntarily accepting admission to the institution or enrolling in a class or course of study offered by Marshall University, accepts the academic requirements and criteria of the institution. It is the student's responsibility to fulfill course work and degree, or certification requirements, and to know and meet criteria for satisfactory academic progress and completion of the program.
- II. Definitions
  - A. *Graduate Dean:* the chief academic officer of the Graduate College who will also serve in an advisory capacity to the student. The student is encouraged to contact the Graduate Dean for guidance on appeal.
  - B. *Academic Deficiency:* failure to maintain the academic requirements and standards as established by Marshall University and its constituent colleges and schools other than those relating to academic dishonesty. This shall include but is not limited to the criteria for maintenance of satisfactory academic progress, i.e. Grade Point Average, special program requirements, professional standards, etc.
  - C. *Academic Dishonesty:* any act of a dishonorable nature which gives the student engaged in it an unfair advantage over others engaged in the same or similar course of study and which, if known to the classroom instructor in such course of study, would be prohibited. This shall include, but is not limited to, the following: securing or giving unfair assistance during examinations or required work of any type; the improper use of books, notes, or other sources of information; submitting as one's own work or creation any oral, graphic, or written material wholly or in part created by another; securing all, or any part of assignments or examinations, in advance of their submission to the class by the instructor; altering of any grade or other academic record; and any other type of misconduct or activity which manifests dishonesty or unfairness in academic work. Each classroom instructor may modify the general definition of academic dishonesty to fit the immediate academic needs of a particular class, provided the instructor defines, in writing, the details of any such departure from the general definition.



Academic dishonesty also includes conspiring with or knowingly helping or encouraging a student to engage in academic dishonesty.

- D. *Day*: shall refer to a calendar day.
- E. *Limited Enrollment Program*: any academic program which imposes admissions requirements in addition to general admissions to the University.
- F. *Student*: any individual who has been admitted to, and is currently enrolled in, a course or in a certificate or degree program at Marshall University, or for whom the institutional appeal period has not expired.
- G. *University Community*: faculty, staff, or students at Marshall University.
- H. *President's Designee*: Vice President of Academic Affairs or other administrator selected by the President.
- I. *Appeal Deadlines*: the time allowed for each level of appeal. There will be no time extensions unless granted by the Academic Appeals Board for good cause. If the appeals do not meet the established deadlines, the issue is no longer appealable.

III. Student Academic Rights concomitant with other academic standards and responsibilities established by Marshall University and its constituent colleges and schools, each student shall have the following academic rights:

- A. The student shall be graded or have his/her performance evaluated solely upon performance in the course work as measured against academic standards.
- B. The student shall not be evaluated prejudicially, capriciously, or arbitrarily.
- C. The student shall not be graded nor shall his/her performance be evaluated on the basis of his/her race, color, creed, sex, sexual orientation, or national origin.
- D. Each student shall have the right to have any academic penalty, as set forth herein, reviewed pursuant to the procedures in Section V. Except in those cases where a specific time is provided, this review shall occur within a reasonable time after the request for such review is made.
- E. Each student shall have access to a copy of a University catalog or program brochure in which current academic program requirements are described (e.g., required courses, total credit requirements, time in residence standards, minimum Grade Point Average, probation standards, professional standards, etc.).
- F. Each student shall receive from the instructor written descriptions of content and requirements for any course in which he/she is enrolled (e.g., attendance expectations, special requirements, laboratory requirements including time, field trips and cost, grading criteria, standards and procedures, professional standards, etc.).
- G. The instructor of each course is responsible for assigning grades to the students enrolled in the course consistent with the academic rights set out in the preceding sections.
- H. Marshall University and its constituent colleges and schools are responsible for defining and promulgating:
  - 1. the academic requirements for admission to the institution, for admission to limited enrollment programs, and for admission to professional and graduate degree programs;
  - 2. the criteria for maintenance of satisfactory academic progress, for the successful completion of the program, for the award of a degree or certification, for graduation;
  - 3. the requirements or criteria for any other academic endeavor, and the requirements for student academic honesty, consistent with the Policies, Rules, and Regulations of the Board of Trustees and with the fundamentals of due process; and
  - 4. probation, suspension, and dismissal standards and requirements.
- I. Normally, a student has the right to finish a program of study according to the requirements under which he/she was admitted to the program. Admission to the program is defined as having an approved Plan of Study. Requirements, however, are subject to change at any time, provided that reasonable notice is given to any student affected by the change.

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#### IV. Academic Sanctions

A student who fails to meet the academic requirements or standards, or who fails to abide by the University policy on academic dishonesty, as defined by Marshall University and its constituent colleges and schools, may be subject to one or more of the following academic sanctions:

A. A lower final grade in or a failure of the course or exclusion from further participation in the class (including laboratories or clinical experiences), any or all of which may be imposed by the instructor of the course involved.

#### B. Academic Probation

##### 1. For Academic Deficiency:

##### a. Graduate Students

Any student who has less than a 3.0 GPA will be placed on academic probation by the Graduate Dean.

Following notification of probation and prior to subsequent registration, a student will be counseled by his/her advisor or the chairperson of the department of his/her program. During this session, the student will be advised of his/her deficiencies and the requirements for removing the deficiency within the next nine (9) semester hours of enrollment. A second advising period will follow the first grading of subsequent enrollment and will be designed to check the progress. If probationary status is not removed, the student may be subject to further academic action pursuant to these policies, including academic dismissal.

##### b. Medical Students

Medical School students should consult the appropriate Medical School publications for the description of this sanction.

##### 2. For Academic Dishonesty

In those cases in which a student has been found guilty of academic dishonesty he/she may be placed on academic probation for a period of time not to exceed one academic year. During this period the student is given an opportunity to prove that he/she can become a responsible and positive member of the University community. Conditions and restrictions for probation may be imposed, as deemed appropriate, including but not limited to:

a. Exclusion from representation of the University in any extracurricular activities such as intercollegiate athletics, debate teams, university theater, band, etc.; however, the student may participate in informal activities of a recreational nature sponsored by the University.

b. Self-Improvement: A program of self-development will be planned in conjunction with a faculty or staff person assigned in a counseling/guidance capacity.

c. Surrender of Student Activity Card: Upon request the Student Activity Card is to be yielded to the Vice President of Academic Affairs and all rights and privileges pertaining thereto forfeited for a specified period of time not to exceed one academic year.

A student violating any term of academic probation while on such probation will be subject to further academic sanction up to and including academic dismissal from the University.

#### C. Academic Suspension

##### 1. For Academic Deficiency

##### a. Graduate Students:

Graduate students should consult college and program publications for a description of the conditions under which academic suspension may be imposed for academic deficiency.

b. Medical Students:

Medical School students should consult Medical School publications for a description of the conditions under which academic suspension may be imposed for academic deficiency.

2. For Academic Dishonesty

In those cases in which a student has been found guilty of academic dishonesty he/she may be academically suspended for a period of time not to exceed one academic year. During such period the student may not enroll in any course or program offered by Marshall University or any of its constituent colleges or schools. A student violating any term of academic suspension while on suspension will be subject to further academic suspension up to, and including, academic dismissal from the University.

D. Academic Dismissal

This is defined as termination of student status, including any right or privilege to receive some benefit, or recognition, or certification. A student may be academically dismissed from a limited enrollment program and remain eligible to enroll in courses in other programs at Marshall University; or a student may be academically dismissed from the institution and not remain eligible to enroll in other courses or programs at Marshall University. The terms of academic dismissal from a program for academic deficiency shall be determined, defined, and published by each program and/or the Graduate College. Typically, a student unable to get off of probation is subject to dismissal. Academic dismissal from a program or from the University may also be imposed for violation of the University policy on academic dishonesty.

V. Academic Appeals

In cases where a student is appealing a grade, the grade appealed shall remain in effect until the appeal procedure is completed, or the problem resolved.

A. Student Appeals for Instructor-Imposed Sanctions: The intent of the appeals process is to treat all parties fairly, and to make all parties aware of the appeals procedure. In those cases in which a student has received an instructor-imposed sanction, the student shall follow the procedures outlined below:

1. Graduate Students:

- a. The student should first attempt a resolution with the course instructor. This initial step must be taken within ten (10) days from the imposition of the sanction or, in the case of an appeal of a final grade in the course, within thirty (30) days of the beginning of the next regular term. The student who makes an appeal is responsible for submitting all applicable documentation. If the instructor is unavailable for any reason, the process starts with the department chairperson.
- b. If the procedure in Step 1 does not have a mutually satisfactory result, the student may appeal in writing to the department chairperson within ten (10) days after the action taken in Step 1, who will attempt to resolve the issue at the departmental level. When a student appeals a final grade, the faculty member must provide all criteria used for determining grades.
- c. Should the issue not be resolved at the departmental level, either the student or instructor may appeal in writing to the Dean of the Graduate College within ten (10) days of the action taken in Step 2. The Dean will attempt to achieve a mutually satisfactory resolution.
- d. Should the issue not be resolved by the Dean, either the student or instructor may appeal in writing within ten (10) days of the action taken in Step 3 to the Chair of the Graduate Council who shall at the recommendation of the Graduate Council appoint a Hearing Panel to resolve the matter.

2. Medical Students

Medical School students who desire to appeal an instructor-imposed sanction should consult the appropriate Medical School publication for the proper procedures to follow.

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B. Appeals for Academic Dishonesty:

Primary responsibility for the sanctioning for academic dishonesty shall lie with the individual instructor in whose class or course the offense occurred; however, charges of academic dishonesty may be filed by any member of the University community.

Sanctions for academic dishonesty may range from an instructor-imposed sanction, pursuant to Sec. IV. A, herein, to dismissal from the institution.

1. In those cases where the instructor imposes a sanction pursuant to Section IV, A, only and does not refer the matter to the department chairperson for additional sanctions, the student may appeal the sanction in accordance with the procedures described in Section V, A.
2. Where the offense is particularly flagrant or other aggravating circumstances are present, such as a repeat violation, the instructor may refer the matter to the department chairperson for additional sanctions as permitted by this policy. In addition, any member of the University community may refer a case of academic dishonesty to the chairperson of the department in which the course involved is being offered. Allegations of academic dishonesty must be referred to the department chairperson within thirty (30) days from the date of the alleged offense.

In those cases where the matter is referred to the department chairperson the following procedures are applicable:

- a. The department chairperson shall bring together the student involved, and the faculty member, and/or other complainant within ten (10) days from the date of referral. A written admission of guilt at this level may be resolved with a maximum penalty of "F" in the course.
- b. If the student denies guilt or disagrees with the sanction imposed, or if the faculty member, other complainant, or chairperson feels that the penalties in Step (a) are insufficient for the act complained of, the case shall be forwarded in writing by the chairperson to the Graduate Dean within ten (10) days from the date of the meeting. The Graduate Dean shall bring together the student, faculty member or other complainant, and the department chairperson to review the charges within ten (10) days from the date of referral. The Graduate Dean may impose any sanction permitted by Section IV of this policy.
- c. Should the student, faculty member, or other complainant be dissatisfied with the determination of the Graduate Dean, the case may be appealed in writing within ten (10) days of the Dean's written decision to the Chair of the Graduate Council who shall at the recommendation of the Graduate Council appoint a Hearing Panel to resolve the matter.
- d. Should the student, faculty member, or other complainant be dissatisfied with the determination of the Hearing Panel, then he/she may file an appeal with the Vice President of Academic Affairs within thirty (30) days from the receipt of the written decision of the Hearing Panel. The decision of the Vice President of Academic Affairs shall be final.

C. Appeals for Academic Deficiencies:

1. When a graduate student has been or may be placed on academic probation or academic suspension for academic deficiencies, or when a student having completed six or more credit hours of relevant coursework in a major is denied admission to a degree program, the student may appeal as follows:
  - a. The student is entitled to written notice:
    - (1) of the nature of the deficiency or reason for denial of admission to a program;
    - (2) of the methods, if any, by which the student may correct the deficiency, and;
    - (3) of the penalty which may be imposed as a consequence of the deficiency.
  - b. The student shall be given the opportunity to meet with the person or persons who has judged his/her performance to be deficient, to discuss with this person



or persons the information forming the basis of the judgment or opinion of his/her performance; to present information or evidence on his/her behalf; and to be accompanied at any such meeting by an advisor of his/her choice from the University (faculty, staff, or student). Such advisors may consult with but may not speak on behalf of their advisees or otherwise participate directly in the proceedings, unless given specific permission to do so by the person conducting the meeting. The student is not entitled to an attorney in such meetings and the formal rules of evidence are not applicable. The student must request such a meeting in writing within ten (10) days from receipt of the notice.

- c. If the student is dissatisfied with the outcome of the meeting outlined in (b) above, the student may appeal the judgment to the Vice President of Academic Affairs within (30) days after receipt of written notice of the judgment.
  - d. The decision of the Vice President of Academic Affairs is final.
2. In those cases in which a student has been or may be dismissed from a graduate academic program, or has been or may be dismissed from the institution for academic deficiencies, the following procedures are applicable:
- a. The student is entitled to written notice:
    - (1) of the nature of the deficiency;
    - (2) of the methods, if any, by which the student may correct the deficiency, and;
    - (3) of the penalty which may be imposed as a consequence of the deficiency.
  - b. The student shall be given the opportunity to meet with the person or persons who have judged his/her performance to be deficient. The student must request such meeting in writing within ten (10) days from receipt of the notice. The student shall be given the opportunity to discuss with this person or persons the information forming the basis of the judgment or opinion of his/her performance, to present information or evidence on his/her behalf, and to be accompanied at any such meeting by an advisor of his/her choice from the University (faculty, staff, or student). Such advisor may consult with but may not speak on behalf of their advisee or otherwise participate directly in the proceedings, unless given specific permission to do so by the person conducting the meeting. The student is not entitled to an attorney in such meetings and the formal rules of evidence are not applicable.
  - c. If the student is dissatisfied with the outcome of the meeting outlined in (b) above, the student may file an appeal with the Chair of the Graduate Council who shall at the recommendation of the Graduate Council appoint a Hearing Panel to resolve this matter. This appeal must be filed within ten (10) days after receipt of written notice of the decision.
  - d. If the student is dissatisfied with the decision of the Hearing Panel, the student may appeal the decision to the Vice President of Academic Affairs within thirty (30) days after receipt of written notice of the decision.
  - e. The decision of the Vice President of Academic Affairs is final.
3. Medical School Students
- In those cases in which a Medical student has been or may be placed on academic probation, or academic suspension, or has been or may be dismissed from Medical School for academic deficiencies, he/she should consult the appropriate Medical School publications for the proper procedure to be followed.

## VI. Graduate Academic Appeals Board

### A. Description and Jurisdiction:

The Graduate Academic Appeals Board is a permanent branch of the Graduate Council. All individual Hearing Panels (see section VI-C below) will be made up of persons sitting on the Graduate Academic Appeals Board. From its membership, the chair of the Graduate Council will



appoint a panel to hear an appeal. It is established to hear all appeals arising from the following:

1. Instructor-imposed sanctions, including: lowering of final course grade, failure of course, or exclusion from further participation in the class.
2. Final course grades.
3. Sanctions imposed for academic dishonesty.
4. Dismissal from an academic program.
5. Dismissal from the University.
6. Such other cases as may be referred to the Board by the Graduate Council.

B. Composition of the Board:

The Hearing Panel shall be composed of faculty and student members chosen in the following manner:

1. Faculty Members:

The Graduate Dean shall appoint three (3) faculty members from each college and school having a graduate program to serve on the Board. Such appointments shall be made annually in the Fall semester.

2. Student Members:

The President of Graduate Student Council shall appoint two (2) graduate from each college and school having a graduate program to serve on the Board. All student members of the Board must be in good academic, financial, and disciplinary standing with the University and must have been enrolled for at least two (2) semesters at Marshall. If, for any reason, the President of the Graduate Student Council fails or is unable to appoint student members then the Graduate Dean may appoint such graduate student members.

3. Hearing Officers:

The Graduate Council chairperson shall appoint the Hearing Officer and two (2) alternates. To the extent possible, the Hearing Officer and alternates must have previously served on a Hearing Panel.

C. Selection of Members for an Individual Hearing:

An individual Hearing Panel shall be composed of two (2) faculty members, one (1) student member, and one (1) non-voting Hearing Officer. The members of the Hearing Panel shall be chosen by the Chair of the Graduate Council or his/her designee. Said members will be selected from colleges different from the college of the appellant.

## VII. Hearing Procedures

It is the intent of these procedures to insure that Marshall University students receive appropriate due process in academic matters. This includes fundamental fairness, just sanctions, and all rights in accordance with the belief that academic appeal hearings at an institution of higher education such as Marshall University should have an educational objective. Academic appeals, pursuant to these procedures, are informal and not adversarial in nature.

- A. The time and place of the hearing are determined by the Hearing Officer. The hearing should be held within sixty (60) days of receiving the written request. Upon written request, the Hearing Officer may, at his/her discretion, grant a continuance to any party for good cause.
- B. The Hearing Officer will notify the appellee, appellant, and other appropriate parties in writing at least five (5) days prior to the hearing, of the date, time, and place of the hearing. A statement of the facts and evidence to be presented in support of the student's grounds for appeal will be provided to the appellee in appropriate cases.
- C. The appellant student and the appellee have the right to an advisor. Advisors must be members of the University community (faculty, staff, or student). Such advisors may consult with, but may not speak on behalf of their advisees or otherwise participate directly in the proceedings, unless they are given specific permission to do so by the Hearing Officer. Attorneys are not permitted to appear on behalf of any appellant or appellee.

- D. Prior to the scheduled hearing, the members of the Hearing Panel may convene in closed session to examine the content of the appeal, the specific issues to be considered, and all supporting documents.
- E. The student with his/her advisor if any, will be called before the Hearing Panel and the Hearing Officer will then restate the nature of the appeal and the issues to be decided.
- F. The hearing shall be closed. All persons to be called as witnesses, other than the appellant, with his/her advisor, if any, and the appellee and his/her advisor, if any, will be excluded from the hearing room. Any person who remains in the room after the hearing has begun will be prohibited from appearing as a witness at the discretion of the Hearing Officer.
- G. Anyone disrupting the hearing may be excluded from the hearing room if, after due warning, he/she engages in conduct which substantially delays or disrupts the hearing, in which case the hearing shall continue and the Hearing Panel shall make a determination based on the evidence presented. If excluded, the person may be readmitted on the assurance of good behavior. Any person who refuses the Hearing Panel order to leave the hearing room may be subject to appropriate disciplinary action pursuant to Marshall University policy. In the event a student is excluded under the terms of this provision, a representative shall be appointed by the Hearing Officer to participate in the student's behalf during the continuation of the proceedings.
- H. Except as provided in G and K herein, all evidence must be presented in the presence of the student.
- I. The student or other parties involved may petition the Hearing Officer for a subpoena or a request for appropriate written information or documents.
- J. The student will be given the opportunity to testify and present evidence and witnesses on his/her own behalf and to discuss with, and question, those persons against whom the appeal is filed.
- K. The Hearing Panel may admit as evidence any testimony, written documents, or demonstrative evidence which it believes is relevant to a fair determination of the issues. Formal rules of evidence shall not be applicable in academic appeal hearings.
- L. If the student appellant or the appellee fails to appear at a hearing and fails to make advance explanation for such absence which is satisfactory to the Hearing Panel, or if the student appellant or the appellee leaves before the conclusion of the hearing without permission of the Hearing Panel, the hearing may continue and the Hearing Panel may make a determination on the evidence presented at the hearing, or the Hearing Panel may, at its discretion, dismiss the appeal.
- M. Upon completion of the testimony and presentation of evidence, all persons, except Hearing Panel members will be required to leave the room. The Hearing Panel will then meet in closed session to review the evidence presented. The Hearing Panel shall make its findings based upon a preponderance of evidence. The Hearing Panel shall reach its determination by a majority vote. The results shall be recorded in writing and filed with the Chair of the Graduate Council and the Vice President of Academic Affairs. If the Hearing Panel's decision includes the imposition of academic sanction, the sanction given and its duration must be specified for the record. A report of a dissenting opinion or opinions may be submitted to the Chair of the Graduate Council and the Vice President of Academic Affairs by the Hearing Officer. The actual vote of the Hearing Panel will not be disclosed. The Hearing Officer is a non-voting member of the Board.
- N. The findings of the Hearing Panel, and any sanction, shall be announced at the conclusion of the hearing. The student, faculty member, and the Graduate Dean shall be notified in writing of the findings and any sanction at the conclusion of the hearing. A record of the hearing shall be prepared in the form of summary minutes and relevant attachments and will be provided to the student upon request.
- O. The student, or any other person, may not tape the proceedings.
- P. In an appeal related to a final grade the Hearing Panel will complete the change of grade forms and submit that information to the Registrar, the faculty member and the Graduate Dean.
- Q. Within thirty (30) days following receipt of the Hearing Panel's decision, the student or faculty member may file an appeal with the Vice President of Academic Affairs who shall review the facts of the case and take such action as deemed appropriate under all the circumstances. The Hearing

Panel's findings and sanction, if any, may be affirmed, modified, or remanded to the original Hearing Board for further action as deemed appropriate by the Vice President of Academic Affairs. A written brief stating grounds for the appeal should be presented by the student to the Vice President of Academic Affairs with the appeal. The scope of review shall be limited to the following:

1. Procedural errors.
2. Evidence not available at the time of the hearing.
3. Insufficient evidence to support the findings of the Hearing Panel.
4. Misinterpretation of University policies and regulations by the Hearing Panel.
5. A sanction disproportionate to the offense.
6. Lack of jurisdiction.

The decision of the Vice President of Academic Affairs is final. The student, the faculty member, the Graduate Dean, and the Registrar shall be notified in writing of the Vice President of Academic Affairs' decision.

*Approved by the Graduate Council  
Pursuant to Board of Trustees Series 60  
Effective Date - July 11, 1986*



## Joan C. Edwards School of Medicine

The Joan C. Edwards School of Medicine offers the degree of Doctor of Medicine.

Established in the mid-1970s, the School of Medicine quickly became a force in improving both health care and educational opportunities for West Virginians. The School's curriculum prepares students for all medical specialties. However, because of the state's continuing shortage of physicians in primary-care specialties (such as general internal medicine and family practice), Marshall particularly emphasizes the special personal and medical skills needed for such fields.

The school is affiliated with the Veterans Affairs Medical Center, St. Mary's Hospital, Cabell Huntington Hospital and University Physicians & Surgeons, the faculty practice group. Through a network of other agreements, the school also provides health care at sites as varied as Huntington State Hospital and small rural clinics.

The result is a dynamic educational setting which exposes students to the full spectrum of medical care. They work in rural outpatient clinics as well as on busy hospital medical and surgical services. They choose from a variety of primary-care and specialty electives at Marshall, at other medical centers, and in numerous overseas locations.

The School of Medicine is accredited by the Liaison Committee on Medical Education of the American Medical Association and the Association of American Medical Colleges.

Information concerning admission may be found in the School of Medicine Bulletin.





# Graduate Degree Programs

**Note: Course descriptions begin on page 124.**

Any and all references herein to candidacy on the master's level have been superseded starting in the Fall of 1998 with the term "Plan of Study."

## ADULT AND TECHNICAL EDUCATION (ATE)

The Master of Science in Adult and Technical Education is a field-based program designed to serve persons who are employed on a full-time basis. The program is intended for persons who serve in an instructional, training, leadership, or professional role in human services areas of business, industry, government, community agencies or education. The areas of emphasis in Adult and Technical Education allow a program to be tailored to meet the personal and professional needs of a broad spectrum of graduate students. The courses provide students with the opportunity to continue their graduate education in a flexible program through a state-wide delivery system. Most courses are taught in the evening or at other convenient times. Every effort is made to tailor the program to meet the needs of the student.

The following plans provide the framework for the candidate's program of study:

	<i>Hours</i>
1. Minimum requirements .....	33-36
Major Field (includes Thesis credit) .....	24-27
Minor Field (6 hours)** and Elective (3 hours) .....	9

In consultation with the advisor, the student will select an area of study and plan the program. Areas of study available in the Master of Science degree program are:

- a. Adult Education
- b. Interdisciplinary Studies
- c. Occupational Leadership
- d. Training and Development

In most areas of study, students may complete 33 hours in the thesis option or 36 hours in the non-thesis option to satisfy the Master of Science degree requirements.

### Adult Education

The Adult Education program is designed to serve persons who work with adults in either an instructional or an administrative mode. As such, its participants are drawn from various areas such as the human services agencies, those with staff development, or inservice responsibilities in hospitals, business or government as well as those in adult preparatory programs at the post-secondary or community college level.

Minimum Requirements .....	36 hours
Major Field (Thesis Option: 24 hours) .....	27
Required:	
ATE 603 Introduction to Adult Education and Adult Learners	
ATE 618 Literature of Adult and Continuing Education	
ATE 628 Adult Instruction: Environmental and Personal Aspects	
ATE 675 Literature & Applied Research in ATE or Equivalent	
ATE 679 Problem Report (3 hours only)	
Elect 12 hours from the following	
ATE 580-584 Special Topics	
ATE 585-588 Independent Study	

- ATE 590-594 Workshop
- ATE 600 Aspects of Training and Development
- ATE 609 Developing Training in Business and Industry
- ATE 656 Instructional Planning for Adult Populations
- ATE 661 Practicum in Adult and Continuing Education
- ATE 671 Evaluation of Adult and Technical Education
- ATE 690-692 Seminar

Minor Field and Elective or Thesis ..... 9

\*\*Select any academic graduate courses for minor field from Adult and Technical Education, Counseling, Curriculum and Instruction, Economics, English, Family and Consumer Sciences, Instructional Technology, Mathematics, Management, Marketing, Psychology, Reading Education, Safety Technology, Sociology, or other approved disciplines. Elective may be completed in any program area.

### Interdisciplinary Studies

The Interdisciplinary Studies program involves a combination of courses from disciplines within the broad field of Adult and Technical Education. The program is designed to permit students to forge specific links among courses from various disciplines. Students can tailor the program to their particular interests and needs. The program differs from traditional graduate programs in that it promotes acquisition of knowledge that transcends traditional disciplinary boundaries.

Minimum Requirements ..... 33-36 hours

Major Field (Thesis Option: 24 hours) ..... 24-27

Required:

ATE 675, 677 or equivalent

Elect 21-24 additional hours of ATE course credit

Minor Field and Elective ..... 9

\*\*Select courses for minor field from any discipline. Elective may come from any program area.

### Occupational Leadership

The Occupational Leadership program prepares individuals to be more effective in roles requiring advanced competencies in the disciplines found in secondary and postsecondary workforce preparation programs (Agriculture Education, Business Education, Family and Consumer Sciences, Marketing Education, Technology Education, Technical Industrial Education). The program is based on the student's educational background, experience, and professional goals. It serves individuals who desire graduate study in teaching, coordinating, curriculum development, cooperative education and/or for teacher certification renewal.

Minimum Requirements ..... 33-36 hours

Major Field (Thesis Option: 24 hours) ..... 24-27

Required:

ATE 601 Philosophy of Workforce Preparation

ATE 603 Introduction to Adult Education and Adult Learners

ATE 595 Historical Developments in Workforce Preparation

ATE 616 Community Relations in Adult/Technical Programs

ATE 640 Program Design in Occupational Education

ATE 675, 677 or equivalent

ATE 690-692 Seminar

Elect ATE 681 or 6 hours of additional ATE course credit

Minor Field and Elective ..... 9

\*\*Select any academic graduate courses for minor field from Adult and Technical Education, Counseling, Curriculum and Instruction, Educational Foundations, English, Family and Consumer Science, Mathematics, Psychology, Reading Education, Safety Technology, Sociology, Special Education, or other approved discipline. Elective may be taken in any program area.

### Training and Development

The Training and Development program is designed to serve persons employed in business, industry, or other organizations involved in the advancement of knowledge, competencies, and skills of their employees. Graduate students are drawn from areas such as management, marketing, personnel, training, and safety whose responsibilities include instructional design and preparation of employees for current jobs, future assignments, and/or personal enhancement.

Minimum Requirements .....	33-36 hours
Major Field (Thesis Option: 24 hours) .....	24-27
Required:	
ATE 503 Introduction to Adult Learning Theory*	
ATE 600 Aspects of Training and Development	
ATE 609 Developing Training in Business and Industry*	
ATE 628 Adult Instruction: Environmental and Personal Aspects*	
ATE 652 Field Based Job Analysis and Curriculum Design*	
ATE 661 Practicum in Adult and Continuing Education	
ATE 675, ATE 677 or equivalent	
Elect ATE 681 or 6 hours from the following:	
ATE 585-588 Independent Study (with prior approval)	
ATE 591-594 Workshop (with prior approval)	
ATE 671 Evaluation of Adult and Technical Instruction	
ATE 690 Seminar (with prior approval)	
Minor Field and Elective or Thesis .....	9

\*\*Select any academic graduate courses for a minor field from Adult and Technical Education, Communications Studies, Counseling, Instructional Technology, Management, Marketing, Psychology, Safety Technology, or other approved disciplines. Elective may be completed in any program area.

\*Students may register for Internship after successful completion of: ATE 503, ATE 609, ATE 628, ATE 652.

### EDUCATION SPECIALIST DEGREE

#### Admission to the Program:

1. Admission to the Graduate College.
2. Master's degree in Adult Education, Adult and Technical Education, Business Education, Home Economics, Industrial Education, Marketing Education, or related area.
3. Acceptance by Adult and Technical Education.

#### Program:

The program is designed to permit specialization in the field of Adult and Technical Education. Upon admission, the department will assign an advisor who will work with the student in developing an approved program. The program is considered approved when an agreement is signed by the student, advisor and one other member of the ATE program. All programs must be completed in seven years from admittance and conform to the following standards:

1. Completion of a minimum of 36 hours of planned, approved graduate study with a 3.25 GPA, including the following:
 

Core coursework .....	18-24
(credit will not be given for ATE courses used in a master's program)	
Minor field (approved area of specialization) .....	6-12
Research Component (ATE 675, 677 or equivalent course by approval) .....	3
Applied Research (Problem Report, 3 hours or Thesis, 6 hours) .....	3-6
<b>TOTAL HOURS .....</b>	<b>36</b>
2. Completion of a comprehensive oral examination covering the coursework and the research paper or thesis. The examination will be administered by three full-time ATE faculty members, as selected by the student.

#### Plan of Study:

All students enrolled in the Ed.S. Program must complete their Plans of Study following completion of the first eighteen hours of their approved coursework. The student may continue to register when the student's plan for completion of his/her program is approved by his/her advisor and one other ATE faculty member and it is verified that the student has maintained a 3.25 GPA.

#### Application for Graduation:

Applications for Graduation must be filed in the Office of Graduate College not later than the date printed in the calendar of the final term or semester in which the degree requirements will be completed. Forms for applying for graduation may be obtained from the Office of the Graduate College. A receipt for a diploma fee of \$30.00, payable at the Cashier's Office must be attached to the application before it will be accepted by the Graduate College Office. Students who fail to apply and to pay the diploma fee may not take the final comprehensive examination and will not be included on the graduation lists.



## ART (ART)

Applicants for admission to the graduate program should have adequate preparation in art. A portfolio or slides of previous art work and an example of your writing, to be evaluated by the graduate Art Department faculty, is required. Applicants revealing deficiencies will be required to do preliminary work in areas of weakness and will be admitted conditionally. Remedial work required will be decided in conference with the Advisor in the major and the Chairperson. A review of work is required after the completion of nine hours. The quality of the student's work is reviewed for a second time when application for admission to candidacy is made. At least eighteen hours must be completed after passing the candidacy review. Transfer students must complete 30 hours in the Marshall Art Department and complete all other requirements.

The Graduate Record Exam (GRE) general test is required of all applicants to the graduate Art programs. The GRE scores must be sent by the Education Testing Service directly to Marshall University when the student applies for admission. The GRE must be taken prior to regular admission to graduate Art programs. Temporarily admitted students may initially enroll without the GRE but will be barred from subsequent registration until official GRE scores are reported to the university. To be admitted with regular status those students taking the GRE must achieve an undergraduate GPA of 2.5 plus a 1500 score on the GRE, (a total of the three sub-tests) or a GPA OF 3.0 and a 1200 score on the GRE. Students not meeting these standards may be academically provisionally admitted to graduate art programs. Academically provisional status requires obtaining a 3.0 in the first 18 hours of graduate work to be regularly admitted.

A thesis is optional in the M.A. Art program (except it is required in the Art Education Master's program). Students are required to complete three semesters of Art 500. A student is encouraged to include a drawing course in the program. Prior to graduation, the candidate shall exhibit creative work achieved during the program of study and pass a written comprehensive.

Minimum Course Requirements .....	36 Hours
Studio major in painting, sculpture, printmaking, ceramics, or weaving .....	15-21
Art history .....	6-9
Seminar .....	3
Electives in related courses selected with Advisor .....	6-9

### Art Education

The degree of Master of Arts in Art with an area of emphasis in Art Education requires a minimum of 36 hours. General Graduate College admission requirements must be fulfilled. A student must demonstrate to the department his/her preparation for admission to the program by submitting a portfolio, slides, and/or examples of written work to be reviewed by a graduate faculty committee. For certification, state requirements must be met. Discuss with your advisor.

Minimum requirements .....	36 Hours
1. Education .....	6
2. Art Education Core Classes (ART 560, 566, 670) .....	9
3. Electives: Additional Art Education, Studio Art courses, Art History .....	15
4. Thesis, ART 681 .....	6

A comprehensive examination is required. In addition, a student may elect to have an exhibition with department approval.

## BIOLOGICAL SCIENCES (BSC)

The Master of Science degree with a major in the biological sciences is preparation for research and for positions in areas such as public health, food sanitation, governmental and industrial biology, conservation, game and wildlife management, park naturalist, genetics, pest control, and microbiology. The Master of Science degree requires the submission of an acceptable thesis. Potential Master of Science students must be sponsored by a faculty member and are encouraged to contact potential faculty advisors about research projects and graduate assistantships. The Master of Arts degree does not require a thesis and allows students to strengthen their education in biological sciences through the completion of advanced coursework.

Admission to the graduate program in the biological sciences will depend upon admission to the Graduate College and student's acceptance by the department. Deadlines for admissions to the Department of Biological Sciences are April 15 and November 15 for fall and spring admissions, respectively. Complete application materials must include 1) original transcripts from all schools where undergraduate and graduate credits were earned; 2) three letters of recommendation; 3) a written statement of educational and professional goals; and 4) scores from the general and subject (biology) portions of the Graduate Record Exam (GRE). Scores must be sent by the Education Testing Service directly to Marshall University when the



student applies for admission. MCAT scores may be substituted for the subject GRE. Students may enroll initially without the GRE but will not be permitted to register subsequently until official GRE scores are reported to the university. A combination undergraduate GPA of 2.5 and 1500 GRE score (a total of the 3 sub-tests) or GPA of 3.0 and 1200 GRE score, and 530 on the GRE subject test in biology (or MCAT score of 65 in biology) is recommended for regular admission status. Students may be admitted provisionally. These students must complete assigned coursework and achieve a 3.0 GPA in the first 12 hours of graduate work to remove the provisional admission status.

Students interested in applying for teaching assistantships should contact the department for deadlines and additional information.

The student will select a tentative graduate program in consultation with his or her advisor, usually during the first semester of graduate work. The student and the advisor will select a graduate committee to include at least two additional faculty members to assist in planning the remainder of the program. During the semester in which the student is completing his/her 18th semester hour of graduate credit, the student must have a "Plan of Study" approved by the Department Chairperson and a copy of the plan must be filed with the Dean of the Graduate College.

Graduate students must complete either as undergraduates or prior to their last semester of graduate work a core of science courses equivalent to a bachelor's degree in Biological Sciences at Marshall University. These include basic courses in Ecology (BSC 320), Cell Biology (BSC 322), and Genetics (BSC 324), each with lab; 6 hours of Organic Chemistry lecture and Organic Chemistry Lab (CHM 355, 356, 361). Introductory Biochemistry (CHM 365) and Introductory Biochemistry Lab (CHM 366) may be substituted for CHM 356 and 361. All courses at the graduate level and/or undergraduate courses to make up deficiencies must be taken for a letter grade, except BSC 585-588 and BSC 650-652.

Theses must conform to the guidelines established by the Graduate College and the department. The maximum amount of credit that may be earned for the thesis is six hours. It must be completed and submitted to the department and to the Graduate College by the dates specified by the Graduate College for a specific semester. Students electing the thesis option must complete at least thirty-two hours of graduate work including the thesis.

Students who elect the non-thesis option must complete a minimum of thirty-six hours of graduate work.

Each candidate must complete three semester hours credit in Seminar (BSC 661-662). Not more than four semester hours credit in Independent Study (585-588) or special problems (650-652, 679) may be used to meet the minimum number of required hours and these may only be applied beyond the 18 hours for the major.

A student may elect to take six hours of graduate work in a minor field.

Upon the completion of the course requirements and of the thesis (if the thesis option is selected), the candidate must pass a comprehensive oral examination.

## BIOMEDICAL SCIENCES

### Program Overview

The basic science departments of the Joan C. Edwards School of Medicine offer an interdisciplinary program leading to the Master of Science and Doctor of Philosophy degrees in Biomedical Sciences. The primary aim of the Biomedical Sciences (BMS) Program is to graduate students who are broadly based in the biomedical sciences with definite interests and special in-depth training in one of the following areas of emphasis: anatomy, cell and neurobiology; biochemistry and molecular biology; microbiology, immunology, and molecular genetics; neuroscience; pharmacology; and physiology. These areas are designed to be flexible and research oriented in order to develop the interests, capabilities and potential of all students pursuing careers in academic or industrial biomedical sciences.

In addition, the BMS Program offers a non-thesis Master of Science degree in a medical sciences area of emphasis for students wishing to pursue non-research careers in the health profession or in biotechnology and pharmaceutical industries. This area of emphasis is also designed to improve the science foundation of students seeking admission into doctoral programs in medicine. Admission into this Program does not guarantee admission into medical school. Students in this area of emphasis are required to pay a Health Professional Fee each semester while enrolled in the Program.

The Biomedical Sciences Doctor of Philosophy Degree Program accepts a very limited number of students to study concurrently with the Doctor of Medicine degree. Individuals must be admitted into each Program separately.

### Admission Requirements

Students who wish to enroll in the Biomedical Sciences Graduate Program must apply for admission through the Graduate Admissions Office and meet the admission requirements of the Graduate College and the Graduate Studies Committee of Marshall University's Joan C. Edwards School of Medicine. Interested

persons should contact the Office of Research and Graduate Education, Marshall University School of Medicine, 1542 Spring Valley Drive, Huntington, WV 25704 or via the internet at <http://www.meb.marshall.edu/programs.htm>.

### **Minimum Requirements for Admission into Master of Science and Doctor of Philosophy Program**

All applicants must have baccalaureate degrees in one of the sciences, with the following prerequisites: one year of general biology, physics, general chemistry, and organic chemistry, all with associated laboratories. Although calculus and physical chemistry are not requirements for admission, they may be required for certain areas of emphasis and are highly recommended. Applicants must also submit (a) Graduate Record Examination (General) scores (minimum of 1,500) or MCAT scores (medical science area of emphasis only, 6.5 average), (b) three letters of recommendation from references familiar with the applicant's relevant academic/professional performance and (c) a personal statement describing educational and career goals. International students are required to score 550 or better on the TOEFL examination.

### **Duration of Degree Programs**

Students generally complete the requirements for the Master of Science Degree within three years. Those who pursue the doctoral degree usually complete the requirements within five to six years. Students who possess a M.S. degree in Biomedical Sciences or the equivalent when admitted into the doctoral degree program, generally require three to four years to complete the Doctoral of Philosophy Degree.

### **MASTER OF SCIENCE DEGREE**

All students are required to meet the general requirements of the Graduate College for receipt of a master's degree. A minimum of thirty-six credit hours is required for a non-thesis degree, while a minimum of thirty-two credit hours is required for the thesis degree. No more than six hours of thesis (BMS 681) may be credited toward the thirty-two hour requirement. Each student will specialize in one of the seven areas of emphasis as defined in the program overview. All students are required to successfully complete Cellular and Molecular Biology (BMS 600, 3 hrs), Statistics/Biostatistics (PSY 517, EDF 517 or equivalent, 3 or 4 hrs), Biomedical Sciences Communication Skills (BMS 600/661, hr. each), Overview of Biomedical Sciences Research (BMS 684, 1 hr.), Introduction to Research (BMS 685, minimum of 3 hrs), and Seminar (BMS 680, minimum of 4 hrs). In addition, the student must successfully complete other courses required by his/her area of emphasis and advisory committee and pass a written and/or oral comprehensive examination.

### **DOCTOR OF PHILOSOPHY DEGREE**

The doctorate is a research or performance degree and does not depend solely on the accumulation of credit hours. The degree requirements are admission to candidacy, residency, and successful completion and defense of a dissertation. The degree signifies that the holder has the competence to function independently at the highest professional level.

### **Degree Requirements**

To qualify for the Doctor of Philosophy degree, the student must pass (C or better or CR) the following courses: Cellular and Molecular Biology (BMS 600, 3 hrs), Statistics/Biostatistics (PSY 517, EDF 517, or equivalent 3 or 4 hrs), Biomedical Sciences Communication Skills (BMS 600/661, hr. each), Overview of Biomedical Sciences Research (BMS 684, 1 hr.), Seminar (BMS 680, minimum of 6 hrs), Introduction to Research (BMS 685), and Research (BMS 882, maximum of 15 hrs). In addition, the student must successfully complete other courses required by his/her area of emphasis and advisory committee. All courses will be defined in the student's *Course of Study*.

### **Advisory Committee**

The advisory committee should be formed no later than the end of the first year of graduate education or upon completion of 18 semester hours of credit. As soon as the committee has been identified, an *Approval for Dissertation Topic and Committee Membership* form is completed and submitted to the Associate Dean for Research and Graduate Education and the Dean of the Graduate College.

The committee will be selected by the student and research advisor and approved by the Associate Dean for Research and Graduate Education and the Dean of the Graduate College. The advisory committee will be composed of at least five faculty members with appropriate expertise. One of the members may be from another institution. The student's research advisor will act as the chairperson of the committee.

### **Approval of Course of Study**

It is essential for the student and advisory committee to carefully define a *Course of Study* by the end of the first year. This is considered a basic contract between the student and the program and includes 1) all transfer credits 2) required and elective courses to be taken at Marshall University and 3) all competencies to

be achieved by the student during graduate study. These details must be recorded on a *Course of Study* form and submitted for approval by the Associate Dean for Research and Graduate Education and the Dean of the Graduate College.

### **Graduate Assistantships for the Doctor of Philosophy Program**

Research assistantships are available for students in the doctoral degree program on a competitive basis. Applications will be reviewed as soon as complete. Assistantships will be allocated by March 15 for fall semester and October 15 for spring semester. The base stipend is renewable annually for up to five years. Priority consideration for the Doctor of Philosophy graduate assistantships will be given to West Virginia residents.

### **Academic Performance**

The student must maintain a grade point average of 3.0 and any student who receives a grade of C in more than two courses will be subject to dismissal from the program.

If the GPA falls below 3.0, the student will be placed on academic probation. Following notification of probation, the student will be counseled by his/her advisor. At this time, the deficiency will be identified and a written plan will be prepared for removing it within the next nine semester hours. This plan, co-signed by the student and the advisor, must be approved by the Dean of the Graduate College before the student can register for additional coursework.

If probationary status is not removed within nine semester hours, the Dean of the Graduate College, in consultation with the Associate Dean for Research and Graduate Education and the Graduate Studies Committee will determine whether the student is retained or dismissed from the program. Retention must be recommended by the interim advisor or student's advisory committee and endorsed by the Graduate Studies Committee.

### **Transfer Credit**

The student may transfer credits completed at other regionally accredited graduate institutions. Approval of the Associate Dean for Research and Graduate Education and the Dean of the Graduate College is contingent on (1) the grades earned were B's or better (2) the credits are appropriate to the student's program and acceptable to the advisory committee, and (3) the time limitations were not exceeded.

The number of transfer hours acceptable for the Ph.D. degree will be determined by the student's advisory committee. Both must receive approval of the Associate Dean for Research and Graduate Education and the Dean of the Graduate College. Transfer credit will not become part of the Marshall University Grade Point Average.

Transfer of credits should be accomplished as early as possible. This should be accomplished either when the student is admitted to candidacy or submits an approved Course of Study. Attempts to transfer credits during the last semester may delay graduation. Official transcripts must be on file in the Graduate College office by the date that grades are due in the Marshall University Registrar's Office.

### **Validation of Outdated Coursework**

The advisory committee has the option to require validation, by special examination, of courses which members deem to be outdated.

### **Time Limitations**

Students must meet all requirements for the Doctor of Philosophy degree within seven years from the date of enrollment in the first course to be used in the degree program. The Graduate Dean may grant an extension upon recommendation by the Graduate Studies Committee. Absence due to military obligations, long serious illness, or similar circumstances beyond the student's control may be considered valid reasons for an extension. It is the option of the advisory committee to require validation of outdated courses by special examination.

### **Admission to Candidacy**

Admission to graduate study and enrollment in graduate courses does not guarantee acceptance as a candidate for the Doctor of Philosophy degree. This is only accomplished by satisfactorily passing a comprehensive qualifying examination and meeting all other specified requirements.

The qualifying examination assesses whether the student has attained sufficient knowledge to undertake independent research. The examination will be given after most of the coursework has been completed and consists of written and oral components covering all areas specified in the *Course of Study*. The examination is prepared, administered and graded by the advisory committee. Oral and written examinations should be scheduled within one month of each other. Successful completion of this examination is based on approval of the committee. Only one dissenting vote is permitted. If necessary, a single portion of the examination may be repeated at the discretion of the advisory committee. If two or more



members cast dissenting votes, the entire qualifying examination must be repeated. The student must have the approval of the advisory committee to repeat a qualifying examination. The committee assesses the deficiencies and determines the time required for the student to make corrections. A student may take the qualifying examination no more than three times. Failure to pass this examination on the third attempt will result in dismissal. The advisory committee must complete an *Admission to Candidacy for Ph.D.* after the student completes the examinations and submit it for approval of the Associate Dean for Research and Graduate Education and the Dean of the Graduate College.

### Dissertation

All candidates must successfully complete a biomedical research project and prepare, submit, and defend a dissertation. The dissertation must present the results of the candidate's individual investigation and make a definite contribution to the current state of knowledge. While conducting research and writing a dissertation, the student must register for Research (BMS 882) at the beginning of each semester or summer term for which progress is to be earned. No more than 15 hours of doctoral research may be credited toward the degree.

Candidates are to follow the general guidelines outlined in *Publishing Your Dissertation: How to Prepare Your Manuscript for Publication and General Information About Dissertations*. Copies of these documents are on file in the Office of Research and Graduate Education.

### Oral Defense of the Dissertation

The oral defense of the dissertation is held during the semester or summer session in which all other degree requirements have been met. The advisory committee must read and tentatively approve the dissertation before the examination can be scheduled. The committee chairperson will complete an *Approval to Schedule Dissertation Defense* form and submit it for approval of the Associate Dean for Research and Graduate Education and the Dean of the Graduate College before the examination can be given. **Such notification must occur at least three weeks before the proposed date of the defense.** A portion of the defense is an open examination and sufficient time is required for adequate public notice. The open examination usually takes the form of a one-hour seminar. This is followed by a thorough review of the dissertation by the advisory committee, and the candidate.

Successful completion of the defense requires the approval of all but one of the members of the advisory committee. **The results (pass/fail) must be recorded on a *Results of Dissertation Examination* form which is to be reported to the Office of Research and Graduate Education and forwarded to the Graduate College Office within 24 hours.** Should the candidate fail the defense, reexamination may not be scheduled without the approval of the advisory committee, Associate Dean for Research and Graduate Education and the Dean of the Graduate College.

All advisory committee members are to be present for the defense. If this is not possible, the Dean of the Graduate College, or designee, may permit one substitute for any member of the committee except the chairperson. A request for a substitute must be submitted in writing to, and approved by, the Associate Dean for Research and Graduate Education and the Dean of the Graduate College. The committee chairperson, the student, and both the original member of the committee to be replaced, and the substitute must sign this request. The substitute must have the same, or higher, graduate faculty status as the original member and represent the same academic discipline or area of emphasis.

### Acceptance of Dissertation

Acceptance of the dissertation is a requirement for the doctoral degree. An accepted dissertation must bear the original signatures of at least all but one member of the advisory committee. If more than one member cannot approve the dissertation, the doctoral degree cannot be recommended. If the substitute member attends and approves the dissertation defense, he or she signs the dissertation. **The dissertation must then be accepted by the Graduate College no later than one week before the end of the semester or summer session in which the degree is expected to be granted.**

### Survey of Earned Doctorates

A completed questionnaire entitled *Survey of Earned Doctorates* must be submitted to the Graduate College when the original and two copies of the dissertation are delivered.

### Publication

All doctoral dissertations and their abstracts will be microfilmed through University Microfilms, Ann Arbor, Michigan. This requirement cannot be satisfied by any other publication, but other publication of material in the dissertation is both permitted and encouraged.



### **Process Summary**

1. Inquiry from prospective student to the Office of Research and Graduate Education or Graduate Admissions Office.
2. Mailing of application from the Office of Research and Graduate Education or the Graduate Admissions Office.
3. Receipt of application materials and required fee by the Office of Research and Graduate Education or the Graduate Admissions Office.
4. Referral of application materials and required fee by the Office of Research and Graduate Education or the Graduate Admissions Office.
5. The Office of Research and Graduate Education notifies the Graduate Admissions Office and the prospective student of the admission decision of the Graduate Studies Committee.
6. The accepted student arrives, reports to the Office of Research and Graduate Education, is assigned an interim advisor, and registers for course work.
7. Selection of a department/advisor must be achieved by the end of the first year. After a permanent advisor has been selected, an advisory committee is formed. A *Course of Study* should be developed by the end of the first year.
8. The student completes requisite course work and other program requirements.
9. The student takes written and oral qualifying examinations for admission to candidacy to Ph.D. These examinations should be scheduled within one month of each other.
10. The student continues doctoral research under the guidance of his/her advisory committee. The dissertation phase begins with the approval of a dissertation prospectus by the advisory committee, the Office of Research and Graduate Education and the Graduate College Dean.
11. The student applies for graduation at the beginning of his or her last semester no later than the University deadline published in the printed Schedule of Classes. The diploma fee must be paid by this time.
12. A copy of the preliminary draft of the dissertation is given to each member of the advisory committee and the Graduate College Dean at least one month prior to the final defense of the dissertation.
13. The chair of the advisory committee requests clearance for the defense from the Office of Research and Graduate Education and the Graduate College for approval no later than three weeks before the scheduled date of the defense.
14. The time and place of the defense of the dissertation are announced.
15. The student defends the dissertation in an oral defense.
16. The student delivers the original and two copies of the approved dissertation, required completed questionnaires and fee to the Graduate College at least one week prior to the end of the term or semester.

## **BUSINESS**

### **Lewis College of Business Graduate School of Management**

The faculty of the Graduate School of Management is composed of individuals with educational backgrounds and experience in the functional fields of business administration, accounting, finance, management, marketing, economics, industrial relations, health care, organization communication, and law. The faculty, in conjunction with other faculties of the Graduate College, offers a variety of graduate educational opportunities for men and women preparing for administrative careers in business, industry, labor, government, hospitals, and nonprofit organizations.

### **LEWIS COLLEGE OF BUSINESS MISSION STATEMENT**

The mission of the LCOB is to be the leading state institution for the education of business students in the region. The college's principal focus will be undergraduate and graduate education for traditional and non-traditional students. The LCOB is committed to graduating individuals who possess the communication, critical thinking, and problem-solving skills necessary to meet current needs and the changing demands of a global economy.

The college is dedicated to excellence, academic freedom, and shared governance. It will maintain high standards for student learning and performance. The college will attract and retain faculty who are effective instructors, caring mentors and productive researchers while making contributions to their disciplines and the community.

The mission of the college also includes initiatives for employees and individuals not pursuing degrees. The college will be an active partner in economic development through an emphasis on entrepreneurship and applied research. In achieving its mission, the LCOB will utilize a variety of technology and delivery systems.

### **ACCREDITATION**

The Lewis College of Business is accredited by AACSB: The International Association for Management Education (American Assembly of Collegiate Schools of Business) and the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools.

### **DEGREE PROGRAMS**

Degree programs presently offered include the following: Master of Business Administration (M.B.A.) , Executive M.B.A. (M.B.A.), Master of Science in Industrial and Employee Relations (M.S.) , and Master of Science in Health Care Administration (M.S.).

### **ENTRANCE REQUIREMENTS**

Persons desiring to pursue the degrees of M.S in Industrial and Employee Relations or M.S. in Health Care Administration must follow the procedures and satisfy the conditions of the Marshall University Graduate College as specified in the following sections of this catalog. Persons desiring to pursue the degree of M.B.A. or Executive M.B.A. must follow the specialized procedures described in the following sections.

### **THE PLAN OF STUDY**

The student and his/her advisor shall prepare a Plan of Study which must be approved during the semester in which the student initially enrolls. A plan should be appropriate to meet the needs of the student in his/her chosen field. It shall include the specific courses the student is expected to complete; and shall also list all other requirements of the program or school. Courses listed on the Plan of Study shall be those judged appropriate by the faculty. Subsequent requests for changes in the plan, initiated by the student, may take the form of a memorandum to M.B.A. director but must be formally approved by the M.B.A. director. Any deviation from the final Plan of Study and/or discrepancy between it and the student's official transcript will delay graduation. Any Plan of Study that may have been approved becomes void if a student is inactive for one year (unless on an official leave of absence).

### **Grade Point Average Requirement**

A student must have a 3.0 GPA in all coursework with no more than two C's. This standard must be met for the student to graduate. If the student falls below these standards, then that student shall be placed on academic probation.

### **Comprehensive Assessment**

Degree candidates are required to complete a comprehensive assessment prior to receipt of the master's degree. The timing and form of a student's comprehensive assessment shall be approved in advance by the Director of the Graduate School of Management. The comprehensive assessment is usually a written term paper required within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

### **Course Enrollment Policy**

In order to take any 600-level course in the Graduate School of Management (GSM), the student must be admitted to a GSM program. On an exception basis, a student not enrolled in the GSM may take one and only one 600-level GSM course with the written approval of the GSM advisor or the GSM director. It is the responsibility of the student to obtain this approval before attempting to register. Additionally, the student must meet the specific course prerequisites. Student who violate this policy will be administratively withdrawn.

### **BUSINESS ADMINISTRATION (M.B.A.)**

Qualified candidates are given an opportunity to earn the Master of Business Administration degree. In keeping with its purpose of providing professional preparation and foundation, the M.B.A. program gives emphasis to building a strong fundamental framework and to developing skills in managerial problem-solving and decision-making.

**Program Design:** Business policies and procedures, reflecting rapid advancement in technology, are subject to change over time. Methods and practices in current use may be totally inadequate for coming decades. For this reason, greater emphasis is placed on sound general principles and decision-making techniques which provide a base for continuous learning.

To accomplish this purpose, the program involves:

1. A series of Business Foundation courses which enable the student to continue professional development.

*(continued)*

The foundation courses required will be determined in consultation with the M.B.A. director and/or the Graduate School of Management academic advisor.

2. A broad study of functional areas of business and their interrelationships, with emphasis on application of knowledge, concepts, and analytical methods for problem-solving.
3. Elective subject matter areas to provide for each candidate's specific professional objectives. Within the framework of the basic program, each candidate has considerable choice in selecting an area of professional focus. Areas currently offered are: accounting, economics, finance, health care, industrial and employee relations, marketing, and management.

The program can be completed in 12-18 months, attending on a full-time basis, depending on the candidate's previous training.

The M.B.A. program includes:	Hours
<b>Business Foundation courses</b> , required as determined by the M.B.A. director and/or the GSM academic advisor.	0-18
<b>M.B.A. Functional Studies courses</b>	27
<b>Electives or Thesis</b> (with prior permission)	3-9
<b>TOTAL</b>	36-48

The university reserves the right, even after the enrollment of students, to make individual curricular adjustments whenever serious deficiencies or needs are found. This may involve additional coursework in speech and/or English whenever necessary. Deficiencies will be determined by the M.B.A. program director. Students may be required to take such courses without credit toward the master's degree and at their own expense.

#### ADMISSION TO THE M.B.A. PROGRAM

Full admission to the M.B.A. program requires:

- A bachelor's degree from an accredited institution;
- A minimum Graduate Management Admissions Test (GMAT) score of 500;
- An index of 1000\* computed by multiplying the undergraduate Grade Point Average (GPA) by 200 and adding the GMAT score;
- Completion of all foundation coursework through undergraduate or Foundation Program preparation with a grade of *B* or better in each undergraduate course, a grade of *C* or better in each Foundation Program course, and an overall foundation coursework GPA of 3.0; and
- Demonstrated computer literacy

\*For those applicants who elect to use only upper-level (latter half) undergraduate coursework to calculate the index, the index requirement shall be 1050 or greater. For those who already possess a master's degree and elect to use graduate coursework to calculate the index, the index requirement is 1100.

Applicants meeting all of the above criteria will be fully admitted into the M.B.A. program. This allows them to move immediately into the 36-hour M.B.A. curriculum.

**Provisional M.B.A. Admission.** Applicants who have GMAT scores of 500 or better and have met all of the Business Foundation course requirements but whose overall undergraduate GPA is sufficiently low that the index does not equal 1000 may enroll in the 36-hour M.B.A. curriculum as provisional students with the permission of the M.B.A. director. Applicants who have completed all of the Business Foundation courses with GPA's of 3.00 or better and have GMAT scores between 450 and 500 may enroll in the 36-hour M.B.A. curriculum as a provisional students with the permission of the M.B.A. director, if the index is at least 1050. Applicants who have GMAT scored of 500 or better and who have indexes of 1000 or better, but have no more than two Business Foundation courses to complete, may take no more than two courses from the 36 hour M.B.A. curriculum as provisional students while completing the Business Foundation courses, with the permission of the M.B.A. director. Students who drop the required Business Foundation courses also will be dropped from the M.B.A. courses. Students accepted into the 3+2 Program may take up to, and no more than, three courses from the 36-hour M.B.A. curriculum as provisional students. Students admitted provisionally for any of the above reasons must earn a grade of *B* or better in each of the first four M.B.A. courses taken and an overall G.P.A. of 3.25 in those four courses to be admitted fully into the 36-hour M.B.A. curriculum.



**Admission to the Business Foundations Program.** Applicants who do not meet the standards for full admission into the 36-hour M.B.A. curriculum may still be admitted into the Business Foundations program. This program is open to those people who have no undergraduate background in business or whose GPA or GMAT scores are below the requirements. Participation in this program may be used to meet the requirements for admission into the 36-hour M.B.A. curriculum. There is no GMAT requirement or GPA requirement for admission into the Business Foundations program. Those wishing to complete the 36-hour M.B.A. curriculum, however, must meet the requirements for either full or provisional admission listed above. No grade below a C will be counted toward the requirements of the M.B.A. program.

### COURSES IN THE GRADUATE SCHOOL OF MANAGEMENT FOUNDATIONS PROGRAM

<i>Graduate School of Management Courses</i>	<i>Undergraduate Equivalents</i>
Financial Accounting Accounting 510	Principles of Accounting 6 Hours
Economic Analysis Economics 501	Principles of Economics 6 Hours
Finance Finance 510	Principles of Finance 3 Hours
Statistics/Calculus Management 500	Business Statistics 3 Hours
	Introductory Calculus 3 Hours
Marketing & Management Marketing 511	Principles of Management 3 Hours
	Principles of Marketing 3 Hours
Operations Management Management 520	Operations Management 3 Hours
Proof of computer literacy	Proof of computer literacy

#### Notes

- No student will be admitted to the M.B.A. program who does not hold a degree from a regionally accredited institution.
- GMAT scores must be less than seven years old.
- Applicants with doctoral degrees are not required to take the GMAT.
- The required Business Foundation courses must have been completed within seven years of application.
- Students may complete a required Business Foundation course by making a satisfactory score on the CLEP examination or on the MUGC course validation examination.
- Students must meet all course prerequisite requirements to enroll in Business Foundation or M.B.A. courses.

#### The 36-Hour M.B.A. Curriculum

All students are required to complete 27 hours of M.B.A. Functional Studies courses plus 3-9 hours of electives. These courses must be completed with a GPA of 3.0 (B or better). In addition, each candidate must pass a comprehensive assessment, which is normally a required written term paper within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

**Courses in the M.B.A. Functional Studies (all students in the general M.B.A. must complete these courses):**

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>
MGT 601	Quantitative Methods for Business	3
ACC 613	Profit Planning and Controls	3

*(continued)*



FIN 620	Financial Management	3
MGT 672	Theories of Management	3
MKT 682	Advanced Marketing Management	3
LE 691	Government and Business Relationships	3
MIS 678	Management Information Systems	3
ECN 630	Managerial Economics	3
MGT 699	Business Policy and Strategy	3

*Electives:*

Three to nine (depending on undergraduate preparation) elective hours must be selected from any Business area or from some area outside the Graduate School of Management (with advisor approval); or a thesis may be written. Up to two Foundation Program courses may be used as electives.

**3 + 2 PROGRAMS WITH OTHER UNDERGRADUATE SCHOOLS**

The 3 + 2 Program is designed to allow an undergraduate student who plans to enroll in the Lewis College of Business M.B.A. program immediately following receipt of the baccalaureate degree an opportunity to complete both degrees in five academic years. Marshall University students and students at several other West Virginia undergraduate schools may apply.

Students may apply to the 3 + 2 Program when all eligibility requirements are met. Please see the M.B.A. director for eligibility requirement details. A student accepted into the 3+2 Program is admitted to the M.B.A. program as a provisional students and may take up to three M.B.A. courses for which he or she has met the necessary prerequisites.

In the 3 + 2 Program, undergraduate accounting majors can take valuable graduate coursework and meet requirements for the M.B.A. while completing the 150 hours required by the State of West Virginia to sit for the Certified Public Accountant exam. Please see the M.B.A. director for information concerning an accounting emphasis.

**EXECUTIVE M.B.A.**

The Executive M.B.A. is designed for the employed professional. The Executive M.B.A. is an off-campus program which is undertaken as a cohort program where students move through the courses as a group in a set sequence. While admission standards are the same as for the M.B.A., students in the Executive M.B.A. usually have a minimum of two years of work experience. Course requirements for the Executive M.B.A. are identical to the M.B.A. except Executive M.B.A. students are to complete a foreign study experience.

The Executive M.B.A. offers an intensive format with courses offered on Saturdays in five week blocks. Cohort groups are established at different times and in different locations throughout the state. Those interested in the Executive M.B.A. should contact the M.B.A. director or the Graduate School of Management office for details about when and where cohorts are being formed.

**INDUSTRIAL AND EMPLOYEE RELATIONS (M.S.)**

The Master of Science in Industrial and Employee Relations degree program is designed to prepare graduates for research and administrative positions in both public and private sector human resource management offices, labor unions, other employee associations, and agencies concerned with employer-employee relations. Graduate instruction is provided in human resource management and development; in trade unionism and collective bargaining; and in legal and public policy issues which may relate to any of the preceding. These matters are examined academically within the contexts of social, economic, and political considerations; and are analyzed via the theoretical and empirical contributions of the social/behavioral sciences.

The study of industrial relations is based upon the knowledge and methods developed in a number of traditional areas of study. The major disciplines represented in the program are economics, psychology, sociology, management, and law. Coursework in related fields is available and encouraged.

**Admission to the M.S. Program**

Admission to the M.S. program requires:

- A bachelor's degree from an accredited institution, and
- A minimum Graduate Management Admissions Test (GMAT) score of at least 450 or a minimum on the Graduate Record Examination (GRE) of 1350, and
- An index of 950 computed by multiplying the undergraduate Grade Point Average (GPA) by 200 and adding the GMAT score or 30% of the total GRE score
- Demonstrated computer literacy

**The Industrial and Employee Relations Program**  
**CORE COURSES (Required of all students)**

Course Number	Course Title	Hours
MKT 511	Marketing and Management	3
ECN 501	Economic Analysis	3
MGT 672	Theories of Management	3
MGT 620	Human Resource Management	3
IR 600	The Development of Labor Relations	3
IR 605	Human Resource Economics	3
IR 610	Collective Bargaining	3
IR 615	Arbitration & Grievance Procedure	3
IR 630	Labor Law	3
IR 660	Compensation and Benefits	3
MGT 699	Business Policy and Strategy	3
Total hours in required Core Courses		33
Electives*		3
<b>Total Hours</b>		<b>36</b>

**Electives:** Electives may be taken from any business area with the approval of the academic advisor.

**HEALTH CARE ADMINISTRATION (M.S.)**

The Master of Science in Health Care Administration is designed to provide individuals with a comprehensive perspective of the health care environment. Emphasis is placed on a global view of health care rather than a targeted sector (such as hospitals, nursing homes, etc.) of the industry. Students completing the program frequently pursue employment opportunities in environments ranging from hospitals to medical practices to health insurers/buyers. While the program attracts individuals from all undergraduate disciplines, many of the students have strong clinical backgrounds and are interested in building their management skills with a focus toward their clinical expertise.

**Admission to the Program**

Admission to the M.S. program requires:

- A bachelor's degree from an accredited institution, and
- A minimum Graduate Management Admissions Test (GMAT) score of at least 450 or a minimum on the Graduate Record Examination (GRE) of 1350, and
- An index of 950 computed by multiplying the undergraduate Grade Point Average (GPA) by 200 and adding the GMAT score or 30% of the total GRE score
- Demonstrated computer literacy

**HEALTH CARE ADMINISTRATION**

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>
MKT 511	Marketing and Management	3
HCA 600	The Health Care System	3
HCA 610	Health Care Financial Management	3
HCA 615	Health Care Economics	3
HCA 620	The Ethical Dimension of Health Care	3
HCA 630	Legal Issues in Health Care Management	3
HCA 656	Management of Health Care Technology and Information Systems	3
MGT 620	Human Resource Management	3
HCA 655	Health Care Marketing	3
MGT 672	Theories of Management	3
HCA 750	Field Research in Health Care Management	3
MGT 699	Business Policy and Strategy	3
<b>Total</b>		<b>36</b>

**CHEMICAL ENGINEERING (CHE)**  
**(See Information Technology and Engineering [CITE])**

**CHEMISTRY (CHM)**

**Degrees Offered**

**MASTER OF SCIENCE (CHEMISTRY):** This program is intended primarily for individuals interested in advanced training in chemistry and related disciplines in preparation for doctoral programs or for careers in industry, government, or post-secondary school education. Two routes to the degrees are available.

With Thesis (CHM 682): a minimum of thirty-two semester hours is required, of which no more than twelve may be in Chemistry 682 (Research). The candidate is required to present an acceptable thesis based upon original research. The candidate must also give a public lecture based upon the results of the thesis and give a satisfactory oral defense of the thesis before his committee. All full-time students and students receiving department stipends must elect this route.

With Problem Report (CHM 679): a minimum of thirty-six hours is required, of which none may be in CHM 682 and three must be in Chemistry 679 (Problem Report). This route will be open to students authorized by the department, generally part-time students who are unable to enroll in CHM 682.

No more than six hours of Special Topics may be counted in the minimum hours required by either route; any exceptions require specific Departmental approval.

Students whose research is in the area of organic chemistry are required to take these courses: 565, 566, 548 (or 549 if credit was previously received for 548 or its equivalent), 540 or 542, 522 or 526, and additional courses needed to complete the 32 or 36 credit hour minimum. Students whose research is in the area of analytical, inorganic, and physical chemistry are required to take at least one graduate course in each of the four major areas (analytical, inorganic, organic, and physical): specific course requirements are to be determined in consultation with one's research advisor.

**MASTER OF SCIENCE (PHYSICAL SCIENCE):** This degree program, offered in cooperation with the Departments of Geology, Mathematics, and Physical Science and Physics, is intended to provide a broadly based advanced science program for individuals whose undergraduate program in science lacks depth or breadth.

Programs will be designed to meet individual needs. The writing of a thesis is optional. Specific degree requirements are listed in the section: Physical Science and Physics.

**ADMISSION TO CANDIDACY:** After being admitted to the Graduate College, and prior to registration, the student will meet with his designated advisor to determine the specific program of studies necessary to prepare for admission to candidacy for the degree. Programs will be adjusted to reflect major interests and prior training of the student. Normally, the student will be eligible to apply for admission to candidacy after the satisfactory completion of twelve hours of graduate course work.

**CIVIL ENGINEERING (CE)**  
**(See Information Technology and Engineering [CITE])**

**CLASSICAL STUDIES (CL)**

The Department of Classical Studies offers minor fields of study in Latin and in classics. These minors are appropriate for graduate programs in English and in history.

**COMMUNICATION DISORDERS (CD)**

The graduate program of the Department of Communication Disorders is accredited by the Council on Academic Accreditation (CAA) of the American Speech-Language-Hearing Association. The Department of Communication Disorders offers an M.A. degree. CD majors at the graduate level follow a prescribed program leading to eligibility for national certification in Speech-Language Pathology by the American Speech-Language-Hearing Association and West Virginia licensure. Students wishing to be eligible for West Virginia certification as public school speech-language pathologists must also meet the requirements for such certification.

**Admission to the Program**

The minimum requirements to be considered for admission include the following:

1. A completed application for admission to the Graduate College must be received by the Graduate Admissions Office by the specified deadline and must include official GRE scores and transcripts from all undergraduate schools attended.



2. An undergraduate degree in Communication Disorders from an accredited institution is required. Students with deficits in undergraduate coursework or those wishing public school certification may need to complete additional requirements after admission.
3. An overall and communication disorders grade point average of at least 3.0 is required for full time admission. Students with grade point averages above 2.5 may be considered for part-time enrollment if space permits. Students who are admitted full time may elect to attend full or part time.
4. Submission of a completed application form to the Communication Disorders program (available from the Communication Disorders department).
5. Students with undergraduate degrees from institutions other than Marshall University must submit three letters of recommendation (written on appropriate letterhead) from individuals who can comment on their academic and clinical performance and potential. At least one letter must be from a classroom instructor.
6. Students with undergraduate degrees from Marshall University must submit three names of faculty who will serve as references.

The program admits students once per year. Generally, more students apply than can be accepted; therefore, the selection process is competitive. All completed applications are reviewed in the spring after the specified deadline for submission. Students who are accepted into the program may elect to begin in the next summer, fall, or the following spring semester. Students admitted to the program who fail to enroll in the selected semester, as well as students already in the program who fail to enroll for a semester without prior permission from their academic advisor, are considered withdrawn from the program and not eligible for future enrollment.

**NOTE:** Applicants who are accepted for the graduate program will be simultaneously admitted as students in the Graduate College.

#### **Program Requirements**

A minimum of 33 graduate credit hours of academic coursework (without the thesis) or 30 hours (with the thesis) in addition to a minimum of 8 graded academic hours plus 6 CR/NC hours of clinical practicum (excluding CD 672/673) necessary to complete certification requirements is required for graduation. The Speech-Language Pathology specialty area of the ETS Praxis Series (NESPA) serves as the comprehensive examination which is required for all students. A score of 620 or better is considered passing. In addition to the comprehensive examination, a candidate who writes a thesis will be required to pass an oral examination on the thesis.

Students who apply for clinical practicum assignments are expected to fulfill the responsibilities of these assignments for the full semester. Students who fail to do so may not be assured of future assignments. Students should consult the department chair, their Communication Disorders academic advisor, and the clinic handbook regarding all academic and clinical requirements and standards specific to the program.

#### **COMMUNICATION STUDIES (CMM)**

The M.A. degree in Communication Studies provides an opportunity for students to develop individual programs of theory, research, and application among the areas of interpersonal, organizational, educational, and public communication. The program is designed for students who seek careers as communication professionals or who intend to pursue further graduate study in the field.

To be admitted to the program, students must meet the requirements for admission to the Graduate College. The Director of Graduate Studies in the department will serve as a student's initial advisor. During the first semester of graduate study, each student will form a committee of three graduate faculty members. At least one member of the committee must have full graduate faculty status.

With the approval of the committee, the student will plan a program of study which must include CMM 601 and 606. A total of 36 credit hours is required for graduation. Students who write a thesis may earn six of those credit hours for the thesis. A minor or cognate outside the department may be approved by a student's committee.

A written comprehensive exam, prepared and evaluated by the student's committee, is required. The exam will be prepared and evaluated by the student's committee. A candidate who writes a thesis is also required to pass an oral examination on the thesis.

#### **COMPUTER SCIENCE AND SOFTWARE DEVELOPMENT (CSD)**

Marshall University does not have a master of science program in CSD. Please see Information Systems and Technology Management.



**CONTROL SYSTEMS (CSE)**  
**(See Information Technology and Engineering [CITE])**

**COUNSELING (COUN)**

The Master of Arts degree in Counseling is a 48 to 60 hour planned program of study designed to meet the necessary competencies of professional counselors, and satisfies the curricular requirements for counselor licensure. There are currently five distinct emphases offered within the Counseling Program. An emphasis may differ with respect to admissions, number of credit hours, format for comprehensive examinations, and other requisites. Curricular elements consist of core courses required of all counseling majors and emphasis courses specific to: mental health counseling, student affairs counseling, career counseling, community counseling, correctional counseling, elementary and secondary school counseling. While all core courses are offered on the Huntington and South Charleston campuses, some emphasis courses are not available in all locations.

Admission to the Counseling Program is selective and competitive. Admission decisions for all program applicants are rooted in the specific standards of the Marshall University Graduate College and the minimum standards of the Counseling Program. (See admission standards for each emphasis area). Students are admitted to an emphasis and must indicate their preferences during the admission process.

It is the responsibility of all admitted students to meet with their advisors prior to the beginning of course work. Each student must complete an advisor-approved Plan of Study prior to the completion of 18 semester hours. A minimum grade point average of 3.0 in all degree courses is required prior to enrollment in the practicum, internship, and for graduation.

**Curriculum**

The following 28 to 30 semester hours of core courses are required of all students:

	<b>Course Title</b>	<b>Cr. Hrs.</b>
✓	COUN 600 Professional Orientation	1-3
	COUN 602 Human Development & Psychopathology	3
✓	COUN 603 Counseling Theories	3
	COUN 604 Group Counseling and Theories	3
	COUN 605 Theory & Practice of Human Appraisal	3
	COUN 606 Career & Lifestyle Development	3
✓	COUN 607 Counseling Techniques in Human Relationships	3
	EDF 621 or 625 Research Writing	3
	COUN 574 Social & Cultural Foundations	3
	COUN 608 Practicum	3

\*All emphases (48 to 60 hours) satisfy the curricular requirements for professional counselor licensure in the State of West Virginia.

**Areas of Emphasis**

***To be eligible for admission to the Mental Health Counseling and Student Affairs Counseling emphasis, students must satisfy four of the following six admission standards:***

1. GRE score of 800 (verbal and quantitative subtests)
2. Undergraduate GPA of 2.75
3. Undergraduate major or experience related to counseling
4. Three written references (2 from former or current professors)
5. Writing sample
6. Personal statement of the student's understanding of and interest in the counseling profession

*Students who satisfy four of the six preceding standards must participate in an on-campus interview as a final standard.* Admitted students must complete the required core courses and the following emphasis-specific courses:

### Mental Health Counseling

In addition to the core courses, students specializing in Mental Health Counseling must complete the following emphasis courses:

COUN 630	Introduction to Mental Health Counseling .....	3
COUN 631	Diagnosis and Treatment Planning .....	3
COUN 632	Introduction to Marriage, Couple & Family .....	3
COUN 575	Prevention & Treatment of Addictions .....	3
COUN 601	Counselors in Consulting Roles .....	2
COUN 691	Internship: Mental Health Counseling .....	9
	Advisor Approved Electives .....	9
	Emphasis total .....	32
	<b>Total credit hours (including core) .....</b>	<b>60</b>

### Student Affairs Counseling

In addition to the core courses, students specializing in Student Affairs Counseling must complete the following emphasis courses:

COUN 660	Introduction to Student Affairs .....	3
COUN TBA	College Student Development .....	3
COUN 662	Current Issues in Student Affairs .....	3
	Elective .....	3
COUN 697	Internship: Student Affairs Counseling .....	6
	Emphasis total .....	18
	<b>Total Credit Hours (including core) .....</b>	<b>48</b>

***To be eligible for admission to the Career Counseling, Correctional Counseling, Community Counseling with Addictions Counseling, Marriage, Couples & Family Counseling, Religious Settings Counseling, and School Counseling emphases students must satisfy the following admission standards:***

1. GRE score(quantitative & verbal subtests) or MAT score
2. Undergraduate GPA of 2.75
3. Writing sample
4. *Personal statement of the student's understanding of and interest in the counseling profession*

Admitted students must complete the required core courses and the following emphasis-specific courses:

### Career Counseling

In addition to the core courses, students specializing in Career Counseling must complete the following emphasis courses:

COUN 651	Seminar in Career Counseling .....	3
COUN 652	Career Counseling with Special Populations .....	3
COUN 653	Career Assessment and Report Writing .....	3
	Electives .....	6
COUN 696	Internship: Career Counseling .....	3
	Emphasis total .....	18
	<b>Total Credit Hours (including core) .....</b>	<b>48</b>

### Community Counseling

In addition to the core courses, students specializing in Community Counseling must complete the following emphasis courses:

COUN 611	Foundations of Community Counseling .....	3
COUN 631	Diagnosis and Treatment Planning .....	3
	Electives .....	9
COUN 692	Internship: Community Counseling .....	3
	Emphasis total .....	18

### Community Counseling with Addictions Emphasis

COUN 635	Core Functions of Addiction Counseling .....	3
COUN 617	Seminar in Addictions .....	3
	Electives .....	9
COUN 694	Internship: Addictions Counseling .....	3
	Emphasis total .....	18

### Community Counseling with Marriage, Couples & Family Emphasis

COUN 622	Parent Education .....	3
COUN 632	Introduction To Marriage, Couple & Family Counseling .....	3
COUN 637	Adult Development & Transition .....	3
COUN 636	Couple Counseling .....	3
COUN 638	Practicum: Interventions: Marriage, Couple & Family Counseling .....	3
COUN 693	Internship: Marriage, Couple & Family Counseling .....	3
	Emphasis total .....	18

### Community Counseling with Religious Settings Emphasis

COUN 639	Psychotheological Issues in Counseling .....	3
COUN 640	Seminar in Spirituality in Counseling .....	3
	Electives .....	9
COUN 699	Internship: Religious Settings Counseling .....	3
	Emphasis total .....	18

Total Credit Hours (including core) ..... 48

### Correctional Counseling

In addition to the core courses, students specializing in Correctional Counseling must complete the following emphasis courses:

COUN 641	Seminar in Correctional Counseling .....	3
COUN 695	Internship: Correctional Counseling .....	3
	Electives (9 hrs.) from the following:	
COUN 632	Intro. To Marriage, Couples & Families .....	3
COUN 575	Prevention & Treatment of Addictions .....	3
COUN 555	Crisis Intervention & Conflict Resolution .....	3
COUN 611	Foundations of Community Counseling .....	3
COUN 631	Diagnosis & Treatment Planning .....	3
COUN 556	Death & Grief Counseling .....	3
	or other advisor approved electives	
	Emphasis total .....	18
	Total credit hours (including core) .....	48

### School Counseling

The school counseling curriculum meets the State Department of Education certification standards for a K-12 certification. An alternative school counseling program is available for students without a teacher education background to qualify for West Virginia certification as school counselors. In addition to the core courses, students specializing in School Counseling must complete the following emphasis courses:

COUN 670	Interventions: Current Issues in School Counseling .....	3
COUN 672	Organization & Administration of School Counseling Programs .....	3
COUN 673	Counseling Children, Parents & Adolescents .....	3
	Electives .....	3
COUN 698	Internship: School Counseling .....	6
	Emphasis total .....	18
	Total Credit Hours (including core) .....	48

### Certification Requirements For School Counselors

Students in school counseling must meet certification requirements established by the West Virginia Department of Education. All students must pass the Praxis II: Specialty Area Test (formerly the National Teachers Examination) in School Counseling prior to applying for certification. Applications for certification are available in the central offices of the county school system. An alternative school counseling program certification is available for students without a teacher education background to qualify for West Virginia certification as elementary or secondary school counselors.

Students who do not hold a valid West Virginia teaching certificate (non-education majors) must submit passing scores on the Pre-Professional Skills Tests (PPST) prior to enrollment in courses leading to certification.

Non-education majors must also complete 6 hours of additional coursework from the following:

#### Alternative Certification Courses

LS 530	Human Relations Skills for Leaders .....	3
CI 521	Behavioral Characteristics of Exceptional Children .....	3
Total Credit Hours with Alternative Certification(including core) .....		54

### ADDITIONAL ELECTIVE COURSE OPTIONS

(Courses identified as TBA are new courses in the process of being developed.)

	Course Title	Cr. Hrs.
COUN 555	Crisis Intervention and Conflict Resolution .....	3
COUN 579	Pharmacology in Counseling .....	3
COUN 611	Community Program Development & Intervention .....	3
COUN 556	Death and Grief Counseling .....	3
COUN TBA	Health and Wellness Counseling .....	3
COUN 577	Stress Management Counseling .....	3
COUN TBA	Counseling the Blended Family .....	3
COUN 616	Domestic Violence .....	3
COUN 617	Seminar in Counseling .....	1-6
COUN 545	Beginning Manual Communication .....	3
COUN 554	Advanced Manual Communication .....	3
COUN 620	Workshop in Counseling .....	1-6
COUN 621	Introduction to Child Abuse and Neglect .....	1-3
COUN 622	Parent Education .....	3
COUN TBA	Issues in Counseling Women .....	3
COUN 580-583	Special Topics .....	1-4
COUN 585-588	Independent Study .....	1-4

### EDUCATION SPECIALIST (Ed.S.) - Counseling

The Education Specialist degree in Education (Ed.S.) is designed to accommodate those students who already possess a master's degree in counseling. The program promotes advanced knowledge and skills in the field of professional counseling with a focus on intervention and supervision skills.

A strong component of the program is the attainment of knowledge and skills in three areas: 1) supervision processes, 2) advanced theoretical applications, and 3) advanced internship experiences. A minimum of 27 semester hours beyond the master's degree must be earned for completion of the program.

#### Admission Requirements

All students entering the Ed.S. Program must possess a master's degree in counseling or closely related field, from a regionally accredited university or college, and be eligible for West Virginia certification as a school counselor or licensure as a Licensed Professional Counselor by the West Virginia Board of Examiners in Counseling, and a minimum 3.50 GPA. Students entering the program must have successfully completed coursework at the graduate level in the following areas:

- Human development
- Human relationships: listening and communication skills
- Individual counseling theories and techniques
- Group counseling theories and techniques
- Developmental guidance

(continued)



- Career development
- Organization and development of counseling and guidance
- Legal and ethical issues in counseling
- Consultation
- Research methods
- Tests and measurements

Appropriate counseling and intervention skills evidenced by a portfolio of previously completed courses or professional experiences. Students who are deficient in any or all of the above requirements may be required to complete advisor-approved prerequisite courses or experiences in addition to the 27 hours in the Ed.S. Students will be admitted to the Ed.S. program in the Fall of each year, at which time an individualized plan of study will be developed based on the program requirements and the student's past academic and professional experiences.

### Program Requirements

The Ed.S. program consists of a minimum of 27 hours of prescribed coursework built around competencies considered crucial to the practice of a master professional counselor. Students in the Ed.S. program must earn a grade of at least a B in all coursework. The courses comprising the core curriculum are as follows:

Course Number	Course Title	Cr. Hrs.
COUN 740	Internship .....	6 - 12
COUN 742	Current Issues in Professional Counseling .....	3
COUN 746	Systems Intervention .....	3
COUN 747	Advanced Group Counseling .....	3
COUN 750	Seminar .....	3
COUN 755	Models of Counselor Supervision .....	3
COUN 756	Residency in Counselor Supervision .....	3
COUN 760	Special Topics .....	3 - 6
<b>Total for Ed.S. ....</b>		<b>27</b>

### CRIMINAL JUSTICE (CJ)

The Criminal Justice Department is committed to those items enumerated in the mission statements of Marshall University and its College of Liberal Arts. First and foremost, the Criminal Justice Department strives to prepare future leaders by providing undergraduate and graduate students with a quality liberal arts criminal justice education. This education includes critical thinking skills, problem solving skills, research skills, language/communication skills, and development of students' intellectual capabilities. The Criminal Justice Department is committed to (1) applied and basic research; (2) leadership and public service to the community; and (3) developing insight into multicultural and global issues.

Students will be admitted to the Master of Science degree program in Criminal Justice in the Fall or Spring semesters. Prospective students must complete an application for admission, which will be considered by the Criminal Justice Department faculty. Admission will be determined by the full time faculty members in the Criminal Justice department.

All applicants must complete the Graduate Record Examination (GRE) prior to admission. For applicants with an undergraduate overall Grade Point Average of 3.0 or higher, a GRE score of 1200 is required. For applicants whose undergraduate overall Grade Point Average is between 2.5 and 2.99, a GRE score of 1500 is required. Applicants with an undergraduate GPA of less than 2.5 may petition the faculty for admission. Decisions will be made on a case-by-case basis, considering the strength of the application and GRE score.

In addition, all applicants must have completed no less than fifteen hours of undergraduate Criminal Justice credit (not including statistics) and three hours of statistics. Students who are required to complete the Test of English as a Foreign Language (TOEFL) exam must have a score of 550 or higher.

Prior to admission into the graduate program in Criminal Justice, students must satisfactorily complete a qualifying writing sample. This writing sample must be completed during the semester prior to initiating graduate study. Students who need to complete the writing sample must contact the graduate advisor in the Criminal Justice Department to make arrangements. Writing samples will be evaluated by the Criminal Justice faculty on a pass/fail basis for content and writing style.

Criminal Justice graduate students must apply for candidacy. To be eligible for candidacy in Criminal Justice, a student must have met all requirements of the Graduate College, and (1) have earned no fewer than

nine, and no more than eighteen hours of graduate credit at Marshall University, with a Grade Point Average of 3.0 or higher, including at least three hours of Criminal Justice core courses (CJ 603, 604, 621, 655, 656).

All graduate students must complete at least eighteen hours of 600-level courses, including CJ 603, 604, 621, 655, and 656. All graduate students must maintain a 3.0 graduate Grade Point Average. In addition, students must complete a minor of at least six hours in another graduate area.

## EDUCATION-CURRICULUM AND INSTRUCTION (CI) (Teacher Education)

### Teacher Licensure in West Virginia

With the exception of the Master of Arts in Teaching Program, the master's degree and professional development programs described herein *do not* result in *initial* licensure in West Virginia. Students seeking initial West Virginia licensure are advised to consult with their advisors regarding appropriate programs and courses.

### EARLY CHILDHOOD, ELEMENTARY AND SECONDARY EDUCATION

The goal of the Early Childhood, Elementary and Secondary Education programs is to provide a coordinated, sequential program of study in an identified area of education. Programs provide the student with a foundation in research, evaluation, instructional methods, technology, human development and learning. This foundation supports knowledge, skills, and understanding developed through concentrated study in a specialized area. These programs are designed to produce a trained teacher as a specialist.

#### Admission Requirements

Individuals seeking admission to the Early Childhood, Elementary and Secondary Education program may apply as degree or professional development students.

**Degree:** Students requesting admission to the Master of Arts degree program in early childhood, elementary or secondary education must satisfy the following requirements:

1. Submission of a transcript verifying a baccalaureate degree from a regionally accredited college or university; and
2. Submission of Graduate Record Examinations (GRE) General Test or Miller Analogies Test (MAT) scores; applicants should score 800 or above on the verbal and quantitative sections of the GRE or at least 30 on the MAT.

Multiple criteria are used in arriving at decisions to admit students to the master's degree programs in Early Childhood, Elementary and Secondary Education. Each applicant is evaluated with reference to the following criteria: 1) undergraduate grade point average; 2) GRE or MAT scores; and 3) performance on any prior graduate courses. Flexibility is maintained in applying the criteria to individual cases. In practice, superior performance on one criterion may compensate for failing to meet the required standard on another. The applicant may be granted provisional enrollment and directed to complete selected courses. If a 3.00 grade point average is maintained in those courses, then the applicant will be admitted to the degree program.

**Professional Development:** For those students not seeking a master's degree there are professional development programs which require the completion of a specified sequence of courses. The early education, middle childhood education, and math through Algebra I professional development programs lead to endorsements on teaching certificates. Entrance requirements for professional development programs include the following:

1. A baccalaureate degree from a regionally accredited college or university; and
2. An undergraduate grade point average of 2.5 or a master's degree

### A. DEGREE PROGRAM IN EARLY CHILDHOOD EDUCATION

The Master of Arts in Early Childhood Education consists of a set of core course requirements, area of emphasis requirements, and a capstone experience. All students must complete 15 hours of coursework in research, growth and development, technology, instructional methods and assessment. Each student must also select an area of emphasis consisting of 18 hours of required and elective coursework. The capstone experience is the program component through which students demonstrate their ability to synthesize and apply the problem solving, research and writing capabilities developed throughout the program. Students may meet the capstone experience requirement by either completing a research project (Final Symposium: CI 659 and CI 680) or satisfactorily completing a written comprehensive examination and six hours of coursework.

Two options for advanced studies in Early Childhood are available:

1. The Master's Degree in Early Childhood Education designed for those who are licensed Early Education (Pre K-K) teachers.
2. The Master's Degree in Early Childhood Education designed for those who are licensed Elementary teachers with no endorsement in Early Education.

Hours may vary, depending on the student's undergraduate program. For those earning an endorsement in Early Childhood (Pre K-K) under Option 2, a practicum and a passing grade on the Praxis II: Specialty Area Test in Early Education (Pre K-K) is required. Candidates with three or more years of teaching experience must consult the Director of Clinical Experiences to determine if they qualify for a performance assessment.

**Option 1: The Master's Degree in Early Childhood Education designed for those who are licensed Early Education (Pre K-K) teachers**

<b>Core Subjects:</b> EDF 621 or 625; EDF 616; CIEC 530 or 534 or 600 or 660; CI 623 or 624 or approved methods course; EDF 612 or CI 609 or CI 501 .....	15
<b>Specialty:</b> CI 653, CI 631, CI 632, CI 633, CI 634, FCS 603 .....	18
Capstone Experience .....	6
<b>TOTAL</b> .....	<b>39</b>

**Option 2: The Master's Degree in Early Childhood Education designed for those who are licensed Elementary teachers with no endorsement in Early Education.**

<b>Core Subjects:</b> EDF 621 or 625; EDF 616; CIEC 530 or 534 or 600 or 660; CI 623 or 624 or approved methods course; EDF 612 or CI 609 or CI 501 .....	15
<b>Specialty:</b> CI 632, CI 633, CI 634, FCS 535, EDF 513, CI 630 .....	18
Capstone Experience .....	6
<b>TOTAL</b> .....	<b>39</b>

**B. ELEMENTARY EDUCATION**

The Master of Arts in Elementary Education consists of a set of core course requirements, area of emphasis requirements, and a capstone experience. All students must complete 15 hours of coursework in research, growth and development, technology, instructional methods and assessment. Each student must also select an area of emphasis consisting of 18 hours of required and elective coursework. The capstone experience is the program component through which students demonstrate their ability to synthesize and apply the problem solving, research and writing capabilities developed throughout the program. Students also will meet the comprehensive assessment requirement through the framework of the capstone experience.

<b>Core Subjects:</b> EDF 621 or 625; EDF 616; CIEC 530 or 534 or 600 or 660; EDF 612 or CI 609 or CI 501; CI 623 or 624 or approved methods course .....	15
Area of Emphasis .....	18
Capstone Experience .....	6
<b>TOTAL</b> .....	<b>39</b>

**Areas of Emphasis include (descriptions in Section I):**

1. Instructional Processes and Strategies
2. Math through Algebra I
3. Educational Computing
4. Reading Specialist
5. Special Education (MI, BD, LD, VI, and Gifted)
6. Middle Childhood Education
7. Elementary Science
8. Early Childhood Education
9. Literary, Language, and Learning
10. Teaching English as a Second Language (ESL)
11. Individualized Plan of Study



### Capstone Experience:

Students may meet the capstone experience requirement by either completing a research project (Final Symposium: C1 659 and C1 680) or satisfactorily completing a written comprehensive examination and six hours of coursework.

## C. SECONDARY EDUCATION

The Master of Arts in Secondary Education consists of a set of core course requirements, area of emphasis requirements, and a capstone experience. All students must complete 15 hours of coursework in research, growth and development, technology, instructional methods and assessment. Each student must also select an area of emphasis consisting of 18 hours of required and elective coursework. The capstone experience is the program component through which students demonstrate their ability to synthesize and apply the problem solving, research and writing capabilities developed throughout the program. Students also will meet the comprehensive assessment requirement through the framework of the capstone experience.

<b>Core Subjects:</b> EDF 621 or 625; EDF 616; CIEC 530 or 534 or 600 or 660; C1 623 or 624 or approved methods course; EDF 612 or C1 610 or CI 501 .....	15
Area of Emphasis .....	18
Capstone Experience .....	6
<b>TOTAL</b> .....	<b>39</b>

### Areas of Emphasis include (descriptions in Section I):

1. Instructional Processes and Strategies
2. Math through Algebra I
3. Educational Computing
4. Reading Specialist
5. Special Education (MI, BD, VI, and LD)
6. Middle Childhood Education
7. Teaching English as a Second Language (ESL)
8. Individualized Plan of Study

### Capstone Experience:

Students may meet the capstone experience requirement by either completing a research project (Final Symposium: C1 659 and C1 680) or satisfactorily completing a written comprehensive examination and six hours of coursework.

## D. SPECIAL EDUCATION

### Admission Requirements—Special Education

Students seeking admission as degree or professional development students must submit all official transcripts from all colleges and universities attended. All applicants must minimally have an overall undergraduate GPA of 2.5. In addition, for full admission to the program applicants must meet *one* of the following three requirements:

- An overall undergraduate GPA of 3.0 or
- A score of 800 on the Graduate Record Examinations (GRE) or
- A score of at least 30 on the Miller Analogies Test (MAT). This requirement is waived for applicants holding a graduate degree.

If for any reason the student is admitted provisionally, he/she must maintain a Grade Point Average of 3.25 for the 12 hours of study.

A master's degree may be earned with a specialization in one of the areas of emphasis listed below. Students without a background in education must acquire certification in regular education prior to endorsement in Special Education. The Preschool Special Education endorsement is exempt from this requirement.

### Program of Study - M.A. in Special Education

1. Master's Degree Requirements (Preschool Special Education, see # 5)  
EDF 616, EDF 621 or 625 and either the Research Option (CISP 611 and CISP 615)  
or the Practitioner Option CISP 627 and CISP 629 .....

(continued)



2.	Special Education Core: CISP 520, CISP 535, and CISP 626 (CISP 535 and CISP 626 are not required for the degree in gifted) .....	9
3.	Certification Area (select one) .....	9
	Behavioral Disorders (excluding Autism) CISP 524, CI 645, CI 649	
	Behavioral Disorders (including Autism) CISP 524, CISP 645, CISP 649, CISP 527, CISP 662	
	Mentally Impaired CISP 533, 553, 651	
	Specific Learning Disabilities CISP 523, CI 646, CI 647	
	Gifted CISP 526, 601, 602, 603	
	Vision Impaired (special education core not required) CIVI 500, 501, 502, 503, 504, 505, 506	
4.	Electives .....	0-9
<b>Total hours</b> .....		<b>36</b>
5.	Preschool Special Education	
	General Education: EDF 621 or 625 and CI 629 .....	6
	Early Childhood Education: CI 632 and CI 634 .....	6
	Special Education: CISP 520, CISP 529, CISP 554, CISP 661, CISP 663, CISP 665, CISP 666, CISP 673, CISP 674 .....	27
<b>Total hours for Preschool Special Education</b> .....		<b>39</b>

### Additional Certification Requirements

All Special Education majors must pass the Praxis II Test in the area(s) in which they seek endorsement. The Special Education Content Specialization Test is taken at or near the end of the certification coursework in Special Education. Students should contact the Special Education Program Area for additional information about these tests.

## E. READING EDUCATION

### 1. Degree Students

Students seeking admission as degree students must meet the following criteria:

- Undergraduate grade point average of 2.5;
- Undergraduate course in human development and at least one course in reading; and
- Graduate Record Examinations (GRE) General Test verbal score of 400 and a total score of 800 (recommended) or an equivalent score on the Miller Analogies Test (MAT).

### Program of Study - M.A. in Reading Education

For the master's degree, curriculum blocks must be completed in the following sequence:

#### Block I: Foundation Courses

CIRG 653, CIRG 636, CIRG 644, EDF 621 (taken within first 12 hours), PSY 672 or EDF 619 .....

#### Block II: Clinical Preparation (PR: all of Block I)

CIRG 637, CIRG 654, CIRG 613 or CIRG 614, CI 609 or CI 501 or CI 610 .....

#### Block III: Clinical Practice

CIRG 643 (PR: all of Block II) .....

#### Block IV: Capstone Courses (PR: Block III)

CIRG 621, CIRG 642 .....

**Total** .....

### Education Specialist-Reading

The goal of the Education Specialist (Ed.S.) program is to provide a unified sequence of graduate studies for school and related personnel who wish to achieve proficiency beyond the master's level in Reading Education. Successful completion of the program leads to an Ed.S. in Education degree. Please contact the Reading Education program faculty for additional information.

### 2. Professional Development Students

A student who holds a master's degree in education and seeks a Reading Specialist endorsement to the teaching certification completes 21 credit hours within the Reading program. Students should contact the Reading Education program area for information.

## F. MASTER OF ARTS IN TEACHING

The Master of Arts in Teaching (MAT) degree program is an alternative and accelerated means for college graduates with degrees in liberal arts, fine arts, business, and professional fields to attain teacher certification. The program provides the professional education courses and clinical experiences, including student teaching, necessary to prepare individuals for teaching a specific content area in grades K-12, 5-12 or 9-12. Program completion results in the awarding of a Master of Arts in Teaching degree. Recommendation for certification typically takes place at the same time, unless there are West Virginia Department of Education requirements still pending. Please note that the MAT program does not offer certification in Elementary Education or Special Education. (An endorsement in Special Education may be added after the initial content certification is earned.)

### Admission Requirements

1. Students must complete all admission requirements, which include: application, application fee, official transcripts, and the Graduate Record Examinations (GRE) or Miller Analogies Test.
2. Students must have a transcript analysis completed for the content specialization.
3. Students must have completed at least 50 percent of the content specialization prior to admission.
4. Students must take and pass the Praxis I (PPST) in reading, writing, and mathematics. This requirement may be waived for applicants who present an enhanced ACT score of 26 or higher, a re-centered SAT score of 1125 or higher, or a previously earned master's degree or higher.
5. Students must have a 2.50 GPA overall and a 2.50 GPA in the content specialization.

### Program Options and Degree Requirements

#### 1. Master of Arts in Teaching - Grades K-12

- Art Education
- Physical Education
- Music Education

Foundation ..... 15 Hours

EDF 621 or 625, PE 670, or ATE 677, Research and Writing ..... 3

EDF 560, 565, or 615 - Social and Cultural Foundations ..... 3

EDF 616, Advanced Studies in Human Development ..... 3

EDF 537, Clinical I - Lab to accompany EDF 616 ..... 0

EDF 619, Educational Psychology ..... 3

CIEC 530, 534, 600, or 660, Instructional Technology ..... 3

Curriculum and Instruction ..... 24 Hours

CI 503, Methods and Materials of Teaching in the Middle Childhood Grades ..... 3

CISP 521, Children with Exceptionalities ..... 3

CI 515, Integrated Methods and Materials ..... 3

EDF 637, Clinical II - Lab to accompany CI 515 ..... 0

CI 624, Advanced Instructional Strategies ..... 3

CI 631, Current Influences on Early Childhood ..... 3

CIRG 644, Teaching Content Reading ..... 3

EDF 677, Clinical III - Student Teaching ..... 6

In addition to the above courses, students also must complete all courses in their teaching specialization.

**TOTAL** ..... **39 Hours**

#### 2. Master of Arts in Teaching - Grades 5-12

- Art Education
- Athletic Training
- French
- Health Education
- Consumer and Homemaking
- English
- Mathematics
- Oral Communications (Speech)
- Physical Education

(continued)

- General Science
- Social Studies
- Spanish

Foundations of Education ..... 15 Hours

EDF 621 or 625, PE 670, or ATE 677, Research and Writing .....	3
EDF 560, 565, or 615, Social and Cultural Foundations .....	3
EDF 616, Advanced Studies in Human Development .....	3
EDF 537, Clinical I - Lab to accompany EDF 616 .....	0
EDF 619, Educational Psychology .....	3
CIEC 530, 534, 600, or 660, Instructional Technology .....	3

Curriculum and Instruction ..... 24 Hours

CI 501, Middle Childhood Curriculum .....	3
CI 503, Methods and Materials of Teaching in the Middle Childhood Grades .....	3
CISP 521, Children with Exceptionalities .....	3
CI 515, Integrated Methods and Materials .....	3
EDF 637, Clinical II - Lab to accompany CI 515 .....	0
CI 624, Advanced Instructional Strategies .....	3
CIRG 644, Teaching Content Reading .....	3
EDF 677, Clinical III - Student Teaching .....	6

In addition to the above courses, students also must complete all courses in their teaching specialization.

**TOTAL** ..... 39 Hours

3. *Master of Arts in Teaching - Grades 9-12*

- Biology
- Business
- Chemistry
- Journalism
- Latin
- Marketing
- Physics
- Safety

Foundations of Education ..... 15 Hours

EDF 621 or 625, PE 670, or ATE 677, Research and Writing .....	3
EDF 560, 565 or 615, Social and Cultural Foundations .....	3
EDF 616, Advanced Studies in Human Development .....	3
EDF 537, Clinical I - Lab to accompany EDF 616 .....	0
EDF 619, Educational Psychology .....	3
CIEC 530, 534, 600, or 660, Instructional Technology .....	3

Curriculum and Instruction ..... 24 Hours

CISP 521, Children with Exceptionalities .....	3
CI 515, Integrated Methods and Materials: Secondary Education .....	3
EDF 637, Clinical II, Lab to accompany CI 515 .....	0
CI 624, Advanced Instructional Strategies .....	3
CIRG 644, Teaching Content Reading .....	3
Approved Electives (selected from content area in which student is to be certified)	6
EDF 672, Clinical III - Student Teaching .....	6

In addition to the above courses, students also must complete all courses in their teaching specialization.

**TOTAL** ..... 39 Hours

## G. EDUCATION SPECIALIST (Ed.S.) - Curriculum and Instruction

### Introduction

The Education Specialist Degree in Curriculum and Instruction is earned by completion of specified coursework and experiences with the recommendation of the student's advisory committee.

### Objectives

The following objectives may be met by the program of studies leading to the degree.

1. Give directed study for courses leading to salary classification M.A. + 15, M.A. + 30, and M.A. + 45.
2. Extend the applicant's teaching and professional skills .
3. Provide additional endorsements (if directed in this way).
4. Prepare the applicant for additional roles such as department chairperson, curriculum planner and lead teacher.

### Entrance Requirements

1. Possess M.A. in education.
2. Be admitted to the Marshall University Graduate College.

### Admission and Program Activities

1. Following admission the student will:
  - a. Select an advisory committee to help plan and develop his/her program (minimum of three members).
  - b. The student's advisory committee may include a member outside the department if the professional objectives call for such.
  - c. Submit a letter of intention, indicating the objectives for pursuing the program.
2. Work required for completion of the program shall be determined by the advisory committee in consultation with the student. Courses may be selected outside the field of education with the approval of the advisory committee. The number of hours to be completed beyond the M.A. will be 30-36. The program of studies adopted by the student and the committee shall be filed with the graduate dean and the chairman of the department.
3. Other departments may be consulted relative to courses that will be useful in helping the student meet his/her objectives.
4. Transfer of credit from other graduate schools to be applied toward the program shall be left to the discretion of the student's advisory committee up to a maximum of 12 hours.
5. A thesis may be written by the student. The total number of hours may be reduced by the student's committee up to a maximum of six hours.
6. The student shall be required to take either a written comprehensive examination or a general oral examination in keeping with planned objectives. These examinations will be given under the supervision of the advisory committee as the final step in completing the program.

Upon the completion of the program, the student will be awarded a Marshall University degree of Education Specialist.

## H. ADDITIONAL CERTIFICATION FOR TEACHERS

Teachers who want to add another teaching endorsement may do so by completing the course requirements, a performance assessment at the appropriate grade level, and the appropriate Praxis II test.

### I. PLANS OF STUDY FOR AREAS OF EMPHASIS/PROFESSIONAL DEVELOPMENT PROGRAMS

#### 1) Instructional Processes and Strategies:

EDF 610, CI 623, CI 624, CIEC 530 or 534, CI 539, CI 551, CI 657, and CI 671.

TOTAL ..... 24 hrs.

*(continued)*



- 2) **\*Math through Algebra I:** This concentration is available to teachers who hold a valid professional license in any area other than mathematics. Satisfactory completion of the required courses, and passing the Praxis II meets the requirements for certification.  
CIME 555, CIME 556, CIME 557, CIME, 558, CIEC 600, CIME 570, CIME 575 or CIME 577  
**TOTAL** ..... 21 hrs.
- 3) **Educational Computing:** The program focuses on instructional applications and classroom utilization of computing.  
CIEC 534 or CIEC 530 or CIEC 660, CIEC 600, CIEC 610, CIEC 620, CIEC 630, CIEC 699, and an approved elective.  
**TOTAL** ..... 21 hrs.
- 4) **\*Reading Education, (completion of an M.A., satisfactory completion of the required courses by sequence and passing the Praxis II meets the requirements for certification):**  
Block I: CIRG 636, CIRG 644;  
Block II: CIRG 637, CIRG 654;  
Block III: CIRG 643;  
Block IV: CIRG 642, 621  
**TOTAL** ..... 21hrs
- 5) **\*Special Education: (satisfactory completion of the required and passing the Praxis II meets the requirements for certification).**  
Core courses: CI 520, CI 535, CI 626, and one area of emphasis from the following:  
Behavioral Disorders (excluding Autism) CI 524, CI 645, CI 649  
Behavioral Disorders (including Autism) CI 524, CI 645, CI 649, CI 527, CI 662, CI 664  
Mental Retardation CI 533, CI 553, CI 651;  
Specific Learning Disorders CI 523, CI 646, CI 647;  
Gifted (GRE of 900 required) CI 526, CI 601, CI 602, CI 603 (Core course is only CI 520).
- 6) **\*Middle Childhood Education:** The concentration in middle childhood education provides a certificate endorsement program for elementary and secondary teachers who have met initial licensure requirements. The endorsement will allow teachers to provide instruction in grades 5-9 within their area(s) of specialization.  
The coursework in this program may be used as an area of emphasis within the master's degree program in Elementary Education or Secondary Education or may be completed as a separate Professional Development program. Individuals who wish to take the endorsement program but not pursue a master's degree should apply to the Professional Development program in middle childhood education. Teachers selecting this option must have an initial content specialization or complete a new one. Elementary Education is not a content area for 5-9 or 5-12. Passing the Praxis II is required.  
CI 501, CI 503, EDF 502, CI 672  
**TOTAL** ..... 12 hrs.
- 7) **Elementary Science Education:** This concentration combines theory, research, and practical applications to enhance content knowledge and strategies and techniques of delivering instruction through the use of hands-on, discovery/inquiry teaching.  
CISE 571, CI 657, CIEC 600, CISE 576 or CISE 577, CISE 572 or CISE 573, CISE 570 or CISE 574 or CISE 575, and an approved elective.  
**TOTAL** ..... 21 hrs.
- 8) **\*Early Childhood Education:** This concentration combines theory, research, and practical applications to child development and early childhood education. It is designed for teachers who wish to pursue a master's degree with an emphasis in early childhood education, as well as teachers who wish to add a Pre K-K endorsement to their professional licensure. Teachers who hold K-6 or K-8 certificates and wish to pursue a master's degree with an early childhood education emphasis will complete the following courses:  
CI 632, CI 633, CI 634, FCS 535, EDF 513, CI 630.  
**TOTAL** ..... 18 hrs.

- 9) **Literacy, Language, and Learning:** This combines theory, research, and practical applications in the areas of speaking, listening, writing, and reading. It is designed to help teachers explore literacy within an interactive and student-centered framework.

CI 550, CI 551, CI 539, CI 636, one additional reading course with advisor approval,  
two electives with advisor approval.

**TOTAL** ..... 21 hrs.

- 10) **Individualized Plan of Study:** Students selecting a planned program must complete the curriculum course CI 501, CI 609, or CI 610 appropriate for their certification.

## **J. SCHOOL PSYCHOLOGY (see separate section on page 121)**

### **DIETETIC INTERNSHIP (DTS)**

Post-baccalaureate study to qualify to take the registration exam to become a Registered Dietitian (RD) is available. Students who have an undergraduate major in Dietetics may be selected to enroll in the Accredited Dietetic Internship Program to receive the supervised practice component required before taking the exam. Enrollment is by a selective, competitive process. The internship has been granted full accreditation by the American Dietetic Association, Commission on Accreditation/Approval for Dietetics Education, 216 West Jackson Boulevard, Suite 800, Chicago, IL 60606-6995, telephone (312) 899-4876.

### **ELECTRICAL ENGINEERING (EE)**

(See Information Technology and Engineering [CITE])

### **ENGINEERING (M.S.E.)**

(See Information Tehnology and Engineering [CITE])

### **ENGINEERING AND SCIENCE (E&S)**

(See Information Technology and Engineering [CITE])

### **ENGINEERING MANAGEMENT (EM)**

(See Information Technology and Engineering [CITE])

### **ENGLISH (ENG)**

Graduate courses in English provide detailed consideration of authors, literary types, and periods of literary history, as well as English language history and linguistics. Students are expected to acquire a broad acquaintance with the whole range of English and American literature and the English language and to become thoroughly familiar with the forms of literature, critical standards, and the materials and methods of literary research.

Each candidate for the Master of Arts in English must select an area of specialization. The areas include the literature of the following periods: Medieval; Renaissance and 17th Century; Restoration and 18th Century; Romantic and Victorian; 19th Century American; Modern British and Modern American. Other areas are: Language and Linguistics; Critical Approaches to Literature; Genre Study; Writing. The candidate may complete the specialization by taking three courses in an area or by taking two courses and writing a thesis in an area. In addition to this specialization each candidate must take at least one course in four other areas.

Students who major in English must have at least 15 undergraduate hours in English and American literature. Students taking English as a minor must have six hours' credit in literature on the undergraduate level. Students with deficiencies may enroll for graduate work but may be asked to take undergraduate courses suggested by the department before admission to candidacy for the degree. A minimum of six hours of college credit in a foreign language or demonstrated reading ability to the satisfaction of the English Department is required for admission to candidacy.

Students may be provisionally admitted to the M.A. in English program without having taken the GRE General Test, but to receive full admission, they must take the GRE during the first semester of study at Marshall.

English 630 is required for a major in English and is offered in the fall semester. This course should be scheduled among the first 12 hours of graduate study.

To complete the work for the master's degree in English the candidate must take 36 hours of coursework or, with a thesis, 32 hours, six of which may be earned by writing the thesis. The required grade average is 3.0 (B), and the candidate must pass a comprehensive examination upon the completion of the coursework.

Graduate students in English should discuss their programs frequently with the Director of Graduate Programs. Further and more particular information may be found in the document, "A Handbook for Graduate Students in English," available from the English Department.

**ENVIRONMENTAL ENGINEERING (ENVE)**  
(See Information Technology and Engineering [CITE])

**ENVIRONMENTAL MANAGEMENT (ENVE)**  
(See Information Technology and Engineering [CITE])

**ENVIRONMENTAL SCIENCE (ES)**  
(See Information Technology and Engineering [CITE])

**FINANCE (FIN)**  
(See Business)

**FAMILY AND CONSUMER SCIENCE (FCS)**

Acceptance into the program of study for the Master of Arts in Family and Consumer Sciences requires a minimum of 12 hours of undergraduate coursework in Family and Consumer Sciences or closely related courses. Students who do not have sufficient background may fulfill the requirement by completing approved undergraduate Family and Consumer Sciences sufficient to assure success in Family and Consumer Sciences graduate studies. Students shall consult the program coordinator for approval of prior coursework before admission to the program.

The Master of Arts in Family and Consumer Sciences requires 32 semester hours of graduate work, of which not more than 6 hours may be earned by a thesis. If a thesis is not submitted, a minimum of 36 hours of coursework must be completed. Each graduate is expected to conduct independent research through a special problem and problem report or thesis. Courses in statistics and research methods are required of all students. EDF 517, 621, and 625 are often selected.

A minimum of 18 hours in Family and Consumer Sciences is required, including FCS 600. It is recommended that students complete two of the following courses: FCS 601, 602, 603, 604, 605, or 606. The remaining hours are planned to meet the individual student's professional needs. One minor with a minimum of 9 hours is required. Prospective students should contact the Family and Consumer Sciences program coordinator for further information.

**FORENSIC SCIENCE (FSC)**  
(also see Biomedical Sciences)

The Master of Science degree in Forensic Science is a two-year curriculum and requires the successful completion of 47-50 credit hours, for both the non-thesis and thesis track. The thesis track stresses a research component where students conduct original research and write a thesis based on their investigations. The non-thesis track, requires that electives be taken in lieu of thesis research hours. In addition to forensic science courses, all students are required to take Human Biochemistry, Cellular and Molecular Biology, and Statistics, which are offered through the Biomedical Sciences Program or other departments. Class attendance is mandatory. Students must pass a written, comprehensive examination at the end of their final semester.

Students who wish to enroll in the Forensic Science master's degree program must apply for admission through the Graduate College. They must meet the admission requirements of the Graduate College and the Graduate Studies Committee of the Joan C. Edwards School of Medicine at Marshall University. Interested persons should contact the Forensic Science Center, 1401 Forensic Science Drive, Huntington, WV 25701. Additional information is available on the World Wide Web site: [www.meb.marshall.edu/forensics/](http://www.meb.marshall.edu/forensics/).

All applicants must have baccalaureate degrees in the sciences with the following basic coursework: one year each of general biology, physics, chemistry, and organic chemistry, all with the associated laboratories.



Applicants must provide to the Office of Research and Graduate Education, as part of a formal application, the scores from the Graduate Record Examination for the General Aptitude with a total minimum score of 1,500. Three letters of reference from individuals familiar with the applicant's relevant academic/professional performance and character are also required.

An internship is a requirement of the Program and is completed during the summer following the first year. The Program does not guarantee a graduate stipend to defray expenses, therefore, it is the responsibility of the student to assume any additional expenses.

The Forensic Science master's degree program has program and laboratory fees that the student will be required to pay before taking particular classes.

### FRENCH (FRN)

Courses may serve as a minor in some programs.

### GEOGRAPHY (GEO)

Students wishing to earn a master's degree in geography have the option of selecting either a M.A. or M.S. degree. While the core requirements are the same for both degrees, the M.S. degree requires that the student obtain a minor in the College of Science and take an additional statistics course. The M.S. option allows students to specialize in a more technical/science-based program leading to employment in environmental planning, computer cartography, GIS/remote sensing, conservation, or physical geography. Both degree options prepare the graduate for advanced work at the doctoral level.

By tailoring the program to the specific needs of the individual student, offering a flexible curriculum, and keeping our offerings updated with changes in the field and the job market, many of our students secure employment as professional geographers before graduation. Graduates of the program include urban and regional planners, cartographers, environmental specialists, economic development consultants, city/county government workers, and international trade consultants, just to name a few.

The undergraduate prerequisite for a graduate major is 12 semester hours of geography. For undergraduate social science majors three semester hours of work in another field closely related to geography may be accepted toward meeting the 12-hour admission requirement.

In general, requirements for admission to candidacy are identical with those required by the Graduate College, except that the department may require a qualifying examination and/or a personal interview. Requirements for the master's degree consist of meeting the general requirements and completing not fewer than 24 hours in geography. At least one-half of the hours must be earned in 600 series courses.

A major must include:

	Hours
Geography 529 and 530 .....	6
Geography 505 or 605 .....	3
Geography 602 or 604 or 608 .....	3
Geography 603 .....	3
Geography 606 or 609 .....	3
Geography 620 .....	3

### GEOLOGY (GLY)

Master's of Science (Physical Science): This degree program is offered in cooperation with the Departments of Chemistry, Mathematics and Physical Science and Physics. Programs will be designed for individual needs. For the Geology concentration, the writing of a thesis is required.

For admission to the Physical Science Master's program, an applicant must hold a baccalaureate degree from an approved, accredited institution of higher learning with a minimum GPA of 3.0 in their major.

Consult with the Chair of the Department of Geology to obtain information about other requirements. Refer also to the requirements listed in the section: Physical Science and Physics.

In addition, the Department offers coursework leading to a minor in Geology which is appropriate to the programs in Biological Sciences, Chemistry, Geography and Physical Science.

### HEALTH AND PHYSICAL EDUCATION (Division of Exercise Science, Sport and Recreation)

The Division of ESSR offers graduate degrees in Health and Physical Education (M.S.) and Exercise Science (M.S.). Each of those degree programs has distinct areas of emphasis. The Health and Physical Education degree offers areas of emphasis in (1) Athletic Training, (2) Athletic Administration, (3) Park Resources and Leisure Services, and (4) Physical Education. The Exercise Science program has two areas of emphasis (1) Clinical Applied Area: Adult Fitness/Cardiac Rehabilitation and (2) Exercise Physiology.

Both programs require from 32 to 39 hours and successful completion of an oral comprehensive examination. Both thesis and non-thesis options are available.



Admission to the programs in good standing is different for both programs. However, students applying for all programs must have successfully completed an undergraduate course in either exercise physiology or human physiology. This requirement needs to be completed within the first 18 hours of graduate study. Also students are limited to six or fewer hours of transfer credit from other institutions, and limited to a maximum of three courses taught at the 400/500 level.

### A. Exercise Science, MS Degree

Research clearly shows that seventy percent (70%) of all premature death and chronic disability could be prevented with appropriate life-style changes. This includes sensible nutrition, exercise, smoke cessation, and related behavioral changes. Such intervention and risk factor management can significantly reduce all-cause mortality and morbidity from cardiovascular disease, diabetes, osteoporosis, obesity, mental health disorders, and cancer. Our quality of life, as well, can be improved and our chances for longevity increased. Because of the awareness and the skyrocketing cost of contemporary treatment-oriented health care, allied health professionals are becoming major players in an alternative approach emphasizing health promotion, disease prevention, and rehabilitation.

The Division of Exercise Science, Sport and Recreation offers the Master of Science in Exercise Science to prepare students for allied health careers in the community, hospital and medical center, corporate wellness, cardiopulmonary rehabilitation settings, and related research positions. Preparation for such careers includes an emphasis on leadership roles and skills that permit one to work with individuals on a client/patient/subject continuum extending from the elite athlete to those with chronic disorder/disease to the cardiac transplantation patient as well as the in between - the recreational athlete and those simply wishing to stay healthy by living sensibly.

The course of study is a two-year program with a 39-hour requirement. Admission to the program requires a 2.75 GPA, an appropriate undergraduate/graduate background, completion of the GRE, a personal interview, three letters of reference, and admission to the Graduate College. The Clinical Applied area of emphasis requires completion of a clinical internship. The Exercise Physiology area of emphasis requires completion of a thesis or an exercise science internship.

#### COURSE REQUIREMENTS

<i>Clinical Applied Area: Adult Fitness/Cardiac Rehabilitation Emphasis</i>	Hours
Minimum requirements .....	39
Physical Education: 621, 670, 682, 683, 684, 685, 687 .....	21
Restricted Electives: FCS 508; COUN 577, PE 578, 586, 601 .....	9
Research Course: EDF 517, 621, 625, PSY 623, 624, MGT 500, MKT 683 .....	3
Clinical Internship (Physical Education 660) .....	6
<i>Exercise Physiology Emphasis Area</i>	Hours
Minimum requirements .....	39
Physical Education: 578, (585, 586, 587, 588; independent studies) 601, 621, 651, 670, 683, 684 .....	27
Research Course: EDF 517, 621, 625, PSY 623, 624 .....	3
Restricted Electives .....	3
Thesis (PE 681) .....	6

### B. Health and Physical Education, MS Degree

Admission to the Health and Physical Education programs is the same as to the Graduate College with the exception that students must have successfully completed an undergraduate course in exercise physiology or human physiology or must do so within the first 18 hours of their graduate program.

If the thesis option is selected the student must complete 32 hours of which six hours are for the thesis. The non-thesis requires the completion of 36 hours. However both options require the successful passing of an oral comprehensive examination. Programs illustrated below are the non-thesis option:

Athletic Training Emphasis .....	36
Physical education required: PE 621, 670 .....	6
Research Course: EDF 515, 621, 625, PSY 623 or 624 .....	3
Physical Education 522, 576, 578, 622, 636, 642, 646, 647 .....	24
FCS 540 .....	3

Athletic Administration Emphasis .....	36
Physical Education 621, 670 .....	6
Research Course: EDF 517, 621, 625, HST 600, MGT 500 or MKT 683 .....	3
Physical Education (Select from among) PLS 511, HE 530, PE 501, 525, 524, 575, 576, 578, 615, 620, 622, 624, 626, 642, 643, 652, 660 and/or Special Topics & Independent Study .....	21
External Minor .....	6
Park Resources and Leisure Services Emphasis .....	36
Physical Education Required: PE 621, 670 .....	6
Research Course: EDF 517, 621, 625, HSY 600, MGT 500 or MKT 683 .....	3
HPER Electives: PLS 501, 502, 510, 511, 521, 530, 531 .....	21
(Additional courses selected with advisor's approval)	
External Minor .....	6
Physical Education Emphasis .....	36
Physical Education Required: PE 621, 670 .....	6
Research Course: EDF 517, 621, PSY 623 or 624 .....	3
Physical Education Elective (Select courses with the approval of advisor) .....	21
External Minor .....	6

### HISTORY (HST)

Students who have not completed an undergraduate major in history must have at least 15 hours of undergraduate courses in history, including 12 hours in the World and American history surveys. Students with deficiencies may enroll for graduate work but may be asked to take undergraduate courses suggested by the Director of Graduate Studies before admission to the degree program.

A student pursuing the Master of Arts degree in history must submit a Plan of Study in the semester no later than the completion of 18 graduate credit hours. A student must earn a quality point average of at least 3.0 (B) on all graduate work applicable to the degree. The application, bearing a record of courses completed, must be made on a form secured from the Graduate Dean's Office.

A student who receives a second grade of C or below at any time while pursuing the Master of Arts degree in History must withdraw from the program. In addition, M.A. students in History must earn at least a 3.0 (B) grade point average in all History courses as a requirement for graduation.

A history student whose program requires a thesis must earn 32 hours of credit in graduate courses. Of these 32 hours, credit not to exceed 6 hours may be granted for the thesis. The student must enroll in History 681 Thesis 1-6 hours, for which he or she is allowed not more than 6 hours of credit. A history student whose program does not require a thesis must complete 36 hours of graduate course work.

A minimum of 30 hours must be earned in the major field and a minimum of 6 hours in a minor field. Students choosing a minor field must do so with the approval of the departmental Director of Graduate Studies. On recommendation of the Graduate Dean the requirement of a minor may be waived. History students are required to complete History 600 Methodology Seminar in Historical Methods. Students must earn credit hours in as many 600 level courses as in 500 level courses.

All graduate students must have an MUnet account and demonstrate proficiency in computer literacy.

It is recommended that students earn credit hours in a wide distribution of historical areas and periods from a diversity of instructors.

The Graduate Record Examination (GRE) General Test is required of all applicants to the graduate program in History. The GRE scores must be sent by the Educational Testing Service directly to Marshall University when the student applies for admission.

### HOME ECONOMICS (See Family and Consumer Sciences)

### HUMANITIES

The Master of Arts in Humanities stresses an interdisciplinary approach, embracing a variety of fields, while allowing conventional disciplinary studies as an integral part of the program. Students consult with faculty advisors to determine individual plans of study. After completing a prescribed core of humanities courses, the student elects one of four areas of emphasis (Arts and Society; Cultural Studies; Historical Studies; Literary Studies). Although the student's plan may encompass courses from more than one area of emphasis, it will have strong intellectual coherence. The program enhances the student's ability to deal

critically and flexibly with intellectual, social, political, historical, literary, or artistic issues with a broad humanistic perspective.

The Humanities Program strongly encourages students not concerned with pursuing the degree (such as teachers using classes for certification and those who want to take courses for their own continuing education) to enroll as non-degree students.

Students seeking a Master of Arts in Humanities should apply as degree students. Applicants to the degree program must meet the following requirements: (a) a score of 450 or above (40%) on the verbal section of the Graduate Record Examination (GRE) General Test or an equivalent score on the Miller Analogies Test (MAT); (b) an undergraduate major in the humanities, and (c) an overall undergraduate grade point average of 3.0 on a scale of 4, or a score in or above the 40th percentile in one of the following areas of the Graduate Record Examination Subject Tests: French, German, Spanish, history, literature in English, music, philosophy.

Applicants who do not meet these requirements may gain admission to the degree program by completing the following provisions: a grade of B or above in their first twelve hours of coursework in the humanities, the twelve hours to include the course in Expository Writing for Research (Humanities 604) and one other core course (Humn 600, 601, 602, 603, or 605).

Degree students have the options of a thesis or final project. Those electing the thesis complete a total of 36 hours, six of which are the thesis (HUMN 680 and 681). Students electing the project option complete a total of 39 hours, three of which are the project (HUMN 680). With both options, students must pass a comprehensive examination. All individual plans of study are organized according to the following general structure: I. Humanities Core (12 hours): Humn 600 and 604 and two others (Humn 601, 602, 603, or 605); II. Area of Emphasis (minimum of 15 hours); III. Program Electives (3-12 hours); IV. Independent Research Project (3 hours) or Thesis (6 hours). Within an area of emphasis, a student may select courses to develop personal interests. Note: Not all courses are offered at every teaching site. Students should understand that some plans of study may require travel to other teaching sites in West Virginia.

No more than twelve hours may be taken at the 500-level. A student nearing the completion of a plan of study may request an independent study course on a topic unavailable through regular courses. In such a case, the student will work under the direct supervision of a faculty member. The student's advisor and the program director must approve the independent study.

Degree students are expected to maintain a 3.0 grade point average in their courses. After a minimum of 24 hours of course credits and consultation with the advisor, a student is eligible to sit for the examination which is related to the core and to the individual plan of study. Note: Students may not enroll in Humanities 680 until they have passed the comprehensive examination.

For further information on the degree program (sample plans of study, comprehensive examination, and independent research options), students should consult the Humanities Program Guide, available from the program director in South Charleston. Because degree students in Humanities have individualized plans of study, they are cautioned to contact the program director when applying for graduate study and to meet regularly with their advisors.

*Note:* Course Listings for Humanities begin on page 173. Some courses in Art, Classics, Communication Studies, English, History, Journalism and Mass Communications, and Philosophy also may be appropriate for the plan of study in Humanities.

## INFORMATION TECHNOLOGY AND ENGINEERING (CITE)

The College of Information Technology and Engineering (CITE) has offices on both Huntington and South Charleston campuses. CITE offers master's degree programs and professional development short courses in the areas of Engineering, Information Technology, Environmental Science, Safety, and Technology Management. Following are the master's degree programs offered:

Engineering (M.S.E.) with Areas of Emphasis in:

- Chemical Engineering
- Engineering Management
- Environmental Engineering

Environmental Science (M.S.)

Information Systems (M.S.)

Safety (M.S.) with Areas of Emphasis in:

- Ergonomics
- Industrial Hygiene
- Occupational Safety and Health
- Mine Safety
- Safety Management



Technology Management (M.S.) with Areas of Emphasis in:  
Environmental Management  
Information Technology  
Manufacturing Systems

### ADMISSION PROCESS

The admission process to CITE master's degree programs is similar for three of the degrees: Engineering, Environmental Science, and Information Systems, but different for the Safety and Technology Management degrees. Details are provided in the following paragraphs.

#### Admission to Engineering, Environmental Science, and Information Systems:

Each applicant for admission to the Engineering, Environmental Science, and Information Systems programs in the College of Information Technology and Engineering must have an undergraduate degree from an accredited college or university, and must satisfy at least TWO of the following criteria:

- Score at the mean or above on the verbal GRE
- Score at the mean or above on the quantitative GRE
- Score at the mean or above on the analytical GRE
- Score at the mean or above on the Miller Analogies Test (not applicable for MSE program)
- Have an undergraduate GPA of 2.75 or above
- Have passed the FE exam and/or the P.E. exam

Also, foreign nationals must score at the mean or above on the TOEFL, and must have met all CITE admission criteria *prior to* registering for the first semester of courses.

In addition, all applicants for the M.S.E. must hold an ABET-accredited engineering degree. Please consult the Environmental Science and Information Systems sections for specific admission requirements for the Environmental Science and Information Systems degrees respectively.

#### Admission to Safety:

Please see program description.

#### Admission to Technology Management:

For regular admission, applicants to the program must complete the following *prior to* registering for the first semester of courses:

- 1) Have an undergraduate GPA of 2.5 or greater. There is no stipulation concerning the undergraduate major; however the degree must be from an accredited college or university.
- 2) Achieve a minimum score on the GRE of 1500, or 450 on the GMAT. Foreign nationals must also score at the mean or above on the TOEFL.
- 3) Submit a written summary (2 typewritten pages maximum) of educational and professional experiences, and career goals related to the TM program, including the Area of Emphasis the applicant is interested in pursuing.
- 4) Complete an interview with the TM program director or designee, with part of the interview consisting of discussion of the written summary.

### DEGREE REQUIREMENTS

Each degree candidate is required to complete at least 36 graduate credit hours (45 for the Safety emphases in Ergonomics and Industrial Hygiene and 37 for Technology Management) with a cumulative Grade Point Average of 3.0 for the courses included in the student's Plan of Study. Each degree-seeking student must have an approved "Plan of Study," developed with a CITE faculty advisor, that must be filed with the Dean of the Graduate College, 113 Old Main, no later than the semester in which the student completes the 9<sup>th</sup> credit hour. Please consult the Academic Regulations portion of the graduate catalog for other information.

The Engineering, Environmental Science, Information Systems, and Technology Management programs culminate with the comprehensive graduate project. This project is not the traditional graduate thesis with a research orientation, but rather a real-life, industry-type project in which the student undertakes an assignment that requires synthesis of all of the course work and its application to a typical problem from a relevant subject area.



### **Engineering, Environmental Science, and Information Systems final project:**

Students will work toward completion of the final project by completing two courses, TE 698 and TE 699, which are two-credit hours each. In the TE 698 course, a real-world problem or concept is selected by each student as the basis of their comprehensive project and a subject proposal is submitted for approval. Students with approved subject proposals are permitted to register for the final course, TE 699, to complete work on the final project. The comprehensive project must be finalized during the term in which the student is registered for TE 699. Students who fail to show satisfactory performance in the comprehensive project courses (TE 698,699) will be required to repeat the course. Completion of the final project includes an effectively written, well-documented report that presents an original solution, and an oral presentation of the project to a faculty committee. Students should work closely with their advisor to ensure that all final project deadlines are met. Please consult the specific program descriptions for further details.

For the Technology Management Capstone Project please consult the program listing later in this section.

## **ENGINEERING**

The M.S. in Engineering (M.S.E.) program is an interdisciplinary engineering program designed to meet the specific needs of engineers employed in industry, government, and consulting. The program offers a broad core curriculum with opportunities for concentrated study in three areas of emphasis: Chemical Engineering, Engineering Management, and Environmental Engineering.

### **Admission Requirements**

See "Admission Process" in previous CITE section.

### **Degree Requirements**

Engineering students are required to complete 36 credit hours, consisting of 15 credit hours of core courses (which includes completion of a comprehensive project), plus 21 additional hours of required courses and electives in the applicable area of emphasis.

#### **Core courses:**

EM 660	Project Management .....	3 hrs.
ENGR 610	Applied Statistics .....	3 hrs.
ENGR 620	Computer Applications (or approved equivalent) .....	3 hrs.
TE 601	Technology and Engineering Seminar .....	2 hrs.
TE 698	Comprehensive Project I .....	2 hrs.
TE 699	Comprehensive Project II .....	2 hrs.

#### **Requirements for areas of emphasis:**

##### *Chemical Engineering:*

CHE 675	Process Safety .....	3 hrs.
CHE 660	Process Synthesis & Conceptual Design .....	3 hrs.
CHE 630	Applied Engineering Mathematics .....	3 hrs.
	Four elective courses in chemical or environmental engineering .....	12 hrs.

##### *Engineering Management:*

MGT 620	Human Resources Management (or TM/EM equivalent) .....	3 hrs.
EM 675	Engineering Economics (or TM equivalent) .....	3 hrs.
EM 601	The Management Process .....	3 hrs.
IE 670	Operations Management .....	3 hrs.
	Three approved CITE elective courses .....	9 hrs.

##### *Environmental Engineering:*

ES 614	Risk Assessment .....	3 hrs.
ENVE 681	Environmental Engineering Design .....	3 hrs.
ENVE 615	Environmental Chemistry .....	3 hrs.
ES 660	Environmental Law .....	3 hrs.
	One of the following courses:	
	Air Pollution Design, Air Pollutant Dispersion Modeling,	
	Environmental Geotechnology, Groundwater Principles .....	3 hrs.
	Two approved elective courses .....	6 hrs.

## ENVIRONMENTAL SCIENCE

In this degree program, students from diverse science backgrounds apply their knowledge and skills to such environmental problems as air pollution and control; water pollution and treatment; groundwater protection, contamination and remediation; solid and hazardous waste management; and the indoor (workplace) environment. The environmental science program gives the student the broad multi-disciplinary subject matter and analytical tools necessary to be successful in such professions as consulting, industrial environmental management and environmental protection.

### Admission Requirements

In addition to the general admission requirements listed under "Admission Process" in the previous CITE section, the applicant must have taken at least seven, but preferably twelve, courses in any of the scientific specialties involved in dealing with the environment, including biology, chemistry, engineering technology, epidemiology, geography, geology, industrial hygiene, environmental law, environmental health, soil science, statistics, toxicology, and applications to the environment in law and medicine.

### Degree Requirements

Students must complete 36 graduate credit hours at the graduate level, including at least 24 credit hours at Marshall University. The degree consists of 12 credit hours of core courses; 12 credit hours of required courses; and 12 credit hours of electives.

#### Core courses:

EM 660	Project Management
ENGR 610	Applied Statistics
TE 601	Technology and Engineering Seminar – within first 9 hours
TE 698	Comprehensive Project I – after completion of 18 hours
TE 699	Comprehensive Project II – after completion of 27 hours

#### Required courses:

ES 614	Risk Assessment
ENVE 615	Environmental Chemistry (or ES 646 or ES 673)
ES 660	Environmental Law (or ES 662 or ES 655)
ES 620	Environmental Management Systems

**Electives:** Students are required to use the electives to satisfy the proficiency requirements (see below). Students in the MS Environmental Science program are required to take 12 elective/proficiency credit hours:

- TWO Environmental Science program electives
- ONE division elective (an approved course in the division)
- ONE CITE elective (an approved course in CITE)

### Proficiency Requirements

In order to work effectively and professionally in a multi-disciplinary field such as this one, environmental scientists must deal with many more subjects, and interact with professionals in many more disciplines, than is the case in a traditional discipline. In this degree specialty, students must show the faculty that they possess the necessary professional maturity and proficiency. In particular, the student must have knowledge of the behavior of the natural environment (ES 646 or ES 651), analytical measurement of chemicals (ES 605), mathematics (including calculus), computation, including microcomputer spread-sheet and database applications. Many students will meet these requirements based on undergraduate courses or job experience, and the courses listed in parentheses will not be required. Other students will meet these requirements by including these courses in their specialty electives. For a few students, additional graduate courses may be necessary in order to satisfy all of the proficiencies. Courses taken in calculus and microcomputer applications will not count toward the required 36 credit hours of graduate work needed for the degree.

## INFORMATION SYSTEMS

The Information Systems program prepares people to be effective users, designers, and developers of information systems, people who can add value to processes and products in organizations. The program also helps participants to improve their professional writing, presentation, and teamwork abilities. Specific objectives expected of graduates include:

- The ability to describe a situation as a system, specifying components, boundaries, and interfaces
- Communication skills for effectively leading teams, collaborating with managers in defining needs and opportunities, and assisting colleagues
- Knowledge of the basic hardware and software components of computer systems and their configurations

(continued)

- The ability to develop specifications for a software system in terms of functions, modules, and interfaces
- The ability to gather and use information needed by information systems professionals
- Mastery of the technical and human skills needed to successfully deploy information technologies in various organizational settings.

### Admission Requirements

Applicants with a wide variety of backgrounds are welcome. Applicants must fulfill the CITE admission procedures. In addition, an applicant wishing to major in Information Systems should have the following credentials and abilities:

- Ability to write structured programs in a high level language and familiarity with batch and interactive computer systems
- A reasonable quantitative or mathematical maturity. College algebra and statistics with a grade of *B* would minimally meet this requirement
- Ability to use microcomputer systems for word processing, spreadsheet analysis, telecommunications, and data management
- Reasonable communication skills demonstrated by being able to write a coherent, grammatically correct, short theme that clearly communicates an idea.

### Prerequisites

Prospective students without the skills outlined above should take the following courses or their equivalent before entering the degree program:

- Computer Systems and Programming: IS 500 and 510 - Computer Systems and Structured Programming I and II
- Mathematical Maturity: College algebra or IE 610 - Statistical Design
- Communication Skills: This need will normally be addressed by E&S 611 - Technical Seminars. In some cases, additional work may be required.

### Degree Requirements

Students must complete 36 graduate credit hours at the graduate level, including at least 24 credit hours at Marshall University. The degree consists of 12 credit hours of core courses; and 21 credit hours of required courses and electives.

#### Core courses:

IS 605	Systems Analysis Techniques
EM 660	Project Management
TE 601	Technology and Engineering Seminar – within first 9 hours
TE 698	Comprehensive Project I – after completion of min. 18 hours
TE 699	Comprehensive Project II – after completion of min. 27 hours

#### Required courses:

IS 621	Information Structures 1
IS 622	Information Structures 2
IS 623	Database Management
IS 610	Systems Design

#### Electives:

Three or more elective courses approved by the student's advisor complete the program. In addition to Information Systems courses, these may include courses offered by other majors and by other institutions.

## SAFETY (SED)

No human endeavor or undertaking can be done without involving the field of safety. Safety professionals work in a variety of situations alongside management to ensure the health and safety of all employees.

The graduate curriculum in Safety is divided into several areas of emphasis: Ergonomics, Industrial Hygiene, Occupational Safety and Health, Safety Management, and Mine Safety. The Master of Science degree is a two-year program with a 36 hour or more requirement. A thesis may be submitted which would require 32 semester hours of graduate coursework with no more than 6 hours to be earned by the thesis.



The areas of emphasis in Ergonomics and Industrial Hygiene require a maximum of 45 semester hours to complete.

Admission to the program requires a 2.50 GPA, an appropriate undergraduate/graduate background, two letters of recommendation, a one-page admission essay and admission to the Graduate College. Additionally, all students entering the program must have completed prior to admission the following courses or their equivalent: Chemistry 211, Physics 101 and Math 130 with a grade of C or better. This requirement may be waived by passing a department entrance examination on the above subjects with a minimum score of 75%. The areas of emphasis in Ergonomics and Industrial Hygiene have different or additional entrance requirements.

An appropriate undergraduate/graduate degree or major is basically any safety, business, nursing, or science degree. All other majors are deemed "not acceptable." However, having a non-appropriate degree does not prevent or eliminate a student from applying for admission. Students wishing to enter the program may be required to take additional undergraduate safety courses as suggested by the faculty to overcome any academic deficiencies. Such courses might be SED 372, SED 373, and SED 378. All students, (except students with undergraduate degrees in safety) will be required to enroll in SED 505, "Introduction to Occupational Safety and Health," to help them become familiar with the field.

A final (written) comprehensive examination is administered to all candidates, thesis and non-thesis, by a committee of three members of the graduate faculty, including the student's advisor. The student who fails to pass the comprehensive examination on a given attempt will be allowed to retake the exam or may be asked to enroll in courses as determined by his committee to strengthen perceived weaknesses. If a student fails to appear at the appointed time to take the comprehensive examination the program may assign a grade of U (unsatisfactory), unless the student contacts the department within forty-eight (48) hours prior to the examination with an acceptable excuse.

Finally, the Safety Technology program maintains a policy whereby students cannot continue in a graduate program if they earn more than two grades of C or lower in any graduate course. Safety students who earn a third C (or lower) will not be permitted to continue taking courses, or to work on a thesis.

The deadline for submission of applications to the program is as follows: November 1 for admission to the Spring term; April 15 for admission to the Summer term, and May 10 for the Fall term.

#### Emphasis: Occupational Safety and Health

<i>Required Courses</i>	Hours
SED 540 Industrial Fire Prevention .....	3
SED 589 Process Safety Management .....	3
SED 597 Occupational Safety and Health Programs .....	3
SED 598 Environmental Safety and Health Legislation .....	3
SED 599 Occupational Safety Program Management .....	3
SED 610 Philosophical and Psychological Concepts of Occupational Safety and Health .....	3
SED 630 Current Literature and Research in Occupational Safety and Health .....	3
SED 647 Industrial Hygiene .....	3
SED 660 Human Factors in Accident Prevention .....	3
Electives: Permission of Advisor or Chairman .....	9
<b>Total</b> .....	<b>36</b>

#### Emphasis: Safety Management

<i>Required Courses</i>	Hours
CMM 508 Leadership and Group Communication .....	3
PSY 518 Psychology of Personnel .....	3
PSY 520 Introduction to Industrial-Organizational Psychology .....	3
SED 554 Industrial Environmental Protection .....	3
SED 597 Occupational Safety and Health Programs .....	3
SED 599 Occupational Safety Program Management .....	3
SED 610 Philosophical and Psychological Concepts of Occupational Safety and Health .....	3
SED 630 Current Literature and Research in Occupational Safety and Health .....	3
SED 660 Human Factors in Accident Prevention .....	3
Electives: Permission of Advisor or Chairman .....	9
<b>Total</b> .....	<b>36</b>

(continued)



## Emphasis: Industrial Hygiene

<i>Safety Core</i>	Hours
MTH 581 Biostatistics .....	3
SED 589 Process Safety Management .....	3
SED 599 Occupational Safety Program Management .....	3
SED 600 Occupational Epidemiology .....	3
<i>Required for Area of Emphasis</i>	
SED 557 Biological Monitoring .....	3
SED 647 Industrial Hygiene .....	3
SED 647L Quantitation Industrial Hygiene Lab .....	3
SED 648 Industrial Ventilation .....	3
SED 649 Physical and Biological Hazards .....	3
SED 651 Industrial Toxicology .....	3
SED 652 Industrial Noise and Vibration .....	3
SED 660 Human Factors in Accident Prevention .....	3
Plus one of the following options:	
<i>Option 1</i>	
SED 679 Problem Report .....	3
Electives (see below) .....	6
<b>Total for Option 1</b> .....	<b>45</b>
or	
<i>Option 2</i>	
SED 681 Thesis .....	6
<b>Total for Option 2</b> .....	<b>42</b>
<i>Electives:</i>	
SED 553 International Safety and Health	
SED 554 Industrial Environmental Protection	
SED 554L Industrial Environmental Auditing/Programming	
SED 558 Hospital Safety	
<i>Others as approved by advisor.</i>	

## Emphasis: Ergonomics

<i>Safety Core</i>	Hours
MTH 581 Biostatistics .....	3
SED 589 Process Safety Management .....	3
SED 599 Occupational Safety Program Management .....	3
SED 600 Occupational Epidemiology .....	3
<i>Required for Area of Emphasis</i>	
PSY 506 Psychometrics .....	3
PSY 520 Introduction to I-O Psychology .....	3
PSY 540 Physiological Psychology .....	3
PSY 616 Human Memory and Information Processing .....	3
PE 636 Structural Kinesiology .....	3
SED 660 Human Factors in Accident Prevention .....	3
SED 661 Advanced Occupational Ergonomics .....	3
SED 662 Methods in Work Analysis .....	3
Plus one of the following options:	
<i>Option 1</i>	
SED 679 Problem Report .....	3
Electives (see below) .....	6
<b>Total for Option 1</b> .....	<b>45</b>
or	
<i>Option 2</i>	
SED 681 Thesis .....	6
<b>Total for Option 2</b> .....	<b>42</b>
<i>Electives:</i>	
SED 554 Industrial Environmental Protection	

SED 554L, Industrial Environmental Auditing/Programming  
 SED 575 Systems Safety Engineering  
 SED 630 Current Literature and Research in OSH  
*Others as approved by advisor.*

### MINE SAFETY (MSF)

The Master of Science Degree in Safety with an area of emphasis in Mine Safety is based on the competencies needed by mine safety and management personnel and mine safety compliance personnel. The program is designed for underground, auger and surface mining as applicable to all components of the mining industry, including metallic and non-metallic products. Special emphasis is provided for the type of mining in which students, are engaged.

Admission to the graduate program with the Mine Safety area of emphasis is dependent upon the student satisfying the minimum admission requirements established by the Graduate College. The Master of Science Degree requires 32 semester hours of graduate work, of which not more than 6 hours may be earned by a thesis. If a thesis is not submitted, a minimum of 36 hours of course work must be completed.

A final (written) comprehensive examination is administered to all candidates by a committee of three members of the graduate faculty, including the student's advisor. The student who fails to pass the comprehensive examination on a given attempt may be asked to enroll in courses as determined by his committee before taking the examination again. In the thesis safety option students must also take a comprehensive written examination.

Prior to admission to candidacy all students must have completed courses or equivalent courses in general safety education, first aid, and personal health with the consent of the department.

The Mine Safety graduate program is sponsored jointly with the National Mine Safety and Health Academy, Beckley, WV.

Required Courses	<i>Hours</i>
MSF 510 Survey of Mining .....	3
MSF 511 Mine Safety Program Analysis .....	3
MSF 512 Mine Safety and Health Legislation .....	3
MSF 514 Hazard Control in Mining .....	3
EDF 621 Educational Research and Writing .....	3
or equivalent course in research methodology such as VTE 670	
Mine Safety Electives .....	15
Electives .....	6
<b>Total</b> .....	<b>36</b>

### TECHNOLOGY MANAGEMENT

The M.S. in Technology Management degree program is designed primarily for working professionals with both technical and non-technical backgrounds who want a better understanding of technological change and its relevance to competitiveness and business strategy. Program course work has a practical emphasis, with real-world projects designed to develop skills that can be put to use on the job immediately. Courses are currently available in both Huntington and South Charleston. All courses necessary to complete the M.S. in Technology Management in any of the available emphases will be offered at both sites, and other locations upon demand.

#### Program benefits:

- Learn how to evaluate and use technology to meet changing customer needs and markets
- Learn how to weigh the costs/benefits of technology decisions
- Understand the effects of technological change on organizations and how to help people adapt to change
- Learn about technology life cycles and how to evaluate emerging technologies
- Explore common problems of management and organizations--and their relationships to technology
- Understand the interrelationships of quality, productivity, and technology
- Network with other professionals

### **Degrees Awarded**

M.S. in Technology Management with emphasis in Environmental Management; M.S. in Technology Management with emphasis in Information Technology; M.S. in Technology Management with emphasis in Manufacturing Systems; M.S. in Technology Management with emphasis in Biotechnology Management (in planning)

### **Admission Requirements**

See "Admission Process" in previous CITE section.

### **Degree Requirements**

Degree requirements consist of eight core courses (22 semester hours), four area-of-emphasis courses (12 semester hours), and a capstone project (3 semester hours), for a total of 37 semester hours. You must have the Technology Management advisor's approval to enroll in Technology Management degree program courses.

### **Core Courses**

TM 600 Program Introduction Seminar  
TM 610 Technology and Innovation Management  
TM 612 Economic and Financial Analysis for Technology Management  
TM 615 Information Technology Strategies  
TM 620 Technology Planning  
TM 630 Quality and Productivity Methods  
TM 650 Human Resources in Technology Management  
EM 660 Project Management

Completion of these eight core courses will qualify a participant for a certificate in technology management, if he/she elects not to complete the degree.

Each student pursuing the degree selects an area of emphasis, consisting of four courses. Currently the following emphases are available:

#### *Environmental Management:*

Environmental Regulations  
Environmental Risk Assessment  
Environmental Management Systems

One course selected from among:

Hazardous Waste Management, Environmental Site Assessment,  
or Geographic Information Systems

#### *Information Technology:*

Computing and Information Systems Technologies  
Communication and Network Technologies  
Multimedia Production and Electronic Information Dissemination

One course selected from among:

Geographic Information Systems, Health Informatics,  
Software Engineering

#### *Manufacturing Systems:*

Quantitative Methods for Business and Technology  
Operations Management for Business and Technology  
Applied Computer Integrated Manufacturing  
Modern Manufacturing Concepts

The capstone technology management project (TM 699) will be work-related, oriented toward the area of emphasis, and jointly directed by a workplace supervisor and an academic advisor.

## **INDUSTRIAL ENGINEERING (IE) (See Information Technology and Engineering [CITE])**

**INFORMATION SYSTEMS (IS)**  
**(See Information Technology and Engineering [CITE])**

**INSTRUCTIONAL TECHNOLOGY AND LIBRARY SCIENCE (ITL)**

Marshall University does not have a master's degree or certification in Library Science.

**JOURNALISM AND MASS COMMUNICATIONS (JMC)**

The W. Page Pitt School of Journalism and Mass Communications offers a flexible program designed to accommodate persons with or without an undergraduate degree in journalism and mass communications or professional media experience. Career interests should include one or more of the following: advertising, broadcast journalism, print journalism, public relations, radio-television, and journalism education. Admission requirements for the M.A.J. degree are as follows:

1. Applicants who complete their bachelor's degree program with a 3.0 or higher cumulative Grade Point Average (based on a 4.0 maximum scale) must have a minimum score of 1200 on the Graduate Record Examinations General Test.
2. Applicants who completed their bachelor's degree program with a 2.25 to 2.99 cumulative Grade Point Average (based on a 4.0 maximum scale) must have a minimum score of 1500 on the Graduate Record Examinations General Test.
3. International student applicants, in addition to meeting the requirements of either No. 1 or No.2 above, must have a minimum score of 525 on the Test of English as a Foreign Language (TOEFL).
4. International student applicants who are unable to complete the Graduate Record Examination before admission will be permitted to complete it during their first semester of enrollment.

During the first term of residence, students must plan with the graduate coordinator a detailed program of courses and discuss other requirements for the Master of Arts in Journalism degree. Students are responsible for learning and for meeting all requirements, guidelines and deadlines included in the Graduate Catalog. Students are required to complete EDF 517 (not required if student completed an acceptable statistics course before enrolling in the master's program); Journalism 601, Theory of Mass Communications, and Journalism 602, Mass Communications Research and Methodology. Some courses are not required of recent journalism and mass communications graduates who have taken the courses, but master's degree candidates who are not required to repeat these courses still must prepare themselves to pass the law, history, and ethics sections of the comprehensive examination. Otherwise, the other required courses are JMC 502, Law of Mass Communication, or JMC 535, Radio-Television Law & Regulation; JMC 504, History of American Journalism & Mass Communications; and JMC 540, Mass Communications Ethics. International students are not required to take JMC 504.

The remainder of each student's program is determined in consultation with and approval from the graduate coordinator. Professional track students must complete a minimum of 36 graduate hours (plus any undergraduate courses deemed by the graduate coordinator to be necessary) and the comprehensive examination.

Thesis track students must complete a minimum of 27 graduate hours (plus any undergraduate courses deemed necessary by the graduate coordinator), a five-credit-hour thesis, and the comprehensive examination.

A minor consisting of a minimum of six hours in one subject area may be approved by the graduate coordinator. Students who enter the master's program without undergraduate preparation in journalism and mass communications and also without any relevant professional experience may be permitted by the graduate coordinator to take all of their course work in journalism and mass communications.

A comprehensive written examination is required. The examination is not based exclusively on the specific courses completed but affords the student an opportunity to demonstrate comprehensive knowledge of the major subject. The five-part examination covers mass communications theory, research, law, ethics, and journalism and mass communications history. International students may substitute another area of concentration (approved by the graduate coordinator) for history.

**LATIN (LAT)**

The Department of Classical Studies offers minor fields of study in Latin and in Classics. These minors are appropriate for graduate programs in English and in history.

**LEADERSHIP STUDIES (LS)**

The Master of Arts degree in Leadership Studies includes areas of emphasis in Educational Leadership, Justice Leadership, and Leadership Specialist.



All programs in Leadership Studies are under revision. Students are encouraged to contact their advisors concerning transfer to the new programs.

### Admission Requirements

All degree-seeking candidates must meet all admission requirements as degree students. Scores from the Graduate Record Examinations General Test (GRE) or the Miller Analogies Test (MAT) must be on file in the Graduate Admissions Office. A GRE composite score of 800 or an MAT score of 40 is required for program admission. Students seeking certification as a school principal must have (1) a valid teaching certificate and (2) a minimum of one year of teaching experience at the time of admission to the program.

### Educational Leadership

The Leadership Studies M.A. degree offers an area of emphasis in Educational Leadership including West Virginia Professional Administrative Certification as a school principal.

### Degree Requirements

All degree students follow a planned program of study and must maintain a cumulative grade point average (GPA) of 3.0. Upon completion of the required courses, Master's degree students must successfully pass a comprehensive assessment.

The Master of Arts degree in Leadership Studies with an area of emphasis in Educational Leadership requires a minimum of 39 semester hours. Required courses taken in a previous program need not be repeated unless they are outdated. Course work more than seven years old will not be accepted for degree and/or certification programs.

### Program of Studies

LS 500, LS 506, LS 510, LS 512, LS 515, LS 520, LS 530, LS 550, LS 600,  
LS 610, LS 630, LS 675, LS 685.

**TOTAL**..... 39 hrs.

### Professional Practice for Certification

Upon completion of the approved program of studies in Educational Leadership, a student seeking West Virginia, Kentucky, or Ohio principal certification must take and pass Praxis II: Test Core Educational Leadership: Administration & Supervision. In addition to the program requirements, to apply for certification in West Virginia, students must (1) complete education and training in evaluation skills through the West Virginia Center for Professional Development and (2) request and file for certification through their county school system. Kentucky or Ohio candidates must complete 6 hours of Leadership Studies electives approved by their advisors.

### Justice Leadership

The Leadership Studies degree offers an area of emphasis in Justice Leadership.

### Degree Requirements

All degree students follow a planned program of study and must maintain a cumulative Grade Point Average (GPA) of 3.0. Upon completion of required courses, master's degree students must participate in an externship experience which synthesizes the content of required courses in their program of studies.

A Master of Arts degree in Leadership Studies with a concentration in Justice Leadership Studies requires a minimum of 36 hours. A core of 15 hours in Leadership Studies is required. A block of Counseling courses consisting of 9 hours relating to the student's needs is also required. An elective block of 12 hours is individualized to meet the career needs and goals of the student.

### Program of Studies

LS 532, LS 625, LS 645, LS 615, and LS 785 .....15 hours  
Select three from COUN 555, COUN 556, COUN 574, COUN 611.  
COUN 616, COUN 641 .....9 hours  
Electives .....12 hours  
**TOTAL**..... 36 hours

### Leadership Specialist

This is a highly individualized program for those students wishing to complete the MA degree in Leadership Studies without certification. Through close academic advising, the program is individualized for

each student. The program is ideally suited to the needs of students who wish to gain leadership skills and knowledge but do not wish to focus narrowly in one area. Please contact the Leadership Studies program faculty.

## **EDUCATION SPECIALIST DEGREE (Ed.S.)**

### **Admission Requirements**

All degree-seeking candidates must meet all admission requirements as a degree student and have earned a master's degree from a regionally accredited higher education institution.

### **Degree Requirements**

Education Specialist degree (Ed.S) students follow a planned program of study and must maintain a cumulative grade point average (GPA) of 3.0. Three concentrations are offered: Supervisor of Instruction, Superintendency, and Higher Education Administration. A maximum of 12 semester hours from the MA degree may be used toward the Education Specialist Degree.

All candidates completing the Education Specialist degree with an area of emphasis as Supervision of Instruction or Superintendent are required to pass the PRAXIS II (0410) Educational Leadership Administration and Supervision Test.

### **Supervisor of Instruction**

The Supervisor of Instruction concentration includes an Ed.S. program and West Virginia Professional Administrative Certification as a Supervisor of Instruction K- 12.

#### **Program of Studies**

LS 500, LS 506, LS 515, LS 520, LS 530, LS 535, LS 610,  
LS 710, LS 740, LS 790, CI 623, and elective

TOTAL.....36 hrs.

### **Superintendency**

The Superintendency concentration includes an Ed.S. program and West Virginia Administrative Certification as a Superintendent.

#### **Program of Studies**

LS 512, LS 530, LS 550, LS 600, LS 630, LS 700, LS 710, LS 720, LS 730, LS 740,  
LS 760, and LS 772.

TOTAL.....36 hrs.

### **Higher Education Administration**

The Higher Education Administration concentration is an Ed.S. program.

#### **Program of Studies**

LS 530, LS 710, LS 714, LS 705, LS 725, LS 745, LS 755,  
LS 762, and Electives (12 hours; must have advisor's approval).

TOTAL..... 36 hrs.

## **COOPERATIVE DOCTORAL PROGRAM (Ed.D.)**

Through a cooperative arrangement with West Virginia University and Marshall University, students may complete requirements for a doctoral degree with a major in Educational Administration from West Virginia University.

### **Overview**

Students may make application, enroll, take courses in the major and minor, hold all committee meetings, complete comprehensive examinations, and write and defend their dissertations while living in southern West Virginia. This program has been designed to meet the advanced educational needs of public/private school and higher education administrators, higher education professionals, state education agency and government officials and other qualified persons wishing to obtain an appropriate terminal degree in the field of educational administration.

### **Admission Requirements**

Criteria considered for acceptance into the Ed.D. program include a 3.0 overall undergraduate grade point average and 3.5 graduate grade-point average, a combined score of at least 1100 on the Graduate

Record Examinations (GRE) General Test or a least a 50 on the Miller Analogies Test (MAT), and a strong commitment to a career in educational administration.

**Program Requirements**

Program requirements are given in more detail in public school and higher education program descriptions available from the Department of Leadership Studies at Marshall University Graduate College, at the Department of Educational Leadership at West Virginia University, or on the World Wide Web at [www.marshall.edu/coopdoc](http://www.marshall.edu/coopdoc).

**SOCIAL SERVICES AND ATTENDANCE CERTIFICATION**

**Admission Requirements**

Students seeking admission to this certification must meet the same admission requirements as degree seeking students. Courses taken in this program will also be applicable as an area of emphasis in the Leadership Specialist master's degree program in Leadership Studies.

**Certification Requirements**

All candidates completing the preparation program for school social services and attendance director are required to pass the PRAXIS II (0210 School Social Worker) test. Candidates who are not licensed educators must also pass the PRAXIS I: Pre-Professional Skills Test (PPST).

**Program of Studies**

Coun 670, Coun 673, LS 550, LS 740, LS691, LS692.

TOTAL..... 18 hrs.

Students who are not licensed educators will also be required to take SPSY 601 and LS 530.

TOTAL.....24 hrs.

**MANUFACTURING SYSTEMS (IS)  
(See Information Technology and Engineering [CITE])**

**MATHEMATICS (MTH)**

Course offerings in mathematics may be used to satisfy major requirements in three programs of the Graduate College, or to satisfy minor requirements in all programs.

The Master of Arts degree with a major in mathematics is offered by the Department of Mathematics. The Master of Science (Physical Science) degree is offered through a cooperative arrangement among the Departments of Chemistry, Geology, Mathematics, and Physical Science and Physics. The Master of Arts (Secondary Education) degree is offered by the Division of Teacher Education.

**Master of Arts Degree (Mathematics)**

The Mathematics Department offers an M.A. in Mathematics which can prepare students for positions in industry, government agencies, or business, for further graduate study at the doctoral level, and for teaching positions at the secondary or two-year college level.

To be admitted to the program, students must complete the Graduate Record Exam (GRE) and have the score sent to Marshall University. GRE scores are considered when awarding graduate assistantships and during initial advising.

A minimum of 36 hours is required; if the student decides to write a thesis, the minimum is 32 hours, including not more than 6 hours for the thesis. A minor of 6 hours in any related area is permitted, subject to approval by the student's advisor and concurrence of the Math Department Chairperson. A final (oral) comprehensive exam is administered by a committee of 3-5 graduate faculty chosen by the student and his/her advisor.

The following are specific requirements for the program:

(1) at least 18 hours of 600 level courses offered by the Math Department; (2) at least 12 more hours of 500 or higher level courses offered by the Math Department, including MTH 528, 546, and 550 (or equivalents); (3) at least 6 more hours of 500 or higher level courses selected from another department at Marshall offering a graduate program or from the Math Department.

**Master of Science Degree (Physical Science)**

This degree program, offered in cooperation with the Departments of Chemistry, Geology, Mathematics, and Physics and Physical Science, is intended to provide a broadly based advanced science program for



individuals whose undergraduate program in science lacks depth or breadth. Programs will be designed to meet individual needs. The writing of a thesis is optional except where specialization is in Geology where it is required. Specific degree requirements are listed in the section: Physics and Physical Science.

### Master of Arts Degree (Secondary Education)

This degree program, offered by the Division of Teacher Education, is intended to meet the needs of public school teachers (1-12). Programs will be designed to meet individual needs. Specific degree requirements are listed in the section: Education - Curriculum and Instruction, Secondary Education.

### MODERN LANGUAGES

At present the Department of Modern Languages does not offer a graduate major. Courses in Modern Languages are taken as minors by students in other departments, such as History, Journalism and English. Courses in Modern Languages are also taken by teachers in service who wish to enhance their competence in language and literature and to qualify for a higher salary.

In cooperation with the Division of Teacher Education, the Department of Modern Languages offers a program leading to the Master's degree in secondary education and Spanish. For further details consult the section: Education-Curriculum and Instruction, Secondary Education, in this catalog.

For courses see French or Spanish.

### MUSIC (MUS)

To be admitted to the graduate program in music, a student must have received a bachelor's degree from an accredited institution with a major in music or the equivalent. A conference and audition with the Chairman of the Department of Music and with members of the department's graduate faculty are required as a part of the admission procedure. At the conference the conditions of admission are defined. The applicant may submit an audition tape if it is inconvenient to appear on campus.

Majors in all music programs are given an examination in basic skills and capacities in music not later than the time of completion of twelve semester hours of graduate work and before being admitted to candidacy. As part of these requirements the basic departmental piano proficiency examination must be passed, the content of which will vary according to the student's departmental area major. In addition, a placement examination in Music History (including Styles) and Music Theory must be taken to determine if deficiencies in these areas exist. Applicants must take these examinations prior to registering for graduate courses in music.

Requirements for performance levels in applied music as well as more detailed information on requisites in the individual options will be found in the Department of Music Handbook.

The Department of Music offers four areas of emphasis within the Master of Arts degree: 1) Applied Music Performance; 2) Music History and Literature; 3) Music Theory and Composition; and 4) Music Education. Students may select conducting under the Applied Music option.

The program for options 1-3 requires 32 hours (including thesis). This program must include at least 26 hours in major, cognate, and elective areas of music. Normally not more than 3-4 hours may be earned by a thesis, which may be a written report, graduate recital, or musical composition of merit.

The degree Master of Arts in Music with an area of emphasis in Music Education (option 4) requires a minimum of 36 hours of coursework. The program for the degree must include 14 hours of music education, 11 hours of cognate studies in music, 5 hours from other fields of music and 6 hours in professional education.

All full-time graduate students are required to participate in a music ensemble during the regular academic year as recommended by their major advisor. No graduate credit is given for this participation.

#### 1. APPLIED MUSIC PERFORMANCE

	<i>Hours</i>
Minimum requirements .....	32
1. Major Area .....	32
Applied music in Voice or Instrument, Music 681	
2. Cognate Studies in Music .....	11-12
Music 621, 640A, One period course in Music History (chosen from one of the following): Music 526, 650, 651, 652, 653, 654, 655, one Music Literature course in major area.	
3. Music Electives .....	2-4
Pedagogy, Literature, Applied, Music Education, Theory, Problem Report or Special Topics.	

*(continued)*



4. Minor Field .....	6
(Voice applied majors should select the study of foreign language. Instrumental applied should select from Literature, Physics [Acoustics], Mathematics, History or other allied areas.)	

**2. MUSIC HISTORY AND LITERATURE**

	<i>Hours</i>
Minimum requirements .....	32
1. Major Area .....	12
Four period courses in Music History (chosen from the following):	
Music 526, 650, 651, 652, 653, 654, 655.	
Music 681 .....	3
2. Cognate Studies in Music .....	9
Music 621, 640A, Music Theory Elective	
3. Music Electives .....	2
(To be determined in consultation between the student and his advisor)	
4. Minor Field .....	6
(Recommend study of French or German for reading knowledge)	

**3. MUSIC THEORY AND COMPOSITION**

	<i>Hours</i>
Minimum requirements .....	32-36
1. Major Area .....	18
Music 640A, 640B, Music 641, Music 645A, 645B, Music 646 or 648, Music 681	
2. Cognate Studies in Music .....	6
Music 621, 655	
3. Music Electives .....	2
(To be determined in consultation between the student and his advisor)	
4. Minor Field .....	6
(Departmental recommendations include areas of Literature, Mathematics, Physics or Philosophy)	

**4. MUSIC EDUCATION**

**INSTRUMENTAL**

	<i>Hours</i>
Minimum requirements .....	36
1. Education .....	6
Two courses in Curriculum and Instruction selected in consultation with the student's advisor	
2. Cognate Studies in Music .....	11
Music 621, 630A, 640A, Music History Elective	
3. Major Area: Music Education .....	14
Music 610, 615, 616, 617, 618A	
4. Music Electives .....	5

**VOCAL**

	<i>Hours</i>
Minimum requirements .....	36
1. Education .....	6
Two courses in Curriculum and Instruction selected in consultation with the student's advisor.	
2. Cognate Studies in Music .....	11
Music 621, 629A, 640A, Music History Elective	
3. Major Area: Music Education .....	14
Music 610, 616, 617, 618B, 619A	
4. Music Electives .....	5

## NURSING (NUR)

The College of Nursing and Health Professions currently offers the Master of Science in Nursing degree with the area of emphasis in: Family Nurse Practitioner, Family Nurse Practitioner with School Nurse Practitioner Specialization, or Nursing Administration. The College of Nursing and Health Professions also offers a Post Master's Certificate in Family Nurse Practitioner Program.

### MASTER OF SCIENCE IN NURSING

The purpose of the Master of Science in Nursing program is to prepare graduates for advanced practice nursing in a variety of practice settings, particularly in rural and/or underserved communities. The program also prepares nurses for leadership roles in the administration of clinical services in a variety of community based or acute care provider agencies.

Coursework in the Master of Science in Nursing program incorporates the classroom, laboratory, and clinical modes of instruction. All nursing students have experiences with rural and/or underserved populations as part of the state initiatives for primary health care. The Master of Science in Nursing program requires the completion of a minimum of 42 credit hours for the family nurse practitioner area of emphasis, and 36 credit hours for the nursing administration area of emphasis. Upon successful completion of the MSN-FNP program, and depending on area of emphasis, graduates are eligible to take the American Academy of Nurse Practitioners (AANP) Certification Examination for Adult and Family Nurse Practitioners and/or the American Nurses' Credentialing Center (ANCC) Certification for Family Nurse Practitioners and/or School Nurse Practitioners. Graduates of the Post Master's Certificate in Family Nurse Practitioner program are eligible to take the AANP Certification, for Adult and Family Nurse Practitioners and/or the ANCC Certification Examination for Family Nurse Practitioners. Graduates of the MSN-NUR ADM program are eligible to take the ANCC Certification Examination for Nursing Administration or Nursing Administration. Advanced depending on their experience and stage of professional development. The Master of Science in Nursing program is accredited by the National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York, NY 10006. Phone (212) 363-5555, ext. 153, FAX (212) 989-8264. In addition, the NLNAC is a source for information regarding tuition, fees, and length of the program.

The program purpose is achieved through three program components. The core component (12 credits) focuses on knowledge and skills related to nursing theory, advanced nursing research, leadership, and health care issues. The family nurse practitioner area of emphasis component (24 credits) provides students with the opportunity to develop competency as a family nurse practitioner. Students in this area of emphasis may also opt to specialize as school nurse practitioners. The nursing administration component (18 credits) provides students with the opportunity to acquire knowledge and skills necessary to administer/manage rural/underserved primary care agencies, home health care, and other health care agencies or units. The elective component (6 credits) allows students to choose one of four options: 1) thesis, 2) role development courses in teaching, 3) school nurse practitioner courses, or 4) elective courses related to the student's area of interest.

The MSN-FNP program can be completed in two academic years of full-time study or over a period not to exceed 7 calendar years from date of first class enrollment. The MSN-NUR ADM program can be completed in one calendar year of full-time study or over a period not to exceed 7 calendar years from date of first class enrollment. Graduate nursing courses are open only to those students admitted to the nursing program.

#### Course Requirements: Family Nurse Practitioner

Core Component Courses (12 credits)	<i>Hours</i>
NUR 602 Theoretical Foundations in Nursing .....	3
NUR 604 Leadership in Nursing .....	3
NUR 606 Advanced Nursing Research .....	3
NUR 608 Issues in Health Care .....	3
Area of Emphasis Component Courses (24 credits)	<i>Hours</i>
NUR 622 Advanced Family Nursing I .....	5
NUR 624 Advanced Family Nursing II .....	5
NUR 626 Advanced Family Nursing III .....	5
NUR 695 Internship: Advanced Family Nursing .....	6
NUR 662 Pharmacology for Nurses in Advanced Practice .....	3
Elective Component Courses (Select 6 credits from the following offerings) .....	<i>Hours</i>
NUR 681 Thesis .....	6
NUR 616 Curriculum Development in Nursing .....	3

*(continued)*

NUR 618 Teaching in Nursing .....	3
NUR 642 Organizational Dynamics in Nursing .....	3
NUR 644 Financial Strategies in Nursing Administration .....	3
or Other Electives .....	6
<b>TOTAL</b> .....	<b>42</b>

### Course Requirements: Family Nurse Practitioner with School Nurse Practitioner Specialization

Core Component Courses (12 credits)	Hours
NUR 602 Theoretical Foundations in Nursing .....	3
NUR 604 Leadership in Nursing .....	3
NUR 606 Advanced Nursing Research .....	3
NUR 608 Issues in Health Care .....	3
Area of Emphasis Component Courses (24 credits)	
NUR 622 Advanced Family Nursing I .....	5
NUR 624 Advanced Family Nursing II .....	5
NUR 626 Advanced Family Nursing III .....	5
NUR 695 Internship: Advanced Family Nursing .....	6
NUR 662 Pharmacology for Nurses in Advanced Practice .....	3
Elective Component Courses (6 credits)	
NUR 632 School Nurse Practitioner Role in School Health I .....	3
NUR 634 School Nurse Practitioner Role in School Health II .....	3
<b>TOTAL</b> .....	<b>42</b>

### Course Requirements: Nursing Administration

Core Component Courses (12 credits)	Hours
NUR 602 Theoretical Foundations in Nursing .....	3
NUR 604 Leadership in Nursing .....	3
NUR 606 Advanced Nursing Research .....	3
NUR 608 Issues in Health Care .....	3
Area of Emphasis Component Courses (18 credits)	
NUR 642 Organizational Dynamics in Nursing .....	3
NUR 644 Financial Strategies in Nursing Administration .....	3
NUR 646 Nursing Management in Health Care Settings I .....	6
NUR 648 Nursing Management in Health Care Settings II .....	6
Elective Component Courses (Select 6 credits from the following offerings)	
NUR 681 Thesis .....	6
NUR 616 Curriculum Development in Nursing .....	3
NUR 618 Teaching in Nursing .....	3
NUR 632 School Nurse Practitioner Role in School Health I .....	3
NUR 634 School Nurse Practitioner Role in School Health II .....	3
or Other Electives .....	6
<b>TOTAL</b> .....	<b>36</b>

### Admission Requirements for MSN Applicants

All applicants must meet the admission requirements of the Marshall University Graduate College. The nursing program is available to a limited number of qualified applicants. Admission is determined on a competitive basis. To be eligible for regular admission to the program, applicants must meet the following admission requirements:

1. Baccalaureate degree with a major in nursing from an NLNAC accredited program.
2. Undergraduate course credit for basic statistics and basic research.
3. Scholastic achievement as evidenced by an overall undergraduate/graduate grade point average and aptitude for graduate study as indicated by the Graduate Record Examination as follows:



GPA 2.5 (4.0=A) and GRE 1500 (total of 3 subtests) *or*  
 GPA 3.0 (4.0=A) and GRE 1200 (total of 3 subtests)

4. Evidence of a current unincumbered license as a registered nurse in a U.S. jurisdiction.
5. Two years of professional nursing experience required for full-time students in MSN-NURADM program. Students with less than two years' experience may opt to study part-time and work in nursing full-time throughout their tenure as a nursing administration student.

An applicant who has a baccalaureate degree in nursing and a master's degree in any field is eligible for regular admission.

Registered nurse applicants with a Master of Science in Nursing degree from an NLNAC accredited program are eligible for regular admission to the MSN program to take any portion of the MSN program, provided space is available.

An applicant may be considered for provisional admission if the:

1. Baccalaureate degree does not meet the criteria for regular admission.
2. Undergraduate/graduate grade point average and Graduate Record Examination fall within the following range:  
 GPA 2.25 (4.0=A) and GRE 1500 (total of 3 subtests) *or*  
 GPA 2.5 (4.0=A) and GRE 1400 (total of 3 subtests) *or*  
 GPA 2.75 (4.0=A) and GRE 1300 (total of 3 subtests) *or*  
 GPA 3.5 (4.0=A) and GRE 1100 (total of 3 subtests)
3. Prerequisite coursework or records are incomplete. If a student is accepted for provisional admission, the terms for reclassification as a regular student will be stated in the letter of admission. The provision(s) and the time frame will be stated in the letter of admission. Under no circumstances will the provisional terms be extended beyond the 12th credit hour. The student must maintain a minimum grade point average of 3.0 in all graduate course work taken during the provisional period. The student who does not meet the provision(s) as stated will be dropped from the program.

#### Admission Process for MSN Applicants

To apply for admission to the program, the applicant must submit a complete application to the Marshall University Admissions Office by March 1 for the Family Nurse Practitioner area of emphasis and July 1 for the nursing administration area of emphasis. Application must include:

1. Graduate application.
2. Official transcripts of all undergraduate and graduate course work. These must be sent directly from the college/university to the Admissions Office.
3. Graduate Record Examination scores. Information regarding this examination may be obtained from the Graduate College or the Admissions Office.
4. Verification of a current unincumbered license as a registered nurse in a U.S. jurisdiction. Verification form may be obtained from the Graduate Nursing Office.

In addition, applicants must submit application and resume to the Graduate Nursing Office on form provided by the College of Nursing and Health Professions.

#### POST MASTER'S CERTIFICATE IN FAMILY NURSE PRACTITIONER PROGRAM

The purpose of the Post Master's Certificate in Family Nurse Practitioner program is to prepare nurses, who have a Master of Science in Nursing degree, as family nurse practitioners. The graduates of this program are eligible to take the American Nurses' Credentialing Center Certification Examination for Family Nurse Practitioners.

#### Course Requirements: Post Master's Certificate in Family Nurse Practitioner Program

NUR 622 Advanced Family Nursing I .....	5
NUR 624 Advanced Family Nursing II .....	5
NUR 626 Advanced Family Nursing III .....	5
NUR 695 Internship: Advanced Family Nursing .....	6
NUR 662 Pharmacology for Nurses in Advanced Practice .....	3
<b>TOTAL .....</b>	<b>24</b>

Additional courses may be taken after consultation with the associate dean for graduate studies.



### **Admission Requirements for Post Master's Certificate in Family Nurse Practitioner Program Applicants**

All applicants must meet the admission requirements of the Marshall University Graduate College. The Post Master's Certificate in Family Nurse Practitioner program is available to a limited number of qualified applicants. Admission is determined on a competitive basis. Applicants must meet the following minimum requirements.

1. Master of Science in Nursing from an NLNAC accredited program. Applicants who are graduates of programs outside the NLNAC jurisdiction will be evaluated on an individual basis.
2. Course credit for basic statistics and basic research.
3. Evidence of a current unincumbered license as a registered nurse in a U.S. jurisdiction.

### **Admission Process for Post Master's Certificate in Family Nurse Practitioner Program Applicants**

To apply for admission to the Post Master's Certificate in Family Nurse Practitioner program, the applicant must submit the following to the Marshall University Admissions Office.

1. Graduate application.
2. Official transcript(s) of graduate coursework. Transcript(s) must be sent directly from the college/university to the Admissions Office.
3. Verification of a current unincumbered license as a registered nurse in a U.S. jurisdiction. Verification form may be obtained from the Graduate Nursing Office.

In addition, applicants must submit application and resume to the Graduate Nursing Office on form provided by the College of Nursing and Health Professions.

### **POLICIES**

Students in both the MSN and Post Master's Certificate programs are governed by policies stated in the **Marshall University Graduate College Catalog**. Policies specific to the nursing programs are as follows:  
Academic Policies:

1. The College of Nursing and Health Professions reserves the right to require withdrawal from nursing of any student whose health, academic record, clinical performance, or behavior in nursing is judged unsatisfactory.
2. Students who earn more than 6 hours of C may be subject to dismissal from the program.
3. Students may repeat one required course in which they have earned less than a C.
4. Students whose grade point average falls below 3.0 may not progress in nursing courses with a clinical component until a grade point average of 3.0 is attained, and only when space is available.
5. No more than 12 course hours may be accepted as transfer credit.
6. Only 1 re-examination of the comprehensive examination may be taken.
7. Students enrolled in the Post Master's Certificate in Family Nurse Practitioner Program must complete the program with a 3.0 grade point average or better on a 4.0 scale.

### **Other Policies**

1. Each student must submit a satisfactory health record prior to registering for his/her first nursing course with a clinical component.
2. Each student is required to have an annual PPD screening test for Tuberculosis.
3. Each student must show evidence of the following prior to registering for any nursing course with a clinical component: Current unincumbered professional nurse licensure in a U.S. jurisdiction. Current certification in cardiopulmonary resuscitation.
4. Students are responsible for own transportation to and from all clinical assignments.
5. Students are required to be in professional attire for all clinical practicums and to wear a name pin. In addition, selected clinical agencies require a white lab coat.
6. Students enrolled in the Nursing Administration area of emphasis must have two full years of work experience in nursing to undertake full-time study or students may opt to study part-time and work in nursing full-time throughout their tenure as a nursing administration student.
7. For additional policies, see Graduate Nursing Student Handbook.

**PATHOLOGY (PTH)**  
**(See Biomedical Sciences)**

**PHARMACOLOGY (PMC)**  
**(See Biomedical Sciences)**

**PHILOSOPHY (PHL)**

The Philosophy Department offers only a minor at the graduate level. Any set of courses is permissible, although it is advisable to take them in relative sequence.

**PHYSICAL EDUCATION**  
**(See Health and Physical Education)**

**PHYSICAL SCIENCE (PS)**  
**(Physics and Physical Science Department)**

The Master of Science in Physical Science, offered in cooperation with the Departments of Chemistry, Geology and Mathematics, is intended to provide the opportunity for students with diverse qualifications to improve the depth and breadth of their knowledge in the Physical Sciences. The degree offered is a M.S. in Physical Science, with an Area of Emphasis in one of the following: Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics.

The area of emphasis in Geobiophysical Modeling is interdisciplinary, with core courses in Remote Sensing and GIS Modeling. Thereafter, students may choose from areas of concentration in Aquatic, Terrestrial or Biophysical Systems and Models.

Programs will be designed to meet individual needs. Students must consult with their advisor for specific requirements. The writing of a thesis is required in the Geology area of emphasis (see section on geology), but is optional in the other areas. If the thesis option is chosen, a minimum of 32 hours is required, including not more than 6 hours for the thesis. Without the thesis, 36 hours are required.

NOTE: These are general guidelines. Individual departments may have their own requirements.

	<i>Hours</i>
Minimum requirements .....	32-36
Area of Emphasis (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics) .....	12-18
Minor area (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics) .....	6
Electives .....	12-18

The Department of Physics and Physical Science also offers minor fields in physical science and in physics.

**PHYSIOLOGY (PHS)**  
**(See Biomedical Sciences)**

**POLITICAL SCIENCE (PSC)**

The Master of Arts in political science provides a wide range of opportunities for students of various interests or goals. The M.A. program affords both concentration and flexibility so that majors may acquire in-depth knowledge in selected aspects of politics as well as appropriate skills in political analysis. Majors may arrange a program to prepare themselves for such endeavors as law school, further graduate work, teaching, or government service. The curriculum also serves interested students in other majors, such as business, education, economics, English, geography, history, journalism, psychology, social studies or sociology, who wish to enhance their backgrounds by taking a minor or specific coursework.

Completion of the master's degree in political science entails fulfillment of both the general Graduate College requirements, and the specific departmental requirements listed below. A major may select either the thesis, or coursework only option. Once an option has been selected, any change in the option must be approved by the department.

The graduate curriculum in political science is divided into six fields of specialization. The student who elects to write a thesis must take at least nine course hours in one of these, and the topic must be within the field. Under the non-thesis options, at least twelve course hours must be taken within a single field.

Under the non-thesis options the candidate must take a comprehensive written examination. All candidates must take a general oral examination.

### General Departmental Requirements

Admission to the graduate program requires GRE Exam and completion of 12 hours undergraduate political science coursework with a GPA of 2.5. Each student works closely with a graduate advisor throughout his or her program. Before completion of 18 hours of graduate coursework with at least a 3.0 GPA, the student must file a Plan of Study with the Graduate College. At this time, a specific program for the student is projected which will lead to the M.A. degree.

	<i>Hours</i>
Minimum requirements .....	32-36
1. Political Science 600 and 604 (required of all majors) .....	6
2. Field of Concentration (minimum) .....	9-12
3. Second field .....	6
4. Minor or cognate .....	6
5. Thesis .....	6
6. Electives .....	6

### GRADUATE FIELD CONCENTRATIONS

American State, Local and Urban Politics: 536, 540, 561, 606, 611, 612, 621, 648, 675.

American National Politics: 523, 533, 536, 540, 560, 584, 606, 611, 612, 652.

Comparative Politics: 507, 508, 509, 510, 511, 522, 524, 529, 614, 652.

International Politics: 505, 506, 515, 520, 523, 524, 529, 609.

Political Theory: 521, 525, 526, 528, 529, 531, 556, 629.

Public Administration and Public Policy: 531, 533, 550, 552, 553, 554, 618, 660.

Courses numbered Political Science 580 through 583, 601, 650, and 651 may be counted in an appropriate area of specialization upon the approval of the advisor.

### PSYCHOLOGY (PSY)

The Department of Psychology offers the Master of Arts (M.A.) degree with majors available in three distinct programs. The three M.A. degree programs include Clinical Psychology, Industrial-Organizational Psychology and General Psychology.

The department also offers coursework toward the Ed.S. program in School Psychology, which is administratively located in the College of Education and Human Services. The department was recently approved to offer a Psy.D. degree program in clinical psychology.

The training objectives, curricula and admissions procedures are distinct for each program, so prospective students should be familiar with the nature of each program prior to submitting applications. **Essential information is detailed below; please read both the general information, which affects students in all programs, as well as the information about the specific program(s) in which you may be interested.** Contact the psychology department for further information or to request application materials.

### General Information for M.A. Programs

- 1) Information on financial aid is available from the Financial Aid office. The psychology department has a limited number of graduate assistantships available each year. These are typically awarded to advanced graduate students who have completed an elective seminar in the Teaching of Psychology, and who then apply to assist with the teaching of our undergraduate General Psychology course. Other graduate assistantships may be available on campus for full-time students. A limited number of graduate fee waivers are granted each semester to students based on the following priorities: faculty and staff, degree-seeking students who provide service to the department, interns who incur a salary penalty, minority students, academically talented students. Application deadlines apply.
- 2) Admissions:
  - a) All M.A. programs review admission applications as they are received. It is the applicant's responsibility to make sure that all application materials are received; only complete files will be reviewed.
  - b) For all programs, the following application materials are required:
    - a completed application form and any required application fees.



- a written statement of educational and professional goals.
- original transcripts from all schools where previous undergraduate and/or graduate credit was earned.
- scores on the general portions of the Graduate Record Exam, or the Miller Analogies Test. These must be original reports sent by the testing service.
- three letters of reference from professionals who know your academic work.

ALL APPLICATION MATERIALS MUST BE SENT TO THE GRADUATE ADMISSIONS OFFICE IN SOUTH CHARLESTON (not to the department)

- c) Prerequisite coursework: see the description of each program for a listing of prerequisite requirements. Completion of prerequisite courses is necessary before the admissions committee will consider an applicant for admission into any of the graduate programs. Applicants should recognize that completion of prerequisite course work does not guarantee admission into a graduate program.
- d) Two-"C" rule: The department maintains a policy whereby students cannot continue in a graduate program if they earn more than one grade of "C" or lower in any graduate course. Psychology students who earn a second "C" (or lower) will not be permitted to continue taking courses, or to work on a thesis.
- e) Clinical and general students must complete either a thesis or the research seminar. Students who intend to do a thesis must complete the prerequisite statistics coursework and have a written thesis proposal/prospectus approved by the thesis committee prior to enrolling for thesis credit. An oral defense of the completed thesis is required. Three copies of the approved thesis must be submitted to the Graduate College office prior to graduation. There is a fee for binding which must be paid prior to graduation.
- f) Passing the comprehensive examination is required for M.A. students in psychology. The examination, consisting of multiple choice questions, is weighted to reflect the content of the degree program but may include questions from the field of psychology not covered in specific coursework. Students are advised to discuss with their advisors how best to prepare for the exam, well in advance of the semester in which they plan to take it. Exams are administered once each semester.

### DOCTOR OF PSYCHOLOGY (PSY.D.) PROGRAM

The Psychology department has been approved to offer a professional psychology doctoral program, which will lead to a Doctor of Psychology (Psy.D.) degree. It is expected that the program's first students will be admitted for the Fall 2001 semester.

The program is designed to prepare doctoral-level psychologists who are committed to providing psychological services to rural, underserved populations in Marshall's state and region. Students will be admitted in one of two ways. The first is for students who have already completed master's degrees in clinical psychology, and the second is for students with bachelor-level degrees who are seeking to begin their graduate training. The program will be based on the Huntington campus.

As this catalog was going to press, significant operational planning for the program was still taking place. Prospective students should contact the Psychology department in Huntington (400 Hall Greer Blvd., Huntington WV 25755; phone 304-696-6446; e-mail [psychology@marshall.edu](mailto:psychology@marshall.edu)) for information about the program, and refer to the department's World Wide Web site ([www.marshall.edu/psych](http://www.marshall.edu/psych)) for ongoing updates about the program's curriculum, admissions procedures, clinical training requirements, financial aid, and related issues.

### M.A. PROGRAM IN CLINICAL PSYCHOLOGY

Students intending to qualify for employment as master's level clinical psychologists complete a curriculum of 50 credit hours (minimum). This curriculum is highly structured, and is designed to maximize the development of professional skills while also developing the student's understanding of fundamental areas in the discipline of psychology. Coursework is completed in the core discipline of psychology, and in the clinical areas of psychological assessment, psychotherapy and ethics. Students complete a series of practicum experiences and a 400 clock hour internship, and are required to pass a written comprehensive examination.

The clinical program, which is based in South Charleston, accepts students into a three-year cycle of courses. Courses may also be offered in Huntington, Teays Valley, Parkersburg, Beckley and Fairmont. At the Huntington campus, classes may be scheduled in the daytime, late afternoon, or evenings. At other sites, courses are typically scheduled in the evenings and on weekends to accommodate the schedules of students



who may be working or have other responsibilities during the usual work week. The curriculum, degree requirements, and expectations of students are the same for all students. When space permits, students will be allowed to take coursework offered at any site.

**Prerequisites**

Before an applicant will be considered for admission into the clinical program, the following coursework must be completed, at either the undergraduate or graduate level:

- Statistics, experimental psychology, personality, abnormal psychology, psychometrics.

**Clinical Psychology - Curriculum**

General/Theoretical Core

1.	Biological bases of behavior .....	3 cr.
	PSY 674, Biological Bases of Behavior	
2.	Acquired or learned bases of behavior .....	3 cr.
	One of these:	
	PSY 616, Human Memory & Info. Processing	
	PSY 672, Cognitive Psychology	
3.	Social/cultural/systemic bases of behavior .....	3 cr.
	One of these:	
	PSY 502, Advanced Social Psychology	
	PSY 503, Applied Social Psychology	
	PSY 526, Cross Cultural Psychology	
4.	Individual/unique bases of behavior .....	3 cr.
	One of these:	
	PSY 615, Advanced Developmental Psychology	
	PSY 617, Applied Developmental Psychology	
	PSY 691, Seminar in Sexuality and Gender Identity	
5.	Research/Statistics .....	3 cr.
	One of these:	
	PSY 517, Intermediate Behavioral Statistics	
	PSY 623, Experimental Design	
	PSY 691, Seminar in Psychological Research	
	PSY 681, Thesis (PR: PSY 517 or equivalent)	

*Applied Techniques: Therapy*

6.	PSY 533, Current Models of Psychotherapy .....	3 cr.
7.	PSY 633, Interviewing & Individual Therapy .....	3 cr.
8.	PSY 608, Differential Diagnosis & Treatment Planning .....	3 cr.
9.	PSY 634, Group Therapy .....	3 cr.
10.	PSY 619, Psychotherapy with Children <i>or</i> .....	3 cr.
	PSY 635, Child & Family Diagnosis & Therapy <i>or</i>	
	PSY 630, Adult Diagnosis & Therapy	

*Applied Techniques: Assessment*

11.	PSY 610, Assessment of Adults .....	3 cr.
12.	PSY 620, Practicum in Adult Assessment .....	1 cr.
13.	PSY 611, Assessment of Children .....	3 cr.
14.	PSY 621, Practicum in Child Assessment .....	1 cr.

*Supervised Experience*

15.	PSY 670, Clinical Practicum I .....	3cr.
16.	PSY 671, Clinical Practicum II .....	3cr.
17.	PSY 680, Internship (400 clock hours) .....	3cr.

*Ethics & Professional Standards*

18.	PSY 605, Ethical, Legal, and Professional Issues in Professional Psychology .....	3 cr.
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<b>TOTAL</b> .....		<b>50 cr.</b>
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**INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**

The Industrial/Organizational Psychology degree is designed to prepare students in psychology and related fields to work as master's level industrial/organizational practioners in the public, quasi-public, and

private sectors. Preparation includes a broad exposure to the discipline of psychology with specific emphasis on behavior within organizational settings. The program follows the guidelines for master's-level programs as specified by the Society for Industrial-Organizational Psychology. The major focuses on preparing students for employment in areas such as interviewing and testing, employee assistance, statistical behavioral analyses, human factors, human relations, wellness, and substance abuse, and organizational research. Each student chooses a three-credit-hour, career-oriented emphasis within the degree to further the student's interests and career goals. An internship provides an experiential base for the student's preparation while a final project provides a final comprehensive focus.

**Admission Requirements:**

Students seeking the Master of Arts degree in Industrial/Organizational Psychology should apply as degree students. In addition to the general admission materials required of all applicants, Industrial Organizational applicants should be aware of the following requirements:

- Official transcripts from all colleges or universities demonstrating a minimum undergraduate GPA of 3.0 out of 4.
- Evidence of preparation in psychology consisting of Experimental Psychology and Intermediate Statistics, plus an additional 12 semester hours of undergraduate or graduate psychology coursework.
- Scores on the Graduate Record Examinations (GRE) which shall not be less than 1250 for the total score (verbal + quantitative + analytic)
- All degree students must complete a statistics competency examination before entering the program. The student will be placed into the appropriate statistics course based on performance on this examination. Students may be required to take additional statistics preparation courses, even if they have completed prior statistics courses at the undergraduate or graduate level.

**INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**  
**Three Year Course Cycle**

Course Course Sequence Requirements:

**Fall Courses**

PSY 520 Industrial/Organizational Psychology (3) cr.	None
PSY 650 Seminar in Performance Appraisal (3) cr.	PSY 518
PSY 683 Internship in Industrial Organization (3) cr.	All previous I/O courses

**Spring Courses**

PSY 518 Psychology of Personnel (3) cr.	PSY 520
PSY 624 Multivariate Statistics (3) cr.	PSY 623 or 652
PSY 681 Final Project (3) cr.	Internship in I/O

**Each Third Semester:**

PSY 627 Social Psychological Bases of Groups (3) cr. <i>or</i>	
PSY 690 Seminar: Organizational Behavior	

**Additional Courses Required for the Degree:**

PSY 506 Psychometrics (3) cr. <i>or</i>	
PSY 679 Testing in I/O Psychology (3) cr.	
PSY 605 Ethical, Legal and Professional Issues (3) cr.	
PSY 623 Experimental Design (3) cr.	
PSY 672 Cognitive Psychology (3) cr.	
PSY 674 Biological Bases of Behavior (3) cr.	

**TOTAL CREDIT HOURS** ..... 42

**GENERAL PSYCHOLOGY**

**Program Description**

The graduate program in General Psychology is designed to be flexible to meet the needs of a variety of students interested in a graduate degree in psychology. While completing a core sequence of courses within the psychology department, in consultation with their advisor students are free to select a variety of courses both from within and outside the department to meet their specific objectives. This program is not designed

for students whose ultimate goal is a career in clinical or I/O psychology, but is intended for students with any other interests in psychology. For example, some of the students in this program want to earn a master's degree in psychology before applying for a Ph.D. program, while others want to upgrade their skills for career advancement. This degree can also be used as a dual major for the Ed.S. program in school psychology.

Students who wish to apply for the clinical or I/O programs, but need one or more prerequisite classes and prefer to take them at the graduate level, may apply for admission into the general program for the purpose of completing the needed classes. However, successful completion of prerequisites does not imply or guarantee admission into any other program. Rather, the student must then apply for admission into the new program, and his or her application will be reviewed based on the criteria and procedures used for review of applications into that program.

### **Prerequisite Coursework**

Admission to the general psychology program requires a minimum of 15 undergraduate credits in psychology including courses in general (or introductory) psychology, behavioral statistics, experimental psychology, social psychology and one additional psychology course.

### **General Psychology Program Requirements**

Students will complete a program consisting of a minimum of 36 credits distributed as follows:

- 1) a 12-credit core of graduate-level coursework and 6 credits of electives in psychology (a minimum of 18 graduate credits in psychology)
- 2) an additional 15 credits selected from psychology or other departments' graduate course offerings in accord with the student's professional/career interests and agreed to by the student's advisor.
- 3) completion of the research seminar (PSY 690, "Research Seminar in Psychology") or completion of a research thesis (PSY 681) for a minimum of 3 credit hours. PSY 517, "Intermediate Statistics," and a proposal/prospectus approved by the student's thesis chair are prerequisites for enrolling in thesis credits. The students must pass an oral defense of the completed thesis.

### **Required:**

Advanced Social (PSY502) or Advanced Developmental Psychology (PSY 615)  
Learning and Cognition (PSY 516, PSY 616, or PSY 672)  
Statistics (PSY 517, 623, 624, or 652)  
Physiological Psychology (PSY 540) or Biological Basis of Behavior (PSY 674)

### **Elective:**

Advanced Developmental - PSY 615  
Cross Cultural Psychology - PSY 526  
Applied Developmental - PSY 617  
Health Psychology - PSY 543  
Advanced Social - PSY 502  
Sem:Sexuality & Gender Identity-PSY690  
Applied Social Psychology - PSY 503  
History and Systems - PSY 560  
Psychology of Personnel - PSY 518  
Multivariate Analysis - PSY 624  
Physiological Psychology - PSY 540  
Abnormal Psychology - PSY 508  
Experimental Design - PSY 623  
Psychometrics - PSY 506  
Child Psychology - PSY 516  
Differential Diagnosis and Treatment Planning - PSY 608  
Current Models of Psychotherapy - PSY 533  
Child and Family Diagnosis and Therapy - (PSY 635)

Students may choose elective courses in other departments such as Sociology, Speech, Safety, Management, etc. Elective coursework for all students will be approved by the student's advisor no later than the end of the first 18 hours of completed graduate work.

### **QUALITY ASSURANCE (QA)**

**(See Information Technology and Engineering [CITE])**

## RELIGIOUS STUDIES (RST)

The Department of Religious Studies offers a minor field of study which is open to all majors in all fields.

## SAFETY (SED)

(See Information Technology and Engineering [CITE])

## SCHOOL PSYCHOLOGY (Ed.S.)

The school psychologist is a professional who works as a specialist within the school system. The specific duties of the school psychologist are the evaluation of behavior and learning problems, the administration and interpretation of individual and group assessment instruments, the appropriate use of school and community resources, and the design and interpretation of research to establish the most appropriate educational and psychological programs based on the individual needs of the child. The school psychologist is a resource person who aids the teacher, special educator, administrator and parents in planning for school age children. The school psychologist must be equally well-trained in direct services to children and in consulting services. To be effective in fulfilling these roles the School Psychologist must endorse the values of a pluralistic society and show appreciation for cultural diversity. All assessments and interventions must be completed within the relevant cultural context of the child. The values of the family and schools as socializing institutions must be recognized and these institutions should be strengthened through the application of psychological services.

The Ed.S. program in School Psychology requires undergraduate preparation in psychology or education and/or related fields, and is also designed to accommodate those students who already possess a master's degree and who wish to complete the requirements for West Virginia certification as school psychologists. The Ed.S. in School Psychology requires a carefully planned, individualized plan of study reflecting the previous education and experiences of the students enrolled. The program consists of those courses still needed to complete the 70-hour approved program in school psychology required for permanent certification as a school psychologist by the West Virginia Department of Education. Graduates of the program are also eligible for licensure by the Board of Examiners for Psychology as a School Psychologist. Of the 24 hours (minimum) required to complete the program, 12 hours are required to be in a full-time, year-long supervised field experience (internship). The Ed.S. program has been approved by the National Association of School Psychologists and meets the minimal training requirements for national certification as a school psychologist.

### Admissions Requirements:

Students seeking admission to the Ed.S. program must submit official transcripts from all colleges and universities including documentation of previous graduate coursework. Previous preparation in psychopathology, statistics, theories of personality, and child psychology is expected. Students who do not have an initial teaching certificate must present a passing score on the PRAXIS I.

Applicants who do not have graduate degrees must submit GRE test scores greater than 1200 for the three subtests or a raw score greater than 40 on the Miller Analogies Test. If the undergraduate GPA is below 3.0, the applicant must complete a minimum of 12 hours of graduate coursework and have a 3.0 GPA before being considered for admission.

An advisor will be assigned upon the student's acceptance into the program. The advisor will:

- Review the student's transcripts to determine the courses which may be transferred as equivalent to courses in the approved program curriculum;
- Interview the student to plan for those courses which best fit the needs and interests of the student; and
- Meet with the student to devise a plan of study which, when completed, will qualify the student for endorsement for certification as a West Virginia school psychologist. This plan must be approved by the School Psychology program coordinator.
- The approved Plan of Study must be completed within the first semester after admission

### Graduation Requirements:

A minimum of 12 hours of coursework at Marshall University is required prior to scheduling an internship. Internship requires a five-day per week, full school year commitment. The student registers for six (6) hours of course credit each semester. Application for internship credit must be made six months prior to the anticipated starting date. All other coursework must be completed before enrolling in the field experience. Professional certification standards require a full year post master's degree internship.

All Ed.S. students must complete the courses identified in their Plans of Study before they apply for graduation. All students must complete an empirical research project for submission to a journal or complete



a thesis. In addition, students must submit a passing score on the Praxis II: Speciality Area Test (formerly the National Teachers' Examination) in School Psychology. Students must also submit a portfolio of their internship and must have had a performance assessment of their job-related objectives by both the faculty supervisor and the cooperating school professional.

The plan of study must indicate equivalency of prior coursework as well as the courses to be completed in the degree program. Students must complete the following 70 hours of required courses either as part of their Ed.S. degree program or through equivalency of courses completed prior to admission.

### Program of Studies Education Specialist in Psychology

Required courses include:

Course Number	Course Title	Hours
<i>All of the following:</i>		
LS 530*	Human Relations	3
PSY 506	Psychometrics	3
PSY 526	Cross Cultural Psychology	3
PSY 560	History and Systems	3
SPSY 601	School Practices I	3
SPSY 602	Issues in School Psychology	3
PSY 605	Ethical, Legal and Professional Issues In Psychology	3
SPSY 621	Assessment of Children Practicum	1
SPSY 622	Assessment of Children	3
SPSY 616	Advanced Developmental	3
SPSY 617	Prevention and Consultation Services In the Schools	3
SPSY 619	Direct Intervention Services in the Schools	3
PSY 623	Experimental Design	3
PSY 627	Social Psych Bases of Groups	3
PSY 672	Cognitive Psychology	3
PSY 674	Biological Bases of Behavior	3
CI 535	General Special Education Programming	3
CI 636	Modern Developmental Reading Program K-8	3
SPSY 734	Linking Assessment to the Curriculum	3
SPSY 740	Practicum in School Psychology	3
SPSY 745	Internship in School Psychology	12
	<b>TOTAL FOR DEGREE</b>	<b>70 hours</b>

*\*Waived for students entering with initial teaching certificate.*

### SOCIOLOGY (SOC)

The Department of Sociology focuses on applied sociology and anthropology, especially the analysis of social and cultural issues, policies and trends in Appalachia. We also offer courses in social theory, with an emphasis on inequality.

Applicants for admission to the graduate program are expected to present a minimum of twelve hours of undergraduate sociology courses. After satisfactorily completing twelve hours of resident graduate sociology courses, including Sociology 503 and 545, students may apply for admission to candidacy.

To complete the requirements for the master's degree, graduate students must select either the thesis or the non-thesis option. The thesis option requires completion of 32 hours of work, including 1-6 hours of thesis in Sociology 681 and a minor of 6 hours. The non-thesis option requires completion of 36 hours, including Sociology 679 and a minor of 6 hours. Sociology 503, 521, 545, and 601 are required for either option.

### SPANISH (SPN)

The Department of Modern Languages offers a minor field of study in Spanish. These courses can also be used in conjunction with a major in Secondary Education.

**SPECIAL EDUCATION**  
(See Curriculum and Instruction)

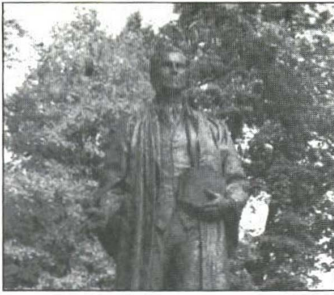
**SPEECH**  
(See Communication Studies)

**SPEECH PATHOLOGY**  
(See Communication Disorders)

**TECHNOLOGY MANAGEMENT (TM)**  
(See Information Technology and Engineering [CITE])

**THEATRE (THE)**

At present the Department of Theatre does not offer a graduate major. Courses in theatre are taken as minors by students in other departments, such as Music, Communication Studies, History, and English. Courses in theatre are also taken by teachers in service who wish to enhance their competence in theatre and to qualify for a higher salary.



# Graduate Courses of Instruction

## ABBREVIATIONS

PR:	Prerequisite
CR:	Corequisite
REC:	Recommended
I.I.I.S:	I-Fall semester; II-Spring semester; S-Summer
-lec. -lab	lecture and laboratory hours per week
	(e.g., 2 lec-4 lab means two hours lecture and four hours laboratory per week)
S/U:	Graded Satisfactory/Unsatisfactory.

ACCOUNTING (ACC) .....	125	DIETETIC INTERNSHIP (DTS) .....	156
ADULT AND TECHNICAL EDUCATION (ATE) .....	126	ECONOMICS (ECN) .....	156
ANATOMY, CELL		EDUCATIONAL FOUNDATIONS (EDF) .....	157
AND NEUROBIOLOGY (ACB) .....	129	ELECTRICAL ENGINEERING (EE) .....	159
ANTHROPOLOGY (ANT) .....	130	ENGINEERING (ENGR) .....	159
ART (ART) .....	131	ENGINEERING MANAGEMENT (EM) .....	159
ARTS AND SOCIETY (A & S) .....	174	ENGLISH (ENG) .....	159
BIOCHEMISTRY		ENVIRONMENTAL ENGINEERING (ENVE) ...	162
AND MOLECULAR BIOLOGY (BIC) .....	132	ENVIRONMENTAL SCIENCE (ES) .....	163
BIOLOGICAL SCIENCES (BSC) .....	133	FAMILY AND CONSUMER SCIENCE (FCS) ...	164
BIOMEDICAL SCIENCE (BMS) .....	135	FINANCE (FIN) .....	166
CHEMICAL ENGINEERING (CHE) .....	135	FORENSIC SCIENCE (FSC) .....	166
CHEMISTRY (CHM) .....	136	FRENCH (FRN) .....	167
CIVIL ENGINEERING (CE) .....	138	GEOGRAPHY (GEO) .....	167
CLASSICS (CL) .....	138	GEOLOGY (GLY) .....	168
COMMUNICATION DISORDERS (CD) .....	138	HEALTH CARE ADMINISTRATION (HCA) ...	169
COMMUNICATION STUDIES (CMM) .....	139	HEALTH EDUCATION (HE) .....	171
COMPUTER SCIENCE AND SOFTWARE		HISTORICAL STUDIES (HIST) .....	175
DEVELOPMENT (CSD) .....	140	HISTORY (HST) .....	171
CONTROL SYSTEMS (CSE) .....	141	HUMANITIES (HUMN) .....	173
COUNSELING (COUN) .....	142	INDUSTRIAL	
CRIMINAL JUSTICE (CJ) .....	146	AND EMPLOYEE RELATIONS (IER) ...	176
CULTURAL STUDIES (CulS) .....	174	INDUSTRIAL ENGINEERING (IE) .....	177
CURRICULUM AND INSTRUCTION (CI) .....	147	INFORMATION SYSTEMS (IS) .....	177
CURRICULUM AND INSTRUCTION: EDUCA-		INSTRUCTIONAL TECHNOLOGY	
TIONAL COMPUTING (CIEC) .....	149	AND LIBRARY SCIENCE (ITL) .....	179
CURRICULUM AND INSTRUCTION: ENGLISH		JOURNALISM	
AS A SECOND LANGUAGE (CISL) .....	150	AND MASS COMMUNICATIONS (JMC) ..	180
CURRICULUM AND INSTRUCTION:		LATIN (LAT) .....	182
MATHEMATICS EDUCATION (CIME) ....	150	LEADERSHIP STUDIES (LS) .....	182
CURRICULUM AND INSTRUCTION:		LEGAL ENVIRONMENT (LE) .....	185
READING EDUCATION (CIRG) .....	151	LITERARY STUDIES (LITS) .....	175
CURRICULUM AND INSTRUCTION:		MANAGEMENT (MGT) .....	185
SCIENCE EDUCATION (CISE) .....	152	MARKETING (MKT) .....	186
CURRICULUM AND INSTRUCTION:		MATHEMATICS (MTH) .....	187
SPECIAL EDUCATION (CISP) .....	153	MICROBIOLOGY, IMMUNOLOGY	
CURRICULUM AND INSTRUCTION:		AND MOLECULAR GENETICS (MCB) ...	188
VISUAL IMPAIRMENTS (CIVI) .....	155	MINE SAFETY (MSF) .....	189

PARK RESOURCES AND LEISURE SERVICES (PLS) .....	193
PATHOLOGY (PTH) .....	194
PHARMACOLOGY (PMC) .....	194
PHILOSOPHY (PHL) .....	195
PHYSICAL EDUCATION (PE) .....	195
PHYSICAL SCIENCE (PS) .....	198
PHYSICS (PHY) .....	198
PHYSIOLOGY (PHS) .....	199
POLITICAL SCIENCE (PSC) .....	200

PSYCHOLOGY (PSY) .....	202
QUALITY ASSURANCE (QA) .....	205
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THEATRE (THE) .....	212

## ACCOUNTING (ACC)

- 510 Financial Accounting. 3 hrs.**  
Application of accounting as an information development and communication function that supports economic decision making. Topics include principles, concepts, problems, financial analysis, personal and organizational decisions, business entities, and government.
- 580-583 Special Topics. 4 hrs.**
- 612 Accounting Functions in Business. 3 hrs.**  
A study of the generation, transformation, and presentation of quantitative data produced by the accounting process. Emphasis is given to the modern accounting system that generates information (1) for marketing, production, and financial executives in planning and controlling business operations, and (2) by investors, creditors, governmental agencies, and other external groups having an interest in the operating results and financial position of business firms. (PR: Full M.B.A. admission or permission of GSM academic advisor)
- 613 Profit Planning and Controls. 3 hrs.**  
Determination, analysis, and reporting of data for planning and controlling operations. Includes flexible budgets, standard costs, and systems of determining historical costs. (PR: Full M.B.A. admission or permission of GSM academic advisor)
- 614 Theory of Accounting. 3 hrs.**  
History and development of accounting principles; intensive study of theoretical problems related to determination of income and presentation of financial conditions. (PR: Accounting 613 and full M.B.A. admission or permission of GSM academic advisor)
- 615 Auditing Theory and Practice. 3 hrs.**  
Legal and social responsibilities of the auditor. Verification of financial statements by independent public accountants and internal auditors. (PR: ACC 429 and full M.B.A. admission or permission of GSM academic advisor)
- 616 Advanced Income Tax Procedure. 3 hrs.**  
A study of selected topics in the Internal Revenue code and regulations with emphasis on tax accounting and research. (PR: ACC 348 and full M.B.A. admission or permission of GSM academic advisor)
- 617 Advanced Controllorship. 3 hrs.**  
Functions of the modern corporate controller. Topics and problems demonstrating the integrative nature of the controller's role are investigated. The use of the computer is integrated into the course. (PR: ACC 613 and full M.B.A. admission or permission of GSM academic advisor)
- 618 Accounting Research. 3 hrs.**  
Examination and evaluation of current theories, issues, and problems relating to accounting. Primary emphasis on accounting theory and research. (PR: ACC 312 and full M.B.A. admission or permission of GSM academic advisor)
- 650-651 Special Topics. 1-3, 1-3 hrs.**  
(PR: Permission of the division head and full M.B.A. admission)
- 660 Independent Study. 1-4 hrs.**  
Independent study of a specific nature under the supervision of a faculty member with graduate status. Hours determined by the magnitude of the project. (PR: Permission of the division head and full M.B.A. admission or permission of GSM academic advisor)
- 681 Thesis. 1-6 hrs.**  
(PR: Permission of the division head and full M.B.A. admission)



## ADULT AND TECHNICAL EDUCATION (ATE)

- 503 **Introduction to Adult Learning Theory. 3 hrs.**  
Designed to acquaint the student with the field of adult education and its underpinnings and the various adult learning theories and/or approaches.
- 505 **Instructional Methods in Technical Training. 3 hrs.**  
Unit and lesson planning; cooperative education as a method of instruction, project plan of instruction, classroom management and control, demonstration techniques, evaluation methods, field experience in Marketing Education classroom.
- 508 **Teaching Methods in Vocational Education. 3 hrs.**  
Correlating shop/lab instruction with classroom instruction; individual and group instruction sheets and materials; the four teaching steps in vocational education; physical factors relating to classroom and shop/lab.
- 510 **Developing Selling Curriculum. 3 hrs.**  
Conduct library research, review selling content, select content objectives, identify content appropriate for the target group, prepare teaching outlines, and design evaluation instruments.
- 511 **Introduction to Vocational Education. 3 hrs.**  
Designed as a follow-up to Teaching Methods in Vocational Education and intended to provide the new teacher guidance and supervision in developing teacher competence.
- 512 **Course Construction and Planning in Vocational Education. 3 hrs.**  
Analysis procedures for determining vocational curriculum content; determination of program goals and objectives; involvement of advisory committees; factors, principles, and techniques of developing a course of study.
- 513 **Organization and Management of School Shops and Laboratories. 3 hrs.**  
Responsibilities of the teacher as a manager; methods of handling tools, equipment, and supplies; project instructional resource needs and reporting; improvement of vocational facilities; filing system, and vocational laboratory.
- 520 **Principles of Cooperative Education. 3 hrs.**  
Principles for planning, implementing, and evaluating the cooperative design within the various service areas of technical education; analysis of factors which must be considered in selection of the cooperative design.
- 521 **Occupational Analysis. 3 hrs.**  
Assist the vocational instructor analyze an occupation; goals and objectives to form a basis for vocational curriculum; classifying and describing occupations; analysis procedures; course content, and technical skills and knowledge.
- 522 **Administration of Cooperative Programs. 3 hrs.**  
Administering cooperative education programs, recruiting, and selecting students; selecting training agencies and placing students; conducting public relations activities for the program; and advising the student organization.
- 524 **Safety in Vocational Education. 3 hrs.**  
Responsibilities of the teacher in providing a safe learning/working environment; effective approaches to accident prevention; laws and regulatory agencies regarding safety management in the classroom and laboratory.
- 525 **Computer Applications in Business and Marketing Education. 3 hrs.**  
Study of computer applications and software for Business and Marketing Education.
- 535 **Methods of Examination in Vocational Education. 3 hrs.**  
Develop written and performance evaluation instruments; develop and use progress charts; determine appropriate grading procedures. Develop rating scales, objectives tests, classroom tests, and manipulative tests. Introduction to statistics.
- 536 **Coordination of Cooperative Vocational Education. 3 hrs.**  
Background of coordination; methods of techniques for evaluating and selecting work stations; student selection, placement, and follow-up; role of advisory committees; methods of evaluating cooperative work experience.
- 540 **Developing Merchandising/Sales Promotion Curriculum. 3 hrs.**  
Conduct library research, review merchandising and sales promotion content, objectives, identify content appropriate for the target group, prepare teaching outlines, and design evaluation instruments.
- 542 **Principles of Prevocational Exploration. 3 hrs.**  
Study of the prevocational exploration delivery system. Develop instructional units which include goals, objectives, and criteria for evaluation of students.
- 544 **Practicum in Prevocational Exploration, I. 3 hrs.**  
Participants make revisions to instructional units, organize a Career Exploration Club, and recognize apprenticeship opportunities.

- 546 **Practicum in Prevocational Exploration, II. 3 hrs.**  
Participants modify the 36-lesson plan project, incorporate additional "hands-on" activities, examine teaching strategies, and design activities for community involvement utilizing an advisory committee.
- 547 **Computer Applications in Vocational Education. 3 hrs.**  
Designed to introduce modern instructional technology in today's classrooms and labs. Introduction to disk operating systems; application software for instruction and instructional management; student evaluation; record keeping, and work processing.
- 548 **Applications of Basic Skills in Vocational Education. 3 hrs.**  
Methods, techniques, and strategies for incorporating basic skills in vocational instruction; emphasis on reading, writing, math, oral communication, and critical thinking skills; job seeking and job keeping skills.
- 549 **Occupational Analysis and Instructional Design. 3 hrs.**  
Analyzing an occupation to identify knowledge and skills; use of the analysis to develop problem solving objectives and instructional plans; emphasis on approach to facilitate student achievement of objectives.
- 550 **Interpersonal Skills in the Workplace. 3 hrs.**  
Course is designed to provide opportunities to learn in preparation for career success with supervisors, co-workers, clients, and customers. Human relations skills are examined and related to business success.
- 552 **History and Philosophy of Vocational Education. 3 hrs.**  
Historical influences in the development of vocational education in America and Europe; motivating influences and the implications of philosophy in modern vocational education.
- 559 **Coordination of Vocational Youth Activities. 3 hrs.**  
Organize and develop a student organization that is co-curricular; defining the purpose of the organization; plan application and integration into the vocational program; competencies in leadership and team building.
- 560-563 **Professional Development. 1-4 hrs.**
- 565 **Career Exploration and Development. 3 hrs.**  
Exploring principles and techniques for career planning and job search. An overview of strategies for gaining a competitive edge in the labor market and for experiencing a successful career beginning.
- 569 **Business and Occupational Teaching Methods. 3 hrs.**  
Survey materials and methods for developing competencies in teaching business education and/or occupational training programs.
- 570 **Practicum in Adult and Technical Education. 1-4 hrs.**  
Individually designed field experience under supervision of the faculty; such experience related to the student's future professional role.
- 580-584 **Special Topics. 1-4 hrs.**
- 585-588 **Independent Study. 1-4 hrs.**
- 591-594 **Workshop. 1-4 hrs.**
- 589 **Grant Proposal Writing for Business and Industry. 3 hrs.**  
This course provides a step-by-step guide to the proposal writing process, from the initial stages of planning, to writing the first draft, to preparing the final document.
- 595 **Historical Developments in Workforce Preparation. 3 hrs.**  
An overview of the historical evolution of technical education legislation; analysis of Technical Education Acts as they relate to state and local planning of technical education programs.
- 600 **Aspects of Training and Development. 3 hrs.**  
Overview of the training and development profession and theories that support the profession; emphasis on the variety of solutions used by HRD professionals to help improve individual and organizational performance.
- 601 **Philosophy of Workforce Preparation 3 hrs.**  
Overview of the historical origins of technical education and their relationship to educational philosophies; foundations of areas of technical education; analysis of questions fundamental to a philosophy of technical education.
- 603 **Introduction to Adult Education and Adult Learners. 3 hrs.**  
Designed to acquaint the student with the field of adult and continuing education, its foundations and development in this country and future trends.
- 605 **Foundations of Business and Marketing Education. 3 hrs.**  
Application of philosophy and principles of business and marketing education to the objectives, curriculum, guidance, and teacher preparation, emphasizing the techniques for coordination of federally aided programs.

- 609 **Developing Training Plans for Business and Industry. 3 hrs.**  
Analysis of factors in developing local plans for business and industry; emphasis on implications of federal guidelines; factors which impinge upon programs during implementation; developing evaluation procedures.
- 610 **Current Issues in Business and Marketing Education. 3 hrs.**  
Individual and group analysis of current issues in business and marketing; identification of issues significant to the direction of sound business education and marketing education programs.
- 614 **Adult/Technical Education and Economic Development. 3 hrs.**  
Study of the sources of data on employment needs; relationship to planning techniques for conducting a community survey; organizing data for analysis and applying the findings to the planning process.
- 615 **Student Career Organizations. 3 hrs.**  
A study of various facets of existing state/national student organizations. Special emphasis is placed upon the organizations of student career organizations and parliamentary procedures. (PR: ATE 542 or equivalent)
- 616 **Community Relations in Adult/Technical Programs. 3 hrs.**  
Study of community organization and the relationship of adult/technical education; consideration of models for analyzing employment opportunities and occupational training needs and the process in securing community commitment.
- 618 **Literature of Adult and Continuing Education. 3 hrs.**  
A program of readings and reports on specific areas in adult education or particular problems within an area of adult and continuing education. Readings to be selected cooperatively with advisor.
- 628 **Adult Instruction: Environmental and Personal Aspects. 3 hrs.**  
The course examines both environmental and personal factors which may impact on the adult learning process and is designed to foster awareness, which will be translated into appropriate intervention strategies.
- 631 **Survey Practicum in Computer Applications in Business and Industry. 3 hrs.**  
An introductory course for persons who want to become familiar with the application of computers in the business/industrial fields represented by adult and technical education.
- 635 **Specialized Practicum in Computer Applications in Business and Industry. 3 hrs.**  
An advanced course for persons who want to further their knowledge of the application of computers in the business/industrial fields represented by adult and technical education.
- 637 **Individual Computer Program Applications. 3 hrs.**  
Individually designed learning activities that involve the application of previously learned theories, processes, operations, techniques or systems. The applications are studied, analyzed, and evaluated.
- 640 **Program Design in Occupational Education. 3 hrs.**  
An overview of technical education history, philosophy, legislation, certification, evaluation, and operations. Comparison to academic programs to emphasize similarities and differences.
- 650 **Career Education Curriculum Development. 3 hrs.**  
Instructional unit is developed to assist children and youth achieve academic, general, or technical education and also career education goals; includes goals, objectives, procedures, student activities, resources, and evaluation.
- 651 **Developing Marketing Curriculum. 3 hrs.**  
Conduct library research, review marketing content, select content objectives, identify content appropriate for the target group, prepare teaching outlines, and design evaluation instruments.
- 652 **Field Based Job Analysis and Curriculum Design. 3 hrs.**  
Field study of job analysis, curriculum, course, and program design.
- 653 **Developing Management Curriculum. 3 hrs.**  
Conduct library research, review management content, select content objectives, identify content appropriate for the target group, prepare teaching outlines, and design evaluation instruments.
- 655 **Developing Personnel Curriculum. 3 hrs.**  
Conduct library research, review personnel content, select content objectives, identify content appropriate for the target group, prepare teaching outlines, and design evaluation instruments.
- 656 **Instructional Planning for Adult Populations. 3 hrs.**  
An examination and application of the process involved in the development, operation, and evaluation of adult programs in the community, business, and industry.
- 661 **Practicum in Adult and Continuing Education. 3 hrs.**  
Individually designed to provide field experience under the supervision of the faculty, such experience to be related to the student's project role in adult and continuing education.
- 662 **Applied Field Experience in Prevocational Exploration. 3 hrs.**  
Participants are assisted in making revisions in instructional units, organizing an advisory committee, and organizing a Career Exploration Club as an integral part of the classroom instruction. (PR: ATE 542)



- 664 **Occupational Education Practicum. 3 hrs.**  
Individually designed to provide field experience under the supervision of the faculty, such experience to be related to the student's profession.
- 667 **Cooperative Education Workforce Experience. 1-10 hrs.**  
Alternating or parallel periods of study and paid employment for experiential learning related to student's academic and/or professional goals (Min. 50 hours of paid work experience per credit hour)
- 668 **Field Based Internship in Business and Industry. 3 hrs.**  
Internship in the technical content areas of marketing, merchandising, management or technology; evaluating methods, and procedures in marketing, merchandising, management, or technology. (PR: ATE 609, 628, 652 and 656)
- 671 **Evaluation of Adult and Technical Instruction. 3 hrs.**  
An examination of the design and evaluation processes used in adult learning areas with emphasis on the T&I and technical fields as well as the general field.
- 673 **Tests and Measurement in Adult/Technical Education. 3 hrs.**  
Evaluation procedures in adult/technical education including principles of test construction; survey of standardized and published tests; utilization in the classroom or training department; review of statistical methods.
- 675 **Literature and Applied Research in Adult/Technical Education. 3 hrs.**  
Program of readings and reports on specific areas of adult/Technical education or particular problems within an area of adult and technical education; reading selected cooperatively with advisor.
- 677 **Research Methodology and Design in Adult/Technical Education. 3 hrs.**  
Study of methodology, application, analysis and synthesis of research; a review of current studies with attention to statistical techniques, data collecting, data handling, and the impact of particular research.
- 679 **Problem Report. 1-6 hrs.**
- 681 **Thesis. 1-6 hrs.**
- 690-692 **Seminar. 1-4 hrs.**

#### ANATOMY, CELL AND NEUROBIOLOGY (ACB)

- 620 **Gross Anatomy/Embryology. 8 hrs. I.**  
The course presents a comprehensive study of the structures of the human body and their development. Although the course is centered in dissection, additional learning resources include examination of non-invasive images such as CAT scans, MR images and radiographs, and the study of models and the use of computer programs. Clinical correlates and cases are used to establish the anatomical basis of the practice of medicine.
- 624 **Microscopic Anatomy and Ultrastructure. 4 hrs. II.**  
Students study the functional and microscopic aspects of cell and tissue types found in different regions of the human body. Presentation of topics correlates with the physiology course, which runs concurrently and provides an organ system approach to the material. In the laboratory portion of the course, tissues from medical histology slide sets and electron micrographs are studied.
- 626 **Advanced Histological Techniques. 4 hrs., II.**  
Advanced techniques of tissue preparation, staining, histochemistry and immune localization. (PR: Consent of instructor)
- 628 **Anatomy of the Nervous System. 4 hrs. II.**  
The gross and fine structure of the nervous system is correlated with function at each level of the spinal cord and brain. Lectures are supplemented in the laboratory by the study of microscopic sections and gross sections of the spinal cord, brain stem and whole brain. (PR: Consent of instructor)
- 632 **Principles of Mammalian Development. 3 hrs. I.**  
A course designed to present the salient features of normal human development so that students will have a basis for comprehending normal adult anatomic relations and variations, and a basis for interpreting congenital pathologic conditions. (PR: Consent of instructor)
- 639 **Neuroanatomy Research Techniques. 3 hrs. S.**  
Students rotate through neuroanatomy faculty research laboratories where they have the opportunity to see state-of-the-art neuroanatomy research skills demonstrated. Each student has the opportunity to participate in neuroanatomical research. (PR: Consent of instructor)
- 640 **Current Topics in Cellular Biology. 1-3 hrs. II.**  
Students carry out a guided comprehensive review of the literature on a current research topic. The topic is selected by agreement of the student and faculty member. Consent of instructor is required.
- 641 **Electron Microscopy. 3 hrs. I.**  
The theory and practice of transmission electron microscopy (TEM). Sample preparation, TEM operation, darkroom work, manuscript preparation, and an individualized research project. (PR: Consent of instructor)



- 643 **Independent Study in Electron Microscopy. 1-5 hrs. II.**  
Supervised individual research projects in electron microscopy and advanced EM Techniques: STEM, SEM, Diffraction, Darkfield. (PR: ACB 641 or approval of instructor)
- 650 **Research in Cellular Processes. 1-4 hrs. II.**  
Provides the student with an introduction to research in cellular biology and neurobiology. The education program is arranged in consultation with an individual faculty member. Consent of instructor required.
- 660 **Current Topics in Neurobiology. 1-3 hrs. II.**  
Students carry out a guided comprehensive review of the literature on a current research topic in neurobiology. The topic is selected by agreement of the student and faculty. Consent of instructor required.
- 675 **Special Topics. 1-4 hrs. I, II.**  
Present course material on special areas of research or topics which are not routinely covered in existing courses. Consent of instructor is required.
- 676 **Special Topics. 1-4 hrs. I, II.**  
Present course material on special areas of research or topics which are not routinely covered in existing courses. Consent of instructor is required.
- 677 **Special Topics. 1-4 hrs. I, II.**  
Present course material on special areas of research or topics which are not routinely covered in existing courses. Consent of instructor is required.

## ANTHROPOLOGY (ANT)

(See Sociology)

- 505 **Applied Anthropology. 3 hrs.**  
Principles of applied anthropology in community development. (PR: 6 hours of anthropology or sociology or equivalent)
- 526 **African Cultures. 3 hrs.**  
Comparative analysis of the tribal cultures of Africa. (PR: 6 hours of anthropology, or equivalent)
- 527 **Ethnic Relations. 3 hrs.**  
Analysis of cultural contact situations with emphasis on the role of western Europe cultures. (PR: 6 hours of anthropology or equivalent)
- 530 **The American Indian. 3 hrs.**  
Comparative analysis of Indian tribal cultures of the Americas. (PR: 6 hours of anthropology or equivalent)
- 537 **World Cultures: An Anthropological View. 3 hrs.**  
Anthropological analysis of the major culture areas of the world. (PR: 6 hours of anthropology or permission)
- 541 **Oceania. 3 hrs.**  
Comparative analysis of the original cultures of the Pacific Islands area. (PR: 6 hours of anthropology or permission)
- 543 **Anthropological Theory. 3 hrs.**  
Introduction to ethnological theory and to the development of grounded theory. (PR: 6 credit hours of anthropology or departmental permission)
- 551 **Anthropological Analysis. 3 hrs.**  
Examination of the analytical procedures utilized in ethnographic and comparative approaches to anthropological data, and an introduction to computer processing of cross-cultural data using the Human Relations Area Files. (PR: ANT 201)
- 553 **Cognitive Anthropology. 3 hrs.**  
Analysis of the relations between cultural, social and personality systems. (PR: 6 hours of sociology or anthropology, 6 hours of psychology or equivalent)
- 555 **Appalachian Cultures. 3 hrs.**  
Analysis of the Cultures of Appalachia. (PR: 6 hours of anthropology or departmental permission)
- 561 **Theory and Analysis in Archaeology. 3 hrs.**  
An introduction to archaeological theory and its application to the material record of cultures, past and present (PR: 6 credit hours of anthropology or departmental permission)
- 570 **Appalachian Field Experience I. 3 hrs.**  
Supervised field work in an Appalachian community studying the social and cultural characteristics of the area. Four afternoons each week plus one class hour. (PR: ANT 455, or equivalent)
- 571 **Appalachian Field Experience II. 3 hrs.**  
Supervised field work in an Appalachian community studying the social and cultural characteristics of the area. Four afternoons each week plus one class hour. (PR: ANT 555)

- 580-583 **Special Topics. 1-4 hrs.**  
Study of topics of interest not covered in regularly scheduled classes. (PR: Graduate status and permission)
- 585-588 **Independent Study. 1-4 hrs.**  
Individual study of topics not offered in regularly scheduled classes. (PR: Graduate status and permission)
- 597-598 **Instructional Television Course. 1-4 hrs.**  
A course based upon Instructional Television Series broadcast by public television. The student is responsible for viewing the series on the air and satisfying all course requirements announced by the department.
- 600 **Ethnographic Methods. 3 hrs.**  
Introduction to anthropological data-gathering and interviewing methods (PR: ANT 201; for students who have not had ANT 333 and 343)

## ART (ART)

- 500 **Co-Curricular Experiences in the Visual Arts. 0 hrs.**  
Students attend distinguished lectures, exhibitions, workshops, field trips, and other co-curricular visual arts events as part of their requirement for graduation.
- 501-502 **History of Art. 3; 3 hrs. I or II or S.**  
A survey of the development of architecture, sculpture, painting and the minor arts to 1400 A.D. and from 1400 A.D. to present. (Does not fulfill Art History requirements.)
- 504 **Iconography of Mary. 3 hrs.**  
Traces the sources and evolution of Catholic doctrine and images of the Virgin Mary.
- 505 **Art in America. 3 hrs. I or II or S.**  
A survey of the development of architecture, painting, and sculpture from colonial times to the present.
- 506 **Figure Drawing. 3 hrs. I or II or S.**  
Practice in drawing from the posed human figure.
- 507 **Tribal Arts. 3 hrs. I or II or S.**  
An introduction to the unique Arts of so-called precivilized peoples with a twofold emphasis: First, the European Pre-Historic, Second, the Non-European Primitive.
- 508 **Art of the Ancient World. 3 hrs.**  
History of the visual arts and architecture in Ancient Mesopotamia, Egypt, Greece and Rome.
- 509 **Nineteenth Century Art. 3 hrs. I or II or S.**  
A survey of the development of architecture, painting, and sculpture in the western world during the last century.
- 512 **20th Century Art To WW II. 3 hrs.**  
A survey of the development of architecture, painting and sculpture in the Western World from 1900 to World War II.
- 513 **20th Century Art After WW II. 3 hrs.**  
A survey of the development of architecture, painting and sculpture in the Western World from World War II to the present.
- 514 **The Art of the Renaissance in Italy and Northern Europe. 3 hrs. I or II or S.**  
The course discusses the art of the Renaissance in Italy and Northern Europe within the context of social, political, theological and philosophical developments.
- 519 **Spinning, Dyeing, and Tapestry. 3 hrs. I or II or S.**  
Basic procedures in handspinning, dyeing and tapestry weaving.
- 540 **Advanced Graphic Design. 3 hrs.**  
Directed study in which student may select subject from any area of commercial design with the goal of developing specific area of expertise. Emphasis on original design and research.
- 548 **Ceramic Materials and Processes. 3 hrs.**  
Practical and empirical investigation of ceramic materials, techniques and approaches to their use in clay and glazes.
- 550 **2 & 3 Dimensional Designs for Fabrics. 3 hrs.**  
Exploring the potentialities of fabric as an art experience in two and three dimensional art form.
- 554 **Designing for Multimedia. 3 hrs.**  
Current topics and techniques in multimedia design. Topics include animation, incorporating digital video and sound, interaction design, information design, Web site design and advanced image processing.
- 555-556 **Painting: Acrylic and Oil. 3; 3 hrs. I, II, S.**  
Study and practice of painting in expressing still life, landscape and the human figure.

- 557 **Figure Painting. 3 hrs. S.**  
Painting the nude model using modern and classical methods.
- 560 **History and Philosophy of Art Education, 3 hrs. I.**  
A survey of the evolution of art education and philosophy, and a study of problems related to art education on the elementary and high school level.
- 566 **Problems in Curriculum Development for Public School Art K-12. 3 hrs.**  
Exploring considerations for curriculum development in Art Education, developing individualized curriculum for specific situations on grade levels K-6 or 7-12.
- 569 **Printmaking Processes. 3 hrs. I, II, S.**  
Experiments in the media of Intaglio, Lithography, Serigraphy, Relief, Collagraphs and new techniques of printmaking.
- 570-573 **Practicum. 3 hrs. I, II, S.**  
To be used for learning activities that involve the application of previously learned processes, theories, systems or techniques
- 580-583 **Special Topics. 1-4 hrs.**  
To be used for experimental courses. By permission only.
- 585-588 **Independent Studies. 1-4 hrs.**  
To be reserved for tutorials, directed and independent research and readings, problem reports, and other activities designed to fit the needs of individual students within the major.
- 601 **Advanced Problems in Art Education (Grades K-12). 3 hrs. I, II, S.**  
For graduate students with limited experience in the arts and crafts wishing to familiarize themselves with methods and materials used in art education.
- 650-656 **Advanced Studio Sequence. 3; 3; 3; 3; 3; 3 hrs. I, II, S.**  
The student will select special studies from art education, art history, drawing, painting, sculpture, ceramics, graphics, and other related approved projects.
- 670 **Seminar. 3 hrs. II. Even years only.**  
Discussion and research in selected areas of art.
- 679 **Problem Report. 1-3 hrs. I or II or S.**
- 681 **Thesis. 1-6 hrs. I or II or S.**

### BIOCHEMISTRY AND MOLECULAR BIOLOGY (BIC)

- 620 **Human Biochemistry. 6 hrs. I.**  
A study of structure and metabolism of biological compounds with special reference to the human. Must be taken concurrently with BIC 621. (PR: Organic chemistry and consent of instructor; CR: BIC 621)
- 621 **Human Biochemistry Discussion. 1 hr. CR/NC.**  
Co-requisite weekly discussion group for Human Biochemistry. Selected topics from the lecture course will be covered in greater depth. Must be taken concurrently with BIC 620. (CR: BIC 620)
- 628 **Molecular Mechanisms in Growth and Differentiation. 2 hrs.**  
Advanced graduate course will acquaint students with the latest information on control of cell growth & differentiation at the molecular level. Lecture & student presentations. A short grant proposal is also required. Prerequisite: Cellular & Molecular Biology; BMS 600.
- 634 **Lipid Biochemistry. 2 hrs. II.**  
Advanced study of lipid structure and metabolism. (PR: Biochemistry and consent of instructor)
- 636 **Enzymology. 3 hrs. I.**  
A study of enzyme structure and function, including purification, kinetics, pH and temperature effects, molecular chaperones, degradation, protein engineering, and enzymes important in the cell cycle and regulation of gene expression. (PR: Biochemistry and consent)
- 638 **Nucleic Acids and Protein Synthesis. 3 hrs. II.**  
An advanced course in molecular biology and molecular genetics emphasizing current research in these areas. (PR: Biochemistry and consent of instructor)
- 643 **Molecular Signal Transduction. 3 hrs.**  
An advanced exploration of the newest information on cellular signalling pathways. Special emphasis will be placed on current literature in following signal transduction from the plasma membrane to the nucleus. (PR: BMS 600 or equivalent)
- 675 **Special Topics. 1-4 hrs.**  
Present course material on special areas of research or topics which are not routinely covered in existing courses.

## BIOLOGICAL SCIENCES (BSC)

- 501 **Ichthyology. 4 hrs. II. (Alternate years)**  
Anatomy, physiology, ecology, zoogeography, economic importance and classification of major groups and representative local species of fishes. 2 lec-4 lab and field. (PR: BSC 120-121, 214 or 310)
- 504 **Cellular Physiology. 4 hrs.**  
The physio-chemical nature of intracellular processes in plant and animal cells with emphasis on the functional significance of microscopic and submicroscopic structure and organization. 3 lec-.3 lab. (REC: Background in chemistry and physics; PR: 12 hours biological sciences)
- 505 **Economic Botany. 3 hrs.**  
Plants used by man for food, ornamental purposes, building materials, textiles and other industrial purposes: economic importance of conservation. No laboratory. (PR: BSC 120-121 or equivalent)
- 506 **Herpetology. 4 hrs. II. (Alternate years)**  
A survey of the reptiles and amphibians of the world with special emphasis placed on forms resident to West Virginia including aspects of zoogeography, morphology, taxonomy, and behavior. 2 lec-4 lab. (PR: BSC 120-121, 214)
- 507 **Genetics. 4 hrs. I, II.**  
The fundamental principles and mechanisms of inheritance. 3 lec-4 lab. (PR: BSC 120-121 or equivalent)
- 508 **Ornithology. 4 hrs. II. (Alternate years)**  
An introduction to avian biology: Identification, distribution, migration and breeding activities of birds. 2 lec-4 lab. (PR: BSC 120, 121; REC: BSC 214)
- 509 **Mammalogy. 4 hrs. I (Alternate years).**  
Study of morphology, evolution and classification, zoogeography, ecology, economic importance; survey techniques and recognition of native mammals of West Virginia. (PR: BSC 121 plus an additional 8 hours of BSC courses)
- 510 **Remote Sensing/GIS Applications. 4 hrs. I.**  
A study of the physical systems for collecting remotely sensed data. Statistical/spatial analysis and modeling using image processing/geographic information/spatial computer software systems with earth resources applications. (PR: PHY 203-204, MTH 225 or permission)
- 511 **Digital Image Processing/GIS Model. 4 hrs. II.**  
A study of image processing/geographic information/spatial analysis systems, concurrent and parallel image processing 3-D modeling scenarios utilizing geophysical data for computer simulation modeling. (PR: BSC/PS 410 or BSC 510)
- 513 **Principles of Organic Evolution. 3 hrs. II.**  
The facts and possible mechanisms underlying the unity and diversity of life with emphasis on Neo-Darwinian concepts of the role of species in evolutionary phenomena. (PR: 16 hours BSC)
- 514 **Entomology. 4 hrs.**  
Entomology, anatomy, physiology, identification, classification, life histories and economic importance of representative insect groups. 2 lec-4 lab. (PR: BSC 120-121 or equivalent)
- 515 **Morphology of Plants and Fungi. 4 hrs. I, II, S.**  
Form, structure, and development of plants and fungi. 2 lec-4 lab., (PR: BSC 120, 121 or equivalent)
- 516 **Plant Taxonomy. 4 hrs. I, II, S.**  
Identification and classification of seed plants and ferns of eastern United States. Readings in history and principles of taxonomy, rules of nomenclature and related topics. 2 lec-4 lab. (PR: BSC 120-121 or equivalent)
- 518 **Mycology. 4 hrs. I.**  
Nature, cause and control of plant diseases. 2 lec-4 lab. (PR: BSC 120-121)
- 519 **Plant Anatomy. 4 hrs. II.**  
Investigations in plant anatomy with emphasis on seed plants. 2 lec-4 lab. (PR: BSC 120 and 121 or permission)
- 520 **Plant Physiology. 4 hrs. II. (Alternate years)**  
Experimental study of plant life processes to include applicable biophysical and biochemical principles, water relations, molecular biology, stress physiology, and growth and development. (PR: BSC 322 or equivalent)
- 521 **Phycology. 4 hrs.**  
Taxonomy and morphology of algae. Techniques used in the study of algae with emphasis upon application of ecological principles to current water quality problems. 2 lec-4 lab. (PR: BSC 105 or 121)
- 522 **Animal Physiology. 4 hrs. I.**  
Physiological principles operating in the organ systems of vertebrate animals. (PR: BSC 120, 121 or equivalent; BSC 322)



- 524 **Animal Parasitology. 4 hrs. I, S.**  
Morphology, life histories, classification, and host relationships of common parasites. 2 lec.-4 lab. (REC: BSC 212 or equivalent)
- 526 **Medical Entomology. 4 hrs. II, S.**  
The characteristics and control of certain insects and other arthropods which transmit disease-causing organisms. 2 lec-4 lab. (REC: BSC 212 or equivalent)
- 530 **Plant Ecology. 4 hrs. II.**  
The study of plants and their interactions with their environment at different levels of ecological organization: individuals, populations, communities, and ecosystems. Emphasis on quantitative analysis of ecological data.
- 531 **Limnology. 4 hrs. I, S.**  
The study of inland waters; ecological factors affecting lake and stream productivity and various aquatic communities. 2 lec-4 lab. (PR: BSC 120-121 or equivalent; REC: BSC 212)
- 542 **Advanced Microbiology. 4 hrs.**  
An advanced treatment of microbiology with emphasis on the molecular aspects of anatomy, taxonomy, and physiology of microorganisms. 2 lec-4 lab. (PR: BSC 302)
- 545 **Microbial Ecology. 3 hrs. II.**  
This course introduces students to the vital roles that microbes play in sustaining life on earth. Includes both theoretical and practical concepts ranging from the origin of life to biodegradation. (PR: BSC 121 or permission)
- 546 **Microbial Ecology Lab. 2 hrs. II.**  
A laboratory course emphasizing the recovery, cultivation, enumeration, and identification of bacteria from environmental samples. Also introduces students to molecular-based methods for studying microbial community structure and dynamics. (PR: BSC 121, CR: BSC 545 or consent)
- 550 **Molecular Biology. 3 hrs. II.**  
Advanced principles in molecular function emphasizing current research using recombinant DNA methodology. (PR: BSC 322 or equivalent)
- 560 **Conservation of Forests, Soil and Wildlife. 3 hrs. I.**  
Primarily for students in the biological sciences, general and applied sciences. Includes fieldwork, seminars, and demonstrations related to conservation. 2 lec-4 lab. (PR: BSC 105 or 121 or equivalent)
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Permission)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs. CR/NC**  
(PR: Permission)
- 601 **Vertebrate Embryology. 4 hrs. I.**  
Vertebrate development based on frog, chick and pig embryos. 2 lec.-4 lab.
- 608 **Plant Physiology: Growth and Development. 4 hrs. II. (Alternate years)**  
Comprehensive advanced study of correlative growth in plants with emphasis on germination, dormancy, growth substances and physiological phenomena associated with phases of development. (PR: BSC 322 or 420 or 520)
- 620-622 **Taxonomy of Vascular Plants. 1-2; 1-2; 1-2 hrs.**  
Field studies in the taxonomy of higher plants. (Limited to 4 hours credit per student). (PR: BSC 516 or equivalent)
- 625 **Advanced Physiology. 4 hrs.**  
Lecture, current literature and introduction to research in physiological systems. 3 lec-3 lab. (PR: 4 hrs. physiology or permission)
- 626 **Protozoology. 4 hrs. (Offered every third semester)**  
A study of free-living and parasitic protozoa important to agriculture, wildlife, and man. Morphology, physiology, reproduction, ecology, and life histories of parasitic protozoa will be emphasized.
- 631 **Animal Ecology. 4 hrs. I.**  
A study of population and behavior ecology; community dynamics and field techniques. 2 lec-4 lab.
- 650-652 **Special Problems. 1-3; 1-3; 1-3 hrs.**  
By permission of adviser, graded CR/NC.
- 661 **Seminar I. 2 hrs. I.**  
In depth group discussion of current biological issues.
- 662 **Seminar II. 1 hr. II.**  
Oral presentation of individual topics. (PR: BSC 661)
- 679 **Problem Report. 1-4 hrs.**  
Preparation and completion of a written report from experimental or field research in biological sciences. (PR: permission)
- 681 **Thesis. 1-6 hrs.**  
(PR: By permission of advisor).

## BIOMEDICAL SCIENCE (BMS)

- 600 **Cellular and Molecular Biology. 3 hrs. I.**  
A study of the molecular biology of the cell and its organelles, cell interactions and evolution. (PR: One year of Biology and Organic Chemistry and consent of instructor)
- 614 **Basic Human Genetics. 2 hrs. II.**  
This course will focus on the study of heritable human diseases. Major topics include the metabolic/molecular basis and detection of inherited disease, gene mapping and genetic risk assessment. (PR: BIC 620 or permission of instructor)
- 624 **Human Genetics. 4 hrs., II.**  
An introduction to the study of heritable diseases, their molecular basis and their detection and treatment. Clinical cases will be presented in the second half of the class. (PR: Graduate status in one of the biomedical sciences)
- 630 **Neuroscience. 5 hrs., II.**  
The structure and function of the nervous system. (PR: Permission of instructor)
- 631 **Neuroscience Literature Review. 1 hr.**  
Published articles in the neuroscience literature will be presented by all class members. Each presentation will include background introduction methods, results, and discussion of the neuroscience research. (PR: Permission of instructor)
- 632 **Neuroscience Research Techniques. 3 hrs.**  
Class participants will be exposed to state-of-the-art neuroscience research techniques while in the laboratories of the neuroscience faculty. (PR: Permission of instructor)
- 660 **Communication Skills for Biomedical Sciences I. 1 hr.**  
Biomedical graduate students are trained to plan, prepare, and deliver effective scientific presentations.
- 661 **Communication Skills for Biomedical Sciences I. 1 hr.**  
Biomedical graduate students are trained to plan, prepare, and deliver effective scientific presentations.
- 670 **Basic Methods in Molecular Cloning. 2 hrs. II.**  
This course is designed to expose students to basic molecular cloning techniques, such as genomic library construction, preparation of plasmid DNA, subcloning, nucleic acid hybridization and DNA sequencing. (PR: Undergraduate biology or chemistry majors or graduate student status in one of the biomedical sciences or third year medical student and permission of instructor.)
- 679 **Special Problems. I, II, S. CR/NC**  
Intensive study of a selected topic or problem. Emphasizes independent study. (PR: Consent of advisor)
- 680 **Seminar. 1 hr. I, II. CR/NC**  
Study and discussion of current topics related to the Biomedical Sciences.
- 681 **Thesis. 1-6 hrs. I, II, S. CR/NC.**
- 684 **Overview of Biomedical Sciences Research. 1 hr.**  
New graduate students in Biomedical Sciences are given an overview of each of the areas of research training.
- 685 **Introduction to Research. 1-6 hrs. I, II, S. CR/NC**  
Directed research activities requiring a completed prospectus for an advanced research project, a written report, or a research thesis. A minimum of three (3) hours required for all M.S. candidates. (PR: Consent of instructor)
- 882 **Research. 1-15 hrs. I, II, S. CR/NC**

## CHEMICAL ENGINEERING (CHE)

- 600 **Fluid Dynamics. 3 hrs.**  
Analysis of flow of fluids; development of equations of change; introduction to constitutive equations; non-Newtonian flow; compressible flow; laminar and turbulent flow, and potential and boundary layer flow. (PR: undergraduate course in fluid flow or transport phenomena)
- 602 **Heat Transfer. 3 hrs.**  
Analysis of transfer of energy; development of equations of change; steady and transient heat transfer by conduction; convection; radiation heat transfer; applications to process heat transfer and design. (PR: undergraduate course in transport phenomena or equivalent)
- 604 **Mass Transfer. 3 hrs.**  
A logical development of the theory of molecular diffusion with applications to problems of interest. (PR: undergraduate course in mass transfer)
- 605 **Fundamentals of Separation Processes. 3 hrs.**  
Fundamentals of gas-liquid, liquid-liquid, gas-solid, and liquid-solid separations. Short-cut techniques and methods for selecting the most appropriate separation process will be covered. Practical application of the principles will be emphasized.

- 630 **Applied Engineering Mathematics. 3 hrs.**  
Mathematical modeling of applied problems, analytical solutions of ordinary differential equations, series solutions, Laplace transforms, analytical solutions of partial differential equations, complex variables. This course is recommended for all engineers. (PR: calculus)
- 631 **Numerical Methods. 3 hrs.**  
Formulas of Newton, Bessel, Gauss, and Sterling; methods of quadrature and summation; transformations of Euler and Shank; solution of linear systems of equations; numerical solution of ordinary differential equations. (PR: knowledge of differential equations, Ch.E. 630, or equivalent)
- 632 **Optimization of Engineering Systems. 3 hrs.**  
Unconstrained optimization and differential calculus; equality constraints; search techniques; calculus of variations; minimum principle; and Hamiltonian, including mixed constraints and state-variable constraints. Setting up and solving practical applications. (PR: knowledge of differential equations)
- 640 **Thermodynamics. 3 hrs.**  
Basic thermodynamic principles are reviewed with the intent of showing their logical development including the laws of thermodynamics, the concept of equilibrium, the phase rule, and various auxiliary functions. (PR: Knowledge of thermodynamics or physical chemistry)
- 645 **Chemical Engineering Kinetics. 3 hrs.**  
Review of homogenous kinetics, including kinetics of homogeneous reactions and interpretation of reactor data; reactor design for single and for multiple reactions, Nonideal flow and models. (PR: undergraduate course in kinetics)
- 650-653 **Special Topics. 1-4 hrs.**  
Designed to increase the depth of study in a specialized area of chemical engineering. (PR: Consent)
- 660 **Process Synthesis & Conceptual Design. 3 hrs.**  
Introduction to a systematic approach for solving process synthesis problems. Tools to help the students in reducing the large search space, which is typical in synthesis problems, down to a small and manageable size.
- 661 **Process Simulation. 3 hrs.**  
Current simulation techniques for development, design, and operation of chemical processes. A short review of modeling and equation solving.
- 670 **Process Equipment Design I (Heat and Fluid Flow Equipment). 3 hrs.**  
Design, sizing, and evaluating equipment used for heat transfer and fluid flow. Emphasis placed on functional performance of equipment. (PR: undergraduate courses in heat transfer and fluid flow)
- 671 **Process Equipment Design II (Mass Transfer Equipment). 3 hrs.**  
Design of equipment for diffusional operations. Includes such topics as distillation, extraction, crystallization, drying, and absorption. Emphasis will be on practical aspects of equipment design. Computer design techniques discussed. (PR: knowledge of unit operations or distillation)
- 672 **Process Equipment Design III (Chemical Reaction Equipment). 3 hrs.**  
Design of equipment for reacting systems. Emphasis will be placed on practical aspects of equipment design including cost, performance, characteristics, and reliability. Computer design techniques will be discussed where applicable. (PR: undergraduate course in kinetics)
- 675 **Process Safety. 3 hrs.**  
This course is designed to introduce the broad topic of emergency relief systems design to those charged with operating, designing or managing today's and tomorrow's chemical process industry (CIP) facilities.

### CHEMISTRY (CHM)

- 510 **Advanced Synthesis and Analysis. 4 hrs.**  
Advanced problems in synthesis, separation and analysis with emphasis on modern instrumental methods. 1 lec-6 lab. (REC: CHM 356 or equivalent)
- 511 **Modern Instrumental Methods in Chemistry and Biochemistry. 4 hrs.**  
This course investigates the theory and functional aspects of modern analytical instrumentation. Emphasis is placed on components of instruments and the applicability of various techniques to specific analytical problems.
- 520 **Fundamentals of Chemistry. 4 hrs. S. Offered on demand.**  
An introductory chemistry course for College of Education graduate students.
- 522 **Spectrophotometric Methods of Analysis. 3 hrs.**  
Modern theories and methods of spectrophotometric analysis, including atomic absorption, infrared, UV-visible and colorimetric methods. 1 1/2 lec.-3 lab. (PR: CHM 345 and 307 or 358)
- 523 **Environmental Analytical chemistry. 4 hrs.**  
Sampling and modern instrumental analysis of water, air and sediments according to EPA methodology. (PR: Graduate standing; C or better in CHM 345 or equivalent experience.)



- 526 **Chromatographic Methods of Analysis. 3 hrs.**  
Modern theories and methods of chemical separations with emphasis on gas and liquid chromatography. (PR: 345, 356, 307 or 357) 2 lec.-2 lab.
- 530 **Introduction to Polymer Chemistry. 3 hrs.**  
Properties of macromolecules. Methods of preparation and characterization. Industrial applications and processes. (PR: CHM 307 or 357, and 356 or permission of instructor)
- 540 **Thermodynamics. 3 hrs.**  
An introduction to chemical thermodynamics and statistical mechanics. (REC: CHM 358 or equivalent)
- 542 **Quantum Mechanics. 3 hrs.**  
An introductory course in quantum mechanics. (REC: MTH 231 or equivalent)
- 548 **Advanced Inorganic Chemistry I. 4 hrs.**  
Study of physical properties and periodic relationships of inorganic materials. 3 lec-2 lab. (PR: CHM 356 and 307 or 357)
- 549 **Advanced Inorganic Chemistry II. 3 hrs.**  
A detailed consideration of bonding, structure, reaction rates and equilibrium involving inorganic materials. (PR: CHM 448 or equivalent)
- 550 **Industrial Chemistry. 3 hrs.**  
Modern industrial processes for making chemicals, with emphasis on petrochemicals. An introduction to the engineering, economic, and environmental aspects of these processes. (PR: CIIM 307 or 357, and 356 or permission of instructor)
- 553 **Magnetic Resonance in Chemistry. 3 hrs.**  
Applications of analysis by magnetic resonance. Emphasis will be placed on proton and heteronuclear magnetic resonance theory and applications. 2 lec.-2 lab. (PR: CHM 356)
- 560 **Molecular Spectroscopy. 3 hrs.**  
A study of the emission and absorption of radiant energy and its relation to molecular structure. (REC: CHM 358 or equivalent)
- 562 **Nuclear Chemistry and Physics. 3 hrs.**  
An introduction to the phenomena of nuclear physics and chemistry. (REC: MTH 231 or equivalent)
- 563 **Nuclear Chemistry and Physics Laboratory. 2 hrs. 4 lab.**  
(REC: CHM 462 or equivalent)
- 565 **Advanced Organic Chemistry I. 3 hrs. I.**  
Studies of the dynamics of organic reactions with emphasis on mechanisms and stereochemistry. (REC: CHM 356 or equivalent)
- 566 **Advanced Organic Chemistry II. 3 hrs.**  
A continuation of Chemistry 565 with emphasis on synthetic methods. (PR: CHM 565)
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 604 **Theories of Analytical Chemistry. 2 hrs.**  
Offered on demand. (PR: CIIM 556)
- 607 **Theoretical Organic Chemistry. 2 hrs.**  
The application of quantitative methods to problems in structure and dynamics. (PR: CHM 565)
- 618 **Kinetics. 3 hrs.**  
An advanced study of reaction rates and mechanisms.
- 627 **Physical Chemistry for Teachers. 3-5 hrs. S.**  
Offered on demand. 3 lec-6 lab. (PR: CHM 520 or equivalent)
- 628 **Special Topics (Inorganic). 1-3 hrs. Offered on demand.**
- 629 **Special Topics (Organic). 1-3 hrs. Offered on demand**
- 630 **Special Topics (Physical). 1-3 hrs. Offered on demand**
- 631-632 **Seminar. 1; 1 hr. I, II.**
- 639 **Advanced Quantum Mechanics. 3 hrs.**  
Offered on demand. (PR: CIIM 542)
- 679 **Problem Report. 3 hrs.**  
Preparation of a comprehensive written report on a topic in Chemistry of current importance. Registration only by permission of Department.
- 682 **Research. 1-12 hrs. I, II, S.**  
Credit in the course is earned by pursuing a directed original investigation in a field of chemistry. Twelve semester hours credit in research are applied toward the M.S. degree. Students may sign for one or more credit hours per semester depending upon the time to be spent on research. A grade of PR may be reported at the close of each term or semester. (PR: Approval of Department Chairman)



## CIVIL ENGINEERING (CE)

- 650-653 **Special Topics. 1-4 hrs.**  
Formal study of civil engineering topics of current interest. (PR: Consent)

## CLASSICS (CL)

These courses are given in English and require no knowledge of Greek or Latin.

- 535 **Greek Civilization. 3 hrs.**  
Study of ancient Greek culture, emphasizing parallels with present-day issues.
- 536 **Roman Civilization. 3 hrs.**  
Study of ancient Roman culture, emphasizing parallels with present-day issues.
- 580-583 **Special Topics in Classics. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Consent of the instructor)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 599 **Humanities Seminar. 3 hrs.**

## COMMUNICATION DISORDERS (CD)

- 518 **Communication Disorders of School Children. 3 hrs.**  
A survey of the causes, symptoms, and treatment of communication disorders encountered in the classroom. Not open to communication disorders majors.
- 524 **Diagnostic Processes with Communication Disorders. 3 hrs.**  
Evaluation of procedures for securing behavioral information to differentiate among various communication disorders; a study of symptom complexes. (PR: Permission of instructor and graduate standing)
- 524L **Diagnostic Processes with Communication Disorders. 3 hrs.**  
Observation and practice in evaluating individuals with communication disorders (PR: Permission of instructor and graduate standing)
- 526 **Therapeutic Procedures I. 3 hrs.**  
Examination of therapeutic procedures relative to developmental speech disorders. (PR: Permission of instructor and graduate standing)
- 526L **Therapeutic Procedures I. 1 hrs.**  
Observation of individuals with communication disorders and introduction to analysis of the Clinical process. (PR: Permission of instructor and graduate standing)
- 527 **Therapeutic Procedures II. 3 hrs.**  
Examination of therapeutic procedures relative to speech and language disorders. Investigation into the clinician's role in case management as well as behavior management techniques. (PR: Permission of instructor and graduate standing)
- 527L **Therapeutic Procedures Laboratory II. 1 hr.**  
Observation and in-depth analysis of the clinical process. (PR: Permission of instructor and graduate standing)
- 570-571 **Clinical Practicum. 1 hr.**  
Supervised clinical practicum in the Marshall University Speech and Hearing Center. (PR: Permission of instructor)
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Permission of chair)
- 585-588 **Independent Study. 1-4 hrs.**  
(PR: Permission of chair)
- 601 **Introduction to Graduate Studies. 3 hrs.**  
An introduction to graduate studies, including clinical and research applications; quantitative and qualitative research methodology; critical analysis of clinical instruments and research literature. (PR: Permission of instructor)
- 620 **Communication Disorders Related to Cleft Palate and Voice. 3 hrs.**  
Intensive study of the anatomy and physiology of laryngeal and maxillofacial structures; voice production and resonance; nature and etiology of voice and resonance disorders; principles of assessment and treatment. (PR: Permission of instructor)
- 622 **Phonological Processes and Disorders. 3 hrs.**  
Advanced study of the phonological component of the linguistic system. Emphasis on phonological disorders in children; social dialects; critical analysis of literature. (PR: Permission of instructor)
- 623 **Fluency Disorders. 3 hrs.**  
Detailed evaluation of theories of fluency disorders and relevant therapies; critical analyses of research literature. (PR: Permission of instructor)
- 624 **Motor Speech Disorders. 3 hrs.**  
Study of the neurological bases of speech; etiologies and symptoms of dysarthrias and apraxias; principles of assessment and treatment. (PR: Permission of instructor)

- 625 **Acquired Aphasia. 3 hrs.**  
Advanced study of the acquired aphasia; critical analysis of research literature. (PR: Permission of instructor)
- 628 **Language Acquisition. 3 hrs.**  
Advanced study of the development of language; language sampling procedures, analysis and application. (PR: Permission of instructor)
- 629 **Child Language Disorders. 3 hrs.**  
Advanced study of current topics in language disorders in children; critical analysis of research literature. (PR: Permission of instructor)
- 630 **Communication Disorders Associated with Neurophathologies. 3 hrs.**  
Intensive study of the nature and etiology of communication disorders associated with traumatic brain injury, right hemisphere lesions, dementia, and other neuropathologies; diagnosis and treatment; critical analysis of research literature. (PR: Permission of instructor)
- 660 **Assisted Communication. 3 hrs.**  
Examination of current trends in assisted communication with emphasis on assistive strategies/devices for individuals with hearing and speech disorders; principles of assessment and treatment. (PR: Permission of instructor)
- 670-671 **Advanced Clinical Practicum. 1-6 hrs.**  
Supervised clinical practicum in the Marshall University Speech and Hearing Center and in affiliated educational, rehabilitation and medical settings. (CD 671 may be repeated but cannot be applied to a master's degree in accordance with the American Speech-Language-Hearing Association's standard regarding application of practicum credits to master's degree programs. Clinical Clock hours will apply for certification. (PR: CD 570 or equivalent; Permission of instructor)
- 672-673 **Clinical Practicum in the Schools. 3-6 hrs.**  
Supervised clinical practicum with school-aged children; fulfills student teaching requirements for West Virginia Certification as a Speech Language Pathologist. (PR: Permission of instructor)
- 677-678 **Special Topics. 1-4 hrs. I., II.**  
Program of study not normally covered in other courses. Topics vary from semester to semester. (PR: Permission of chair)
- 681 **Thesis. 1-6 hrs. I., II.**  
(PR: Permission of chair)
- 685-688 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Permission of chair)
- 690-693 **Seminar. 1-4; 1-4; 1-4; 1-4 hrs.**  
Topics in communication disorders not covered in other courses; topics vary from semester to semester. (PR: permission of chair)

### COMMUNICATION STUDIES (CMM)

- 501 **Organizational Communication. 3 hrs.**  
Investigation of information flow in organizations with emphasis on identifying communication problems.
- 502 **Rhetorical Theory. 3 hrs.**  
An exploration of theories of rhetoric from the Greek philosophers to the present. This course will examine the strategic use of symbols in persuasive discourse.
- 506 **Interviewing. 3 hrs.**  
Skill development in the question-answer-response process as it applies to a variety of interviewing situations.
- 508 **Leadership and Group Communication. 3 hrs.**  
A study of the variables affecting, and affected by, the communication process in small groups, with particular emphasis upon leadership variables.
- 509 **Theories of Persuasion and Change. 3 hrs.**  
Study of the relationship between persuasion and social change, including theories of attitude and behavioral change and contemporary theories of persuasion.
- 511 **Communication Study and Research. 3 hrs.**  
Introduction to the advanced study of theory and research areas with emphasis on communication research methods and reporting.
- 513 **Theories of Interpersonal Communication. 3 hrs.**  
A survey and analysis of theories related to interpersonal communication in relationships. Emphasis is on the communication processes and contingencies underlying relationship development, maintenance, and disengagement in various interpersonal contexts.
- 520 **Communication and Conflict. 3 hrs.**  
An exploration of the theory, research, and practice of communication in understanding and negotiating interpersonal conflict.

- 541 **Development and Appreciation of Film Since 1930. 3 hrs.**  
A study of important directions in modern film, including style, genre, and the relationship to contemporary society. A variety of films will be viewed for analysis.
- 550 **Direction of Speech Activities. 3 hrs.**  
Direction of extracurricular speech activities/assemblies, forensic events, etc. (PR: Fifteen hours of speech or permission of departmental chairman)
- 556 **Computer-Mediated Communication. 3 hrs.**  
This course explores the impact of computer-mediated communication on human organization. (PR: Email capability; web search capability)
- 574 **Health Communication. 3 hrs.**  
Explores communication demands of human healthcare and healthcare promotion; examines communication controversies in the modern healthcare system, and examines communication strategies to resolve healthcare problems.
- 576 **Communication for Classroom Teachers. 3 hrs.**  
Knowledge and utilization of interpersonal communication skills in all teaching-learning environments.
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Permission of chair)
- 585-588 **Independent Study. 1-4 hrs.**  
(PR: Permission of chair)
- 597-598 **Instructional Television Course. 1-4 hrs.**  
A course based upon Instructional Television Series broadcast by public television. The student is responsible for viewing the series on the air and satisfying all course requirements announced by the department.
- 601 **Problems and Methods in Communication Research. 3 hrs.**
- 602 **Communication Consultation Strategies. 3 hrs.**  
An in-depth analysis of diagnostic and intervention strategies employed by communication consultants. Strategies include communication network analysis, communication process observation and consultation, communication role and norm negotiation, and team building.
- 606 **Studies in Communication Theory. 3 hrs.**  
An extensive investigation into the major concepts of contemporary communication theory.
- 650 **Leaders and Movements in Communication Education. 3 hrs.**  
The study of speech-communication education from the time of the Greeks to the present, with emphasis upon the evolution of communication education to meet the needs of contemporary society.
- 656 **Seminar in Public Communication. 3 hrs.**
- 673 **Seminar in Interpersonal Communication. 3 hrs.**  
Intensive treatment of principles and processes underlying dyadic communication. Designed to enable the student to diagnose and intervene to resolve communication problems.
- 674 **Seminar in Communication Pedagogy. 3 hrs.**  
Primarily for graduate teaching assistants to develop instructional skills of preparation, presentation and evaluation; to understand instructor duties and requirements, and to exemplify interpersonal skills in dealing with students.
- 675-676 **Seminar. 1-3; 1-3 hrs.**  
Program of study not normally covered in other courses. Topics vary from semester to semester.
- 677-678 **Special Topics. 1-3; 1-3 hrs.**  
Program of study not normally covered in other courses. Topics vary from semester to semester.
- 681 **Thesis. 1-6 hrs.**
- 685-688 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Permission of chair)

### COMPUTER SCIENCE AND SOFTWARE DEVELOPMENT (CSD)

Marshall University does not have a master of science program in CSD. Please see Information Systems and Technology Management.

- 509 **Software Development for Health Care. 3 hrs. II. S.**  
Software development and maintenance approaches for the health care industry. Shared database approaches; instrumentation interfacing and control; inquiry/response methods and effective user interfaces. Participation in team projects. (PR: permission of instructor)
- 519 **Decision Systems. 3 hrs. I. S.**  
System/software approaches to decision support systems. On-line group decision systems, knowledge-based systems, interactive user interfacing methods, electronic conferencing and teleconferencing, statistical software, distance learning/response techniques, trends. Project participation. (PR: permission of instructor)



- 529 Introduction to Computer Graphics. 3 hrs. II.**  
Introduction to underlying theory and techniques of computer graphics. Historical perspective. Display hardware technology. 2D raster operations, 2D and 3D geometric transformations, and 3D projection and viewing techniques. Project participation. (PR: MTH 330 or equivalent, or permission of instructor)
- 539 Introduction to Artificial Intelligence. 3 hrs. I.**  
Concepts and methods. Heuristic search, planning, hypothesis formation, modeling, knowledge acquisition and representation. Languages, methodologies, tools. Applications including automatic programming, theorem proving, machine vision, game playing, robots. Project participation. (PR: CSD 240 or equivalent, or permission of instructor)
- 542 Communication Networks and Distributed Systems. 3 hrs. II.**  
Network structures, architectures, topology. Layers, protocols, interfaces, local area networks. Coverage of current networks. Distributed processing concepts: architectural trade-offs, distributed databases. Operating system and application software issues. Project participation. (PR: CSD 322 or equivalent, or permission of instructor)
- 549 Formal Languages and Automata Theory. 3 hrs. I.**  
Concepts and formalisms of formal languages and automata theory. Fundamental mathematical concepts. Grammars and corresponding automata. Deterministic parsing of programming languages. (PR: MTH 340 or equivalent, or permission of instructor)
- 557 Database Systems, 3 hrs. II.**  
Basic concepts, semantic models. Data models: object-oriented and relational, lesser emphasis on network and hierarchical. Query languages and normal forms. Design issues. Security and integrity issues. (PR: Permission of instructor)
- 559 Computer Simulation and Modeling. 3 hrs. I.**  
Concepts of model building and computer-based discrete simulation. Special-purpose simulation languages. Experimental design, analysis of results. Statistical aspects, random number generation. Model validation issues and methods. Project participation. (PR: MTH 445 or equivalent, or permission of instructor)
- 567 Compiler Design. 3 hrs. I.**  
Compilation of modules, expressions, and statements. Organization of a compiler including compile-time and run-time aspects: symbol tables, lexical analysis, syntax analysis, semantic analysis, optimization, object-code generation, error diagnostics. Compiler writing tools. Participation project. (PR: CSD 325 or equivalent, or permission of instructor)
- 568 Image Processing. 3 hrs.**  
Image Processing focuses on the application of technology to scientific analysis of images. Topics include: measurement techniques, scientific methods of reconstruction and interpretation of images and video. (PR: Graduate standing in COS or the Medical School)
- 570 Introduction to Applied Automation. 3 hrs. I.**  
Introduction to production economics; programmable logic control, sensors and actuators, digital and analog I/O design. Introduction to robotics and flexible manufacturing systems. (PR: Permission of instructor)
- 579 Software Engineering. 3 hrs.**  
Current techniques in software design and development using Ada, Modula-2, or C for software projects. Formal models of structured programming, top-down design, data structure design, object-oriented design, program verification methods. (PR: CSD 239 and 320)
- 580-583 Special Topics. 1-4 hrs.**  
(PR: Permission of instructor)
- 585-588 Independent Study. 1-4 hrs.**  
(PR: Permission of instructor)
- 603 Advanced Educational Computing. 3 hrs.**  
Allows the educator to develop a more in-depth understanding of the 'BASIC programming' language and become familiar with other languages used on microcomputer.
- 610 Using the Computer as a Decision-Making Tool. 3 hrs.**  
Introduction to statistical software packages and packaged microcomputer software serving as a productivity tool for lower and middle level managers. Spreadsheet, text-editing and file management packages for microcomputers. Open to all graduate students.

### CONTROL SYSTEMS (CSE)

- 601 Advanced Differential Equations. 3 hrs.**  
Systems of linear ordinary differential equations and nonlinear equations. Linearization, approximation, and stability. Use of dynamic simulation software.



- 602 **Modeling and Simulation. 3 hrs.**  
Process models for flow, heat transfer, mass transfer, and reactions. Analysis includes various lumped parameter and distributed parameter methods.
- 611 **State Space Control-Continuous. 3 hrs.**  
State space representation of dynamic systems; dynamics of linear systems; frequency domain analyses; controllability and observability; shaping the dynamic response; linear observers and compensator design; linear, quadratic optimum control.
- 620 **Digital Control. 3 hrs.**  
Discrete time systems and the Z transform; sampling and reconstruction; open-loop and closed-loop discrete systems. System time response characteristics; stability analysis techniques. Pole assignment design and state estimation.
- 621 **Control Systems Design. 3 hrs.**  
Design of simple control systems. Multivariable control systems. Periodic processing. The concepts will be illustrated using chemical, electrical and mechanical engineering processes.
- 624 **Advanced Control. 3 hrs.**  
Specific advanced control topics such as dead time compensation, inverse response, cascade control, ratio control, adaptive control, inferential control, decoupling control, process identification, and optimal control.
- 626 **Non-Deterministic Systems. 3 hrs.**  
Probability models used in engineering, transformations of random variables, multivariate random variables, application of statistical process control. Stochastic processes for engineering applications, linear least-square estimation and regression analysis.
- 629 **Nonlinear Control. 3 hrs.**  
Methods for analysis and design of nonlinear control systems. State space models, phase plane limit cycles, stability, describing functions, relay system stabilization theory, variable structure systems and advanced topics.
- 630 **Optimal Control. 3 hrs.**  
General theory of optimal control; calculus of variations; Pontryagin's maximum principle; Hamilton-Jacobi theory, application of optimal control theory to design of feedback systems, using several performance criteria; advanced topics.
- 631 **Adaptive Control. 3 hrs.**  
Study of developments in the field of adaptive control; stability, convergence of adaptive systems, model reference, self-tuning and robust adaptive control, adaptive observer, autotuning and gain scheduling, and advanced topics.
- 650-653 **Special Topics. 3 hrs.**  
Designed to increase the depth of study in a specialized area of control systems. (PR: Consent)

## COUNSELING (COUN)

- 545 **Beginning Manual Communication. 3 hrs.**  
This course provides a beginning study of the psychological characteristics of the hearing impaired and fundamental techniques of manual communication.
- 554 **Advanced Manual Communication. 3 hrs.**  
This is the follow-up course to COUN 618 and provides an advanced study of the grammar, syntax and idioms of American Sign Language (ASL) and a comprehensive overview of the effect of hearing impairment. Emphasis will be upon communicating in ASL. (PR: COUN 545)
- 555 **Crisis Intervention and Conflict Resolution. 3 hrs.**  
Students explore various types of crises such as situational and developmental. Specific topics include suicide and sexual assault. Requirements include a class presentation, and 30 supervised clinical hours in a crisis setting approved by instructor.
- 556 **Death and Grief Counseling. 3 hrs.**  
A study of the stages of death, dying and the grief process are presented in practical, theoretical, social, and psychological aspects. Emphasis is on counseling relating to various forms of loss.
- 574 **Social & Cultural Foundations. 3 hrs.**  
Examines the use of appropriate resources for effective counseling of individuals of different cultural, ethnic, social, racial, geographic, or other backgrounds. Personal, social, and cultural sources contributing to social and emotional disenfranchisement are explored, as well as the impact of using stereotypes and practicing discrimination in society and human service delivery systems. (PR: COUN 603, program admission, or permission.)
- 575 **Prevention and Treatment of Addictions. 3 hrs.**  
Course surveys the field of addictions covering assessment, treatment, prevention, and education. It will explore the development of addiction theory and with particular focus on the bio-psycho-social model. (PR: COUN 600 & 603)

- 577 Stress Management Counseling. 3 hrs.**  
This course provides counseling students and others with a comprehensive analysis of stress in contemporary society. Of particular emphasis is an orientation to stress management as a counselor helping intervention. Students explore theoretical and practical alternative in helping the stressed client.
- 579 Pharmacology in Counseling. 3 hrs.**  
Provides basic understanding of the role of therapeutic drugs in the treatment of psychiatric disorders. familiarizes with most commonly used drugs, side effects, and adverse reactions in specific mental illness. (PR: COUN 600 & 601)
- 580 - 583 Special Topics. 1-4 hrs.**  
Study, reading, and research in specialized areas of counseling and human relations. Areas of interest are offered at various times by the faculty to provide specialized study for advanced students or practicing professionals in the field of counseling. (PR: Consent)
- 585-588 Independent Study. 1-4 hrs.**  
Individual or group study and research of various issues and fields of emphasis in counseling. (PR: Consent)
- 600 Professional Orientation. 1-3 hrs.**  
This course provides an understanding of all aspects of professional helping in mental health including history, roles, ethics, standards and credentialing. (PR: Program admission or permission)
- 601 Counselors in Consulting Roles. 2 hrs.**  
This course provides an exploration of consultation roles that are integrated into the various settings in which counselors work. Content includes an orientation to consultation and its historical development, theory and practice issues, and major models. Of special emphasis is the focus upon case applications and presentations. (PR: COUN 600 and 607)
- 602 Human Development and Psychopathology. 3 hrs.**  
The course will explore human growth/development from birth through adulthood. Theories of character development, social maturation, abnormalities and variations in development due to gender, culture, and environmental factors will be covered. The change processes, helping relationships, and strategies for facilitating development appropriate to various phases of the life span will be addressed. (PR: COUN 600 & 603)
- 603 Counseling Theories. 3 hrs.**  
Survey of classical and contemporary counseling philosophies, history, and techniques as related to interpersonal relationships in the counseling process. (PR: Program admission or permission. CR: COUN 607)
- 604 Group Counseling & Theories. 3 hrs.**  
An examination of group dynamics and theories of group counseling with demonstrations of specific group techniques and the practice of popular approaches in group counseling. (PR: COUN 607)
- 605 Theory and Practice of Human Appraisal. 3 hrs.**  
Provide an understanding of individual and group approaches to assessment and evaluation including history, theoretical and statistical aspects, applications to special populations, and legal and ethical concerns and issues. (PR: COUN 600 and 603)
- 606 Career and Lifestyle Development. 3 hrs.**  
A study of career development theories and decision-making models that impact career development and related life factors. (PR: COUN 600, 607, EDF 621 or 625)
- 607 Counseling Techniques in Human Relationships. 3 hrs.**  
Study of a variety of counseling and therapeutic techniques within the framework of a systematic counseling model. Emphasis on basic interviewing, assessment and counseling skills that facilitate the helping process through integration of various theoretical orientations. (PR: Program admission or permission. CR: COUN 603)
- 608 Practicum. 3 hrs.**  
A clinical experience under professional supervision preparing the student for internship; audio and video tapes, group supervision and feedback are used to achieve competency in the application of a counseling process. (PR: Consent. Students must have achieved a minimum grade of B in 606, 607, and EDF 621 or 625)
- 611 Foundations of Community Counseling. 3 hrs.**  
Examines the history of deinstitutionalization in human services with an emphasis on prevention in the delivery of such services in community agencies. Proposal writing for grants and needs assessment processes and procedures will be emphasized. (PR: COUN 603)
- 616 Domestic Violence. 3 hrs.**  
An introduction to the epidemiology, dynamics, clinical interventions and treatment of domestic violence.

- 617 **Seminar in Counseling. 1 -6 hrs.**  
For students in degree programs or in post-master's work who wish to discuss and study theory, principles, and techniques of counseling or other special topics. Instructor will indicate in course syllabus whether class is letter graded or S/U. (PR: Consent)
- 620 **Workshop. 1 - 6 hrs.**  
Special workshops and short intensive courses on theory, methods, supervision and other special topics in counseling, designed for advanced students and professionals in the counseling field or related fields. (PR: Consent)
- 621 **Introduction to Child Abuse & Neglect. 1 hr.**  
Introduction to the dynamics of child abuse and neglect and to the legal and ethical issues of persons mandated to report child abuse and neglect. (PR: COUN 600 & 603)
- 622 **Parent Education. 3 hrs.**  
Study of family education skills training for conducting family education groups and parent training.
- 630 **Introduction to Mental Health Counseling. 3 hrs.**  
Provides an introduction to the foundations and contextual dimensions of mental health counseling. Emphasis is given to an exploration of mental health counseling roles and functions, theories and techniques, professional standards and operations, administration, evaluation, and special issues. (PR: COUN 603 and 607)
- 631 **Diagnosis and Treatment Planning in Mental Health Counseling. 3 hrs.**  
Provides an in-depth exploration of the knowledge and skills necessary for the practice of mental health counseling. Emphasis is given to the principles and practices that relate to psychopathology, DSM diagnosis, etiology and assessment, systematic treatment planning, interviewing, and short and long-term interventions. (PR: COUN 630)
- 632 **Introduction to Marriage, Couples, and Family Counseling. 3 hrs.**  
A comprehensive survey of the major theoretical models of marriage, couples, and family therapy from a systems perspective and the applied practices evolving from each orientation. (PR: COUN 603)
- 635 **Core Functions of Addiction Counseling . 3 hrs.**  
Advanced course designed to prepare students for work with clients presenting with substance abuse, and addiction disorders. The course will address the nature and treatment of addiction with attention to the core functions of the addiction counselor. (PR: COUN 575)
- 637 **Adult and Family Development and Transition. 3 hrs.**  
An in-depth study of various theories of family development and interaction. Focus will be on theoretical understanding of family relationships across the stages of the family life cycle and related treatment strategies. (PR: COUN 632)
- 636 **Couple Counseling. 3 hrs.**  
This course is designed to introduce students to a variety of theoretical concepts, techniques, and their application in the therapeutic setting. Emphasis is on basic interviewing, assessment, and counseling skills that facilitate the helping process through integration of various theoretical orientations.
- 638 **Interventions: Marriage, Couples, and Family Counseling. 3 hrs.**  
An intensive practical experience in marriage, couples, and family therapy techniques to prepare the student to enter the supervised internship of the program. (PR: Students must have achieved a minimum grade of B in COUN 637)
- 641 **Correctional Counseling Seminar. 1-9 hrs.**  
A critical examination of counseling models in corrections and an appraisal of current professional trends in community corrections. The course may include field experience in correctional settings. The course is designed for visiting professors and/or consultants who offer an expertise in a correctional setting. (PR: COUN 600 & 603 or Consent)
- 646 **Correctional Counseling: Client Advocacy. 3 hrs.**  
Designed to provide the counselor in a correctional setting with an integration of current contributions from related disciplines. Emphasis will be upon client advocacy, as well as the public, administrative, and legal responsibilities of correctional counselors and others who work with correctional clients. (PR: Consent)
- 651 **Seminar in Career Counseling. 3 hrs.**  
For students in career counseling who wish to discuss and study theory, principles, and techniques of career counseling or to study specific topics and issues in the field of career counseling. (PR: Consent)
- 652 **Career Counseling with Special Populations. 3 hrs.**  
Introduction to the special career development needs and concerns of various groups of people in a variety of settings. Emphasis will be given to the special concerns of women, various ethnic groups, the physically and mentally challenged, and person at various stages of vocational maturity. (PR: COUN 600 & 603)



- 653 **Career Assessment Techniques and Report Writing. 3 hrs.**  
A study of career assessment tools needed to assist individuals in making career choices. Focus will be given to the administering, scoring, and interpreting of vocational and career instruments utilized in career decision making. (PR: COUN 605 and 606)
- 660 **Introduction to Student Affairs. 3 hrs.**  
Provides a broad, comprehensive introduction to the field of college student affairs and its role with the context of American higher education. Various student affairs functional areas, historical, and philosophical foundations of the field, professional standards, guiding theories, and models, and competencies needed to work with diverse student populations are examined. (PR: COUN 603)
- 662 **Current Issues in Student Affairs. 3 hrs.**  
To enhance the student's awareness and understanding of the educational, environmental, administrative, legal, and ethical issues in the field of Student Affairs in colleges and universities, this course provides the opportunity to discover, discuss and analyze current issues impacting student affairs practices both nationally and internationally. (PR: COUN 603 and 607)
- 670 **Interventions for Current Issues in School Counseling. 3 hrs.**  
An in-depth examination of effective strategies for dealing with current issues in K-12 environment. Issues such as academic failure, substance abuse, loss, violence, multicultural factors, etc. will be explored. (PR: COUN 603 and 607)
- 672 **Organization and Administration of School Counseling Programs. 3 hrs.**  
Operation and administration of elementary and secondary school counseling programs in terms of personnel functions, relationships, physical facilities, instructional integration, financial standards, laws, and regulation. (PR: COUN 670 & 671)
- 673 **Counseling Children, Adolescents, and Parents. 3 hrs.**  
Consideration of effective counseling strategies and techniques appropriate for children, adolescents and parents through lecture, demonstration and laboratory experiences. Personal, social, career, academic and family related issues and dynamics will be explored. (PR: COUN 600 & 603)
- 674 **Observation of School Environment (Required). 3 hrs.**  
Introduction to the roles and functions of school pupil personnel professionals (general classrooms, exceptional student environments, support staff and administration), models of operation, problems, issues, and techniques. The organization and administration of school systems and philosophy of general and special education are considered. Students will spend a minimum of one-half day a week observing in K through 12 schools.
- 691 **Internship in Mental Health Counseling. 3 - 9 hrs.**  
Supervised experience in mental health counseling. Participation in seminars on specified topics. Minimum 100 clock hours for each semester hour credit. (PR: COUN 608 and 631 with minimum grade of *B* or permission)
- 693 **Internship in Marriage and Family Counseling. 3 - 9 hrs.**  
Supervised experience in marriage and family counseling. Participation in seminars on specified topics. Minimum 100 clock hours for each semester hour credit. (PR: COUN 608 and 638 with a minimum grade of *B* or permission)
- 695 **Internship in Corrections Counseling. 3 - 6 hrs.**  
Supervised experience in corrections counseling. Participation in seminars on specified topics. Minimum 100 clock hours for each semester hour credit. (PR: COUN 608 and 641 with a minimum grade of *B* or permission)
- 696 **Internship in Career Counseling. 3 - 6 hrs.**  
Supervised experience in career counseling. Participation in seminars on specified topics. Minimum 100 clock hours for each semester hour credit. (PR: COUN 608 and 653 with a minimum grade of *B* or permission)
- 697 **Internship in Student Affairs Counseling. 3 - 6 hrs.**  
Supervised experience in career counseling. Participation in seminars on specified topics. Minimum 100 clock hours for each semester hour credit. (PR: COUN 608 and 652 with a minimum grade of *B* or permission)
- 698 **Internship in School Counseling 3 - 6 hrs.**  
Supervised experience in school counseling. Participation in seminars on specified topics. Minimum 100 clock hours for each semester hour credit. (PR: COUN 608 and 673 with a minimum grade of *B* or permission)
- 740 **Internship 6-12 hrs.**  
A course designed to offer advanced graduate students an opportunity to practice under close supervision the professional skills required in the broad field of counseling in school and community settings. Instructor will indicate in course syllabus whether class is letter graded or S/U. (PR: Consent)



- 742 **Current Issues in Counseling 3 hrs.**  
An examination of current issues affecting professional counselors and training in effectively dealing with the issues. Selected readings, guest speakers, and class discussion will center around professional issues relevant to counselors in various settings (i.e., legal and ethical considerations). (PR: Consent)
- 746 **Systems Intervention 3 hrs.**  
Examination of the major systems which may require intervention by a supervisor of counselors and training in effective intervention strategies. (PR: Consent)
- 747 **Advanced Group Counseling 3 hrs.**  
The application of counseling theories in group settings, including supervised group leadership experiences. (PR: Consent)
- 750 **Seminar 3 hrs.**  
For students in post-master's work who wish to discuss and study theory, principles, and techniques of counseling or other special topics. Instructor will indicate in course syllabus whether class is letter graded or S/U. (PR: Consent)
- 755 **Models of Counselor Supervision 3 hrs.**  
A survey of theoretical approaches and techniques counseling supervision. Emphasis is placed on supervision of counselors in various settings. (PR: Consent)
- 756 **Residency in Counselor Supervision 6 hrs.**  
Supervised application of the knowledge and skills gained in the Ed.S. Program. Students will supervise practicing counselors in approved settings. (PR: Acceptance into the Ed.S. Program, completion of all other Ed.S. academic requirements, and consent)
- 760 **Special Topics 3-6 hrs.**  
Study, reading, and research in specialized areas of counseling, human relations, guidance or other special topics. The Master of Arts degree in counseling is a 48 to 60 hour planned program of study designed to meet the competencies of professional counselors. Curricula programs consist of three basic components: core

### CRIMINAL JUSTICE (CJ)

- 502 **Seminar in Crime Prevention. 3 hrs.**  
Techniques for crime prevention analyzed from two orientations; crime prevention by environmental engineering and crime prevention by behavior modification. (PR: CJ 211 or permission)
- 504 **Theoretical Criminology. 3 hrs.**  
A critical analysis of the major criminological theories and their empirical foundations. Current theory and research receive greater emphasis than historical development.
- 510 **Police Administration II. 3 hrs.**  
Police department organizations. Development of personnel and employment practices in law enforcement. Issues concerning unions and unionization. Problems and techniques of management.
- 512 **Community Relations. 3 hrs.**  
Law enforcement and the community; relation to schools, public education functions of law enforcement personnel; community attitudes. (PR: CJ 211 or consent of instructor)
- 513 **Business and Industry Security. 3 hrs.**  
Selection, training and staffing of a security force; security devices available, techniques of internal security; ground security; security techniques applicable to personnel selection; legal problems. (PR: CJ 211 or permission)
- 521 **Corrections and the Law. 3 hrs.**  
Review of criminal law principles and theory as related to corrections. (PR: CJ 231 or permission)
- 522 **Law of Evidence. 3 hrs.**  
Leading rules and principles of exclusion and selection; burden of proof, nature and effect of presumptions; proof of authenticity and contents of writings; examinations, competency and privilege of witnesses. (PR: CJ 321 or permission)
- 525 **Juvenile Justice Administration. 3 hrs.**  
A survey of the juvenile justice process, police, courts and corrections, including programs, services, and the laws. (PR: CJ 321 or permission)
- 531 **Criminal Rehabilitation. 3 hrs.**  
Legal and historical background of rehabilitation; roles of correctional workers; and nature of the rehabilitation process. (PR: CJ 231 or permission)
- 532 **Correctional Institutions. 3 hrs.**  
Analysis of the theory of organizations and administration of correctional institutions; principles of institutional corrections. (PR: CJ 231 or permission)
- 533 **Correctional Administration. 3 hrs.**  
Objectives of correctional institutions; records; personnel, program development, security; educational programs. (PR: CJ 231 or permission)

- 580-583 **Special Topics in Criminal Justice. 1-4; 1-4; 1-4; 1-4 hrs.**  
A study of special interest criminal justice topics under the supervision of a qualified faculty member. (PR: Consent of instructor)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
This course permits the student to undertake supervised research (field or library) in any area where there is no appropriate course. (PR: Consent of instructor)
- 590 **Internship. 1-6 hrs.**  
The placement of an individual into a criminal justice agency (police, probation, courts, jails) to observe and participate in its operation. Grading is CR/NC. (PR: Consent of instructor)
- 601 **Seminar in Criminal Justice. 3 hrs.**  
A forum to acquaint students, faculty and guests with each others' research and experiences in dealing with criminal justice issues.
- 602 **Law and Social Control. 3 hrs.**  
An examination of the nature of law and crime with a view towards determining the nature of control of social behavior by the legal system.
- 603 **Criminal Justice Planning. 3 hrs.**  
A systematic review of procedures to plan and evaluate criminal justice organizations and their operations.
- 604 **Advanced Theory in Criminal Justice. 3 hrs.**  
Course is designed to provide the student already familiar with the basic concepts of criminological theory the opportunity to examine in depth a selected set of theories (PR: CJ 504, its equivalent, or permission of instructor)
- 605 **Juvenile Delinquency. 3 hrs.**  
Juvenile delinquency in the modern world; nature, extent, causes, treatment, and control.
- 620 **Criminology. 3 hrs.**  
Seminar in crime and delinquency. (Same as SOC 620)
- 621 **Advanced Criminal Law and Procedure. 3 hrs.**  
A review of contemporary legislation and court decisions relating to criminal law and procedure. (CJ 322 or permission)
- 632 **Community Corrections. 3 hrs.**  
A survey of probation, parole, pre-release centers, halfway houses and other forms of community corrections as elements of a total correctional system. Historical development, contemporary organization, and legal issues are emphasized.
- 651 **Comparative Criminal Justice. 3 hrs.**  
A comparative study of criminal justice systems in other countries. The course may center on either law enforcement agencies, court systems, or correctional institutions
- 655 **Research Methods in Criminal Justice. 3 hrs.**  
Elements of scientific research; interaction between research and theory; use of data processing resources. (PR: Undergraduate Statistics Course, CJ 656 and permission)
- 656 **Applied Statistics in Criminal Justice. 3 hrs.**  
Principles of statistical techniques with emphasis upon their application in the Criminal Justice system. (PR: Undergraduate statistics course and permission)
- 679 **Problem Report. 3 hrs.**  
The preparation of a written report on a research problem or field study in Criminal Justice. (PR: CJ 655 and permission)
- 681 **Thesis, 1-6 hrs.**

## CURRICULUM AND INSTRUCTION (CI)

- 501 **Middle Childhood Curriculum. 3 hrs. I, II, S.**  
The study of procedures for creating a functional middle childhood curriculum with emphasis upon the needs of middle childhood learners.
- 503 **Methods and Materials of Teaching in the Middle Childhood Grades. 3 hrs. I, II, S.**  
The study of methods appropriate for teaching in the middle childhood grades and the production and utilization of materials and resources in these grades. Middle school clinical experience is required (PR or CR: CI 501)
- 511 **Analysis of Teaching in Early Years. 2 hrs.**  
The analysis and appraisal of teaching strategies employed in the teaching of young children. (CR: CI 630)
- 515 **Integrated Methods and Materials: Secondary Education. 3 hrs.**  
General secondary/middle school course with emphasis on instructional standards and objectives, methods, and materials of the disciplines. A clinical experience provides observation and teaching. *MAT students only.* (PR: EDF 537; CR: EDF 637)

- 517 **Comprehensive Classroom Discipline Techniques. 3 hrs.**  
Identification of common classroom discipline problems and techniques for dealing with behavioral incidents in school settings K-12.
- 518 **Classroom Motivation. 1-3 hrs. I, II, S.**  
Classroom motivation with an emphasis on theoretical constructs and practical applications for teachers of students from early childhood through adolescence.
- 539 **Language Arts and Literature. 3 hrs.**  
An examination of theory, research, and practical strategies for integrating language arts and teaching literature for students K-8.
- 542 **Instructional and Classroom Management in Elementary Education. 3 hrs.**  
This course allows elementary education students to critically examine a variety of classroom management strategies and educational issues that impact instruction.
- 549 **Instructional and Classroom Management in Secondary Education. 3 hrs.**  
Classroom management with an emphasis on practical techniques for dealing with management problems in secondary and middle school settings.
- 550 **Teaching Writing, K-12. 3 hrs.**  
Designed to help teachers examine problems in the teaching of writing, successful approaches and techniques, study current theory and research, and write papers in various modes.
- 551 **Writing to Learn in Content Areas. 3 hrs.**  
Designed to introduce teachers to successful approaches and strategies to foster thinking and learning through writing, and experiment with a variety of approaches and techniques in their classrooms.
- 552 **Summer Institute: The National Writing Project Model. 6 hrs.**  
Participants will examine problems in the teaching of writing, present and demonstrate approaches to the teaching of writing, study current and past research in the field.
- 557 **Elementary Education: Teaching Contemporary Mathematics. 3 hrs.**  
Application of modern methods and techniques in the implementation of a contemporary elementary mathematics program.
- 559 **Multicultural Influences in Education: Materials and Techniques. 3 hrs. I, S.**  
Multicultural education with an emphasis on methods and materials for teaching students from diverse cultural backgrounds.
- 560-564 **Staff Development: (Identifying content title to be added). I-4; 1-4; 1-4; 1-4 hrs. I, II, S.**  
Courses and activities designed to meet the specific inservice needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrading if approved but not in degree programs. CR/NC grading.
- 580-583 **Special Topics. 1-6 hrs. I, II, S.**
- 585-588 **Independent Study. 1-4 hrs. I, II, S.**  
Permission of Chair and GPA 3.0 to take class. Limit of 6 hrs. of Independent Study to be used in master's degree program.
- 591-594 **Workshop. 1-4 hrs.**  
A study of practical applications in teacher education and related fields for advanced students and professionals. Experience in new techniques and application of new knowledge.
- 597-598 **Instructional Television Course. 1-4 hrs.**  
A course based upon Instructional Television Series broadcast by public television. The student is responsible for viewing the series on the air and satisfying all course requirements announced by the department.
- 609 **Elementary Education: Curriculum in the Modern Elementary School. 3 hrs. I, II, S.**  
Examination of traditional and current assumptions undergirding the modern elementary school curriculum with emphasis on converting theoretical bases into plans for curriculum change and modernization.
- 610 **Secondary Education: Curriculum in the Modern Secondary School. 3 hrs. II, S.**  
Analysis of the social and political factors which affect secondary school curriculum with emphasis upon trends and developments in high schools today.
- 618 **Elementary Education: Informal Learning in Primary and Middle Schools. 3 hrs.**  
Informal learning in the primary and middle school with emphasis on the significance of natural child development, learning through games and play, and the British model for infant and junior schools, and related activities for the middle years (ages 10-14) in middle school settings.
- 623 **Instructional Models and Assessment Techniques. 3 hrs.**  
Selected teaching models are analyzed with implications for the role of the teacher; assessment of influences of the teacher.
- 624 **Advanced Instructional Strategies. 3 hrs.**  
Performance-based laboratory experiences in a micro-teaching laboratory development of a personalized teaching repertoire.



- 630 **Early Childhood Education: Practicum in Early Childhood Education. 1-4 hrs.**  
Supervised experience in teaching kindergarten with a concurrent seminar in organization and administration.
- 631 **Early Childhood Education: Current Influences on Early Childhood Education. 3 hrs.**  
A study of recent findings in the behavioral sciences and their implications for early childhood education.
- 632 **Early Childhood Education: Early Childhood Programs. 3 hrs.**  
An examination of past and present programs for young children with opportunity provided for curriculum development.
- 633 **Early Childhood Education: Adult Involvement in Early Education. 3 hrs.**  
Ways of communicating and involving paraprofessionals, parents, volunteers, staff in the education of young children.
- 634 **Language and Cognition in Early Childhood. 3 hrs.**  
Examination of selected studies in language acquisition and cognitive development of children from birth to eight years of age.
- 638 **Curriculum Planning. 3 hrs.**  
A study of the fundamental skills needed to evaluate educational progress at the classroom, program, and school levels.
- 640 **Literature. 1-3 hrs. I, II, S.**  
A program of reading, either extensive or intensive, and reports on a group of outstanding contributions to education; readings selected with guidance of advisor. Only one registration for Curriculum and Instruction 640 is permitted. (PR: Permission of chair)
- 641 **Seminar. 3 hrs. I, II, S.**  
A guided program of readings, reports and discussions. No student may register for this course a second time. (PR: Permission of chair)
- 656 **Elementary Education: Teaching Language Arts. 3 hrs.**  
A unified Reading-Language instructional approach to develop a basic understanding of reading-language related principles derived from disciplines, research, and innovative classroom practices.
- 657 **Elementary Education: Advanced Techniques in Teaching Elementary Mathematics. 3 hrs. II, S.**  
Historical, social, psychological, and philosophical foundations of mathematics education; investigation of current trends and issues in contemporary programs.
- 659 **Symposium-Elementary and Secondary Education, Part I. 3 hrs.**  
The symposium is the culmination of the master's degree program in Elementary Education, Secondary Education, and Early Childhood Education. This is the first of a two-part sequence. (PR: Consent)
- 670 **Elementary Education: Teaching Social Studies in Elementary Schools. 3 hrs.**  
Materials and procedures for teaching social studies with emphasis on a survey of successful programs of instruction.
- 671 **Elementary Education: Advanced Techniques in Teaching Science. 3 hrs.**  
Intensive concentration on helping children inquire into the earth, physical, and biological sciences through modern methods and media.
- 672 **Practicum in Education. 3-6 hrs.**  
Clinical Experience: Directed activity in a clinical setting. (PR: Permission)
- 675 **Curriculum Theory. 3 hrs.**  
Analysis of the assumptions undergirding curriculum development.
- 676 **Program Evaluation. 1 hr.**  
An examination of program evaluation models and techniques for instructional supervisors.
- 677 **Writing for Publication in Professional Education. 3 hrs.**  
For professional educators and students who wish to study and practice writing articles for publication in scholarly journals in the field of education.
- 678 **The Supervising Teacher. 3 hrs.**  
Duties and responsibilities of the teacher who supervises student teachers.
- 679 **Classroom Management for Elementary Teachers. 3 hrs.**  
This course is designed for elementary teachers. The content includes methods of managing the physical and social environment in the classroom.
- 680 **Symposium-Elementary and Secondary Education, Part II. 3 hrs.**  
The comprehensive assessment requirement is met within the framework of this course. (PR: Consent.)
- 681 **Thesis. 1-6 hrs. I, II, S.**  
Students completing 681 must defend their thesis in an oral examination.

## **CURRICULUM AND INSTRUCTION: EDUCATIONAL COMPUTING (CIEC)**

- 530 **Computer Software and Methodology in Education. 3 hrs.**  
This course is designed for inservice teachers who want to become familiar with how to use the microcomputer to improve their instruction.



- 534 **Applications Software in the Classroom Curriculum Area. 3 hrs.**  
A hands-on overview of major classes of applications software. A range of computing topics such as hardware, communications, ethics, and types of software will be discussed.
- 560-564 **Staff Development. 1-4 hrs.**  
Courses and activities designed to meet the inservice needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrades if approved, but may not be used a degree programs. CRNC grading.
- 580-583 **Special Topics. 1-4 hrs.**  
585-588 **Independent Study. 1-4 hrs.**  
591-594 **Workshop. 1-4 hrs.**
- 600 **Computing and Instructional Design. 3 hrs.**  
An analysis of current systems of educational computing based on models of instruction, learning modalities, and desired learning outcomes. (PR: CIEC 534 or equivalent or consent).
- 610 **Local Area Networks and Telecommunications in the School. 3 hrs.**  
A hands-on approach to managing and using local area networks and telecommunications to meet the instructional needs of the school. (PR: CIEC 534 or equivalent or consent).
- 620 **Software Evaluation and Selection. 3 hrs.**  
In-depth evaluation of software based on student-developed criteria. (PR: CIEC 600 or equivalent).
- 630 **Authoring Systems and Multimedia. 3 hrs.**  
A hands-on approach to authoring systems, including stackware, and the integration of other technologies such as CD-ROM, video disk, still video, and video and audio cassette recordings. (PR: CIEC 620 or equivalent).
- 660 **Using Computers to Improve Instruction in the Classroom. 3 hrs.**  
This course is designed for inservice teachers who are familiar with the "BASIC programming" language and who want to learn how the microcomputer can be utilized in a content area. (PR: CI 530)
- 699 **Final Project in Curriculum Area. 3 hrs.**  
A final project related to the student's curriculum area which demonstrates the ability to design and implement a computer-based curriculum application. (PR: CIEC 630 or equivalent).

#### CURRICULUM AND INSTRUCTION: ENGLISH AS A SECOND LANGUAGE (CISL)

- CISL 550 **Second Language Acquisition. 3 hrs.**  
This course examines current theories of second language acquisition and their implications for second language teaching and learning.
- CISL 551 **Linguistics for ESL. 3 hrs.**  
This course examines major linguistic theories on first- and second-language acquisition, emphasizing acquisition of English by non-native students in prekindergarten through twelfth grade. (PR: CISL 550)
- CISL 552 **Intercultural Communication. 3 hrs.**  
This course focuses on the interrelationship of language and culture and includes analyses of world cultures, with literature and arts as bridges. Participants develop teaching materials for ESL classrooms.
- CISL 553 **Methods and Materials for ESL: Language Development. 3 hrs.**  
Approaches to developing and assessing listening and speaking skills among second language populations at different stages in academic development, with an overview of traditional ESL methods. (PR: CISL 550)
- CISL 554 **Methods and Materials for ESL: Literacy Acquisition. 3 hrs.**  
Approaches to developing and assessing writing and reading skills among second language populations at different stages in academic development. Focus also includes literacy acquisition in content areas. (PR: CISL 550)
- CISL 555 **ESL Practicum for Teaching ESL. 3 hrs.**  
A culminating practicum that involves participation in ESL curriculum evaluation and development. (PR: CISL 550, 551, 552, 553, 554)

#### CURRICULUM AND INSTRUCTION MATH EDUCATION (CIME)

- 500 **Mathematics for the Elementary Teacher I. 3 hrs.**  
Systems of numeration, sets, relations, binary operations, decimal and other base systems, natural numbers, integers, rational numbers, and real numbers with emphasis on the algebraic structure.
- 501 **Mathematics for the Elementary Teacher II. 3 hrs.**  
Continuation of CIME 500. PR: CIME 500
- 555 **Technical Mathematics for Mathematics Educators. 3 hrs.**  
This course will cover the objectives of applied and technical preparation mathematics for teachers, with an emphasis on methodologies appropriate for those students who are likely to comprise these classes.

- 556 Finite Mathematics for Mathematics Educators. 3 hrs.**  
This course will cover the methods and objectives of business and technical preparation mathematics courses with an emphasis on teaching methodologies appropriate for those students who are likely to comprise these classes.
- 557 Precalculus for Mathematics Educators. 4 hrs.**  
A progressive development of algebraic concepts, skills, and applications. Problem solving techniques and calculator usage will be integrated throughout the program.
- 558 Geometry for Mathematics Educators. 3 hrs.**  
Basic concepts of logic and mathematical proofs. Topics include angle relationships, parallel, and perpendicular lines, circles, polygons, solids, triangles, and elementary trigonometry. (PR: CIME 557)
- 560-564 Staff Development. 1-4 hrs.**  
Courses and activities designed to meet the inservice needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrades if approved, but may not be used a degree programs. CRNC grading.
- 570 Teaching Mathematics to Early Adolescents. 2 hrs.**  
An examination of the interrelationships of the physical, intellectual, and socio-emotional development of the pre- and early adolescent and their impact on the teaching and learning of mathematics. (PR: Any two of the following: CIME 555, 556, 557 or 558; or permission)
- 575 Supervised Field Practicum/Seminar in Mathematics, 5-9. 3 hrs.**  
Supervised practicum in which the student demonstrates and is assessed in mathematics teaching skills in a clinical setting in grades 5-9. (PR: any two of the following—CIME 555, 556, 557, 558; or permission)
- 577 Supervised Field Practicum/Seminar in Mathematics, 9-12. 3hrs.**  
Supervised practicum in which the student demonstrates and is assessed in mathematics teaching skills in a clinical setting in grades 9-12. (PR: any two of the following CIME 555, 556, 557, 558, or permission)
- 580-582 Special Topics. 1-4 hrs.**
- 585-588 Independent Study. 1-4 hrs.**
- 591-594 Workshop. 1-4 hrs.**

### CURRICULUM AND INSTRUCTION: READING EDUCATION (CIRG)

- 500 Building Supportive Classrooms for Early Literacy Learning. 3 hrs.**  
This is a field-based course designed for schools that are adjusting the literacy curriculum to support literacy acquisition. Participants learn to provide appropriate assessment and instruction to foster the development of learning strategies for reading and writing for their pupils.
- 506 Introduction to Reading Recovery. 3 hrs.**  
A course designed for Reading Recovery Teachers-in-Training including the basic concepts, practices, theory, and philosophy. Participants will administer, score, and interpret an observation survey.
- 507 Reading Recovery: Theory and Practice. 6 hrs.**  
Provides information, direction, and supervision in implementing Reading Recovery within the school setting. This course includes a daily practicum and weekly seminar session relating theory to practice. (PR: CIRG 506)
- 560-564 Staff Development. 1-4 hrs.**  
Courses and activities designed to meet the inservice needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrades if approved, but may not be used a degree programs. CRNC grading.
- 565 Reading for Supervisors of Instruction. 1 hr**  
A course for individuals seeking certification as a supervisor of instruction. Attention will be given to comprehensive reading programs, approaches to reading instruction, and inservice programs. (PR: Consent)
- 580-583 Special Topics. 1-4 hrs.**
- 585-588 Independent Study. 1-4 hrs.**
- 613 Children's Literature. 3 hrs.**  
An examination of teaching methods and of children's literature that are conducive to promoting permanent interests, skills, and interests in reading for ECE and MCE.
- 614 Adolescent Literature. 3 hrs.**  
Analysis of the roles of the teacher in developing a reading program for the late adolescent and adult. The utilization of children's literature as a medium for bridging the content fields with the process of reading will be a major concept that will be utilized.
- 619 Reading Leadership: Roles, Responsibilities, and Problems. 3 hrs. S.**  
Analyses of administrators/supervisor's roles, responsibilities, problems, and practices in reading programs K-12. Presents practical solutions for problems encountered in a comprehensive reading program.

- 621 **Current Issues and Problems in Reading. 3 hrs.**  
A seminar course especially designed to explore problems and issues in reading, K-12. Professional literature, empirical research, and practical experience will be used to identify problems and solutions. (PR: CIRG 643)
- 636 **Modern Developmental Reading Program. 3 hrs.**  
Principles and practices of teaching developmental reading.
- 637 **Reading Education: Diagnosis and Correction of Reading Difficulties I. 3 hrs.**  
Study and the causes of reading difficulties, diagnostic devices and techniques, and remedial methods and materials. (PR: CIRG 636 and 644)
- 639 **Reading Education Seminar: Planning, Organizing and Supervising a Reading Program. 3 hrs.**  
This course is designed as an in-depth study and analysis of the planning and organizing of reading programs at various administrative levels. (PR: CI 643)
- 642 **Reading Education Seminar: Reading Instruction for Individuals with Special Needs. 3 hrs.**  
Study of research findings, methodology and instructional materials for atypical learners, illiterate adults and others.
- 643 **Practicum in the Diagnosis and Correction of Reading Difficulties - Elementary and Secondary. 3 hrs.**  
Clinical experiences in the diagnosis and corrective treatment of reading disabilities. (PR: CIRG 654)
- 644 **Teaching Content Reading. 3 hrs.**  
Principles underlying the teaching of reading in the content fields.
- 653 **Literacy Acquisition. 3 hrs.**  
Literacy acquisition is a foundation course open to professionals whose interests require understanding of the process involved in becoming literate.
- 654 **Reading Education: Diagnosis and Correction of Reading Difficulties II. 3 hrs.**  
Experiences in analyzing diagnostic test results, preparing diagnostic reports, and selecting appropriate materials and procedures to meet specific reading needs. (PR: CIRG 637)
- 701 **Reading Education Seminar I. 3 hrs.**  
An investigation of research in reading that has made a difference in education, pupil achievement in reading, the role of reading, and the role of the reading specialist. (PR: Master's degree, consent of instructor)
- 702 **Reading Education Seminar II. 3 hrs.**  
An examination of research that has the potential to bring about changes in reading education and school curriculum.
- 703 **Reading and Reading-Related Tests and Techniques. 3 hrs.**  
An examination of research related to the development of reading and reading-related diagnostic procedures. Detailed study will be made of standardized tests, the Informal Reading Inventory (IRI) and other similar diagnostic measures and competency-based instruments.
- 704 **Advanced Instructional Reading Processes. 3 hrs.**  
A study of advanced instructional techniques in reading. Attention will be given to such concepts as self-concept, intelligence, nature/nurture, interaction, perception, physiological differences, and exceptionalities.
- 705-706 **Applied Research in Reading Education I and II. 3-6 hrs.**  
Planning and implementing a study investigating aspects of reading theory. The study will necessitate deriving empirical data under field conditions.
- 707 **Issues in Reading. 3 hrs.**  
A review of trends and issues in reading education focusing on the complexity of the reading process.
- 708 **Philosophy and History of Reading Education. 3 hrs.**  
A study of the philosophical foundation of current reading programs. This course will review the historical background and progress in reading education.
- 709 **Field Experience: An Aspect of Reading Education. 3 hrs.**  
A field-based course designed to study the theory, preparation, presentation, and evaluation of inservice education. Emphasis will be placed on the refinement of teacher education in specialized areas of the curriculum.
- 710 **Independent Study. 3 hrs.**  
Individualized study of advanced topics in reading.

#### **CURRICULUM AND INSTRUCTION: SCIENCE EDUCATION (CISE)**

- 560-564 **Professional Development. 1-4 hrs.**  
Courses and activities designed to meet the inservice needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrades if approved, but may not be used a degree programs. CR/NC grading.
- 570 **Flora and Fauna for the Elementary/Middle School. 3 hrs.**  
A study of the flora, fauna, and physical geography of West Virginia. Field-based experiences will lead to a greater understanding of the forces that shaped Appalachia and the flora and fauna that live here.
- 152 *Courses of Instruction* *Marshall University*



- 571 **Developing Thematic Science in the Elementary/Middle School. 3 hrs.**  
A study of the strategies and techniques needed to plan, implement and evaluate a thematic, coordinated, and integrated science program in the schools.
- 572 **Environmental Education for the Elementary/Middle School Teacher. 3 hrs.**  
A study of man's interactions with the environment. Awareness, conservation, problem-solving and stressed using strategies and techniques appropriate for the elementary/middle school student.
- 573 **Chemistry for the Elementary/Middle School. 3 hrs.**  
A study of the fundamental principles of chemistry focusing on developmentally appropriate methods, strategies and techniques to assist with concept development and attainment.
- 574 **Integrated Science for the Elementary School. 3 hrs.**  
Study and application of the concepts and activities included in an integrated science program for the elementary school.
- 575 **Integrated Science for the Middle School. 3 hrs.**  
Study and applications of the concepts and activities included in an integrated science program for the middle school.
- 576 **Wave Phenomena and Electricity for the Elementary/Middle School. 3hrs.**  
A study of the fundamental principals of physics focusing on wave phenomena and electricity for the elementary/middle school teacher.
- 577 **Energy and Matter for the Elementary/Middle School. 3hrs.**  
A study of the fundamental principles of physics focusing on energy and matter for elementary and middle school teachers.
- 580-582 **Special Topics. 1-4 hrs.**
- 585-588 **Independent Study. 1-4 hrs.**
- 591-594 **Workshop. 1-4 hrs.**

### CURRICULUM AND INSTRUCTION: SPECIAL EDUCATION (CISP)

- 520 **Introduction to Exceptional Children. 3 hrs.**  
An introduction to the study of children who deviate from the average in mental, physical, and social characteristics, including a study of the characteristics of such children and the adaptation of educational procedures to their abilities and disabilities.
- 521 **Children with Exceptionalities. 3 hrs.**  
Behavioral characteristics of children with exceptional development, dynamics of family- community interaction, and attitudes toward exceptional conditions. Implications for amelioration and educational planning. (Not for Special Education majors)
- 523 **Introduction to Learning Disabilities. 3 hrs.**  
An integrated, concise overview of specific learning disabilities; definitions, etiology; observable and identifiable symptoms and implications for amelioration.
- 524 **Introduction to Emotional Disturbances. 3 hrs.**  
Characteristics of emotional-social disturbances in children; dysfunction in behavior, academic achievement, and social relationships, etiology and educational implications are presented.
- 526 **Introduction to the Gifted. 3 hrs.**  
An overview of giftedness in children, definitions, etiology, observable characteristics and implications for educational agencies.
- 527 **Introduction to Autism. 3 hrs.**  
This is a lecture-discussion course designed to survey current autism definitions, rates of incidence conceptual models and educational designs relating to autistic children, youth, and adults. (PR: Permission)
- 529 **Introduction to the Physically Handicapped. 3 hrs.**  
An introduction to the characteristics and needs of crippled and other health impaired children. The medical aspects of physically handicapping conditions are considered. (PR: CI 520; CR: Field Experience)
- 533 **Special Education: Introduction to Mental Retardation. 3 hrs.**  
Acquaints teachers with the characteristics and needs of the mentally retarded child. The status of the mentally retarded in our society and the impact of mental retardation on education (PR: CI 520. CR: Field Experience)
- 535 **General Special Education Programming. 3 hrs.**  
Address the educational/curricular needs of students with mild learning problems in the categorical areas of mental retardation, behavior disorders, and specific learning disabilities. (PR: CI 320/520 and 433/533 or 423/523 or 424/524 or permission of instructor)
- 553 **Special Education: Education of the Mentally Retarded. 3 hrs.**  
Principles and current trends in curriculum development are reviewed and evaluated toward the development of specific curricula for the mentally retarded. Methods and materials are presented in relation to this development. (PR: CI 520 and 533)



- 554 **Working with Families of Exceptional Students. 3 hrs.**  
Principles and information designed to give the student an understanding of the needs and rights of parents of exceptional children and techniques to involve parents successfully in their child's education.
- 560-564 **Staff Development. 1-4 hrs.**  
Courses and activities designed to meet the inservice needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrades if approved, but may not be used a degree programs. CRNC grading.
- 580-583 **Special Topics. 1-4 hrs.**
- 585-588 **Independent Study. 1-4 hrs.**
- 600 **Grant Writing in Special Education. 3 hrs.**  
A review of the federal and state guidelines for writing grants in Special Education. The priority areas of special education in which monies are currently available will also be examined.
- 601 **Psychological Foundations of Giftedness. 3 hrs.**  
A study of measures used to identify the gifted and interpretation of results, psychological development of the gifted and psychological pressures, problems and adjustments strategies towards mental health in the gifted child.
- 602 **Education of the Gifted. 3 hrs.**  
Educational models, identification techniques, teaching strategies and resources available for gifted children. Current trends in curriculum development for the gifted are also examined. (PR: CISP 526)
- 603 **Field Experience: Gifted. 3 hrs.**  
Supervised experiences (one semester) in field work with children who exhibit potential giftedness.
- 604 **Practicum in Emotional Disturbances. 3 hrs.**  
An initial participation and observation experience with children experiencing behavior problems. Course evolves around bi-weekly seminar and selected projects.
- 611 **Special Education Research, Part I. 3 hrs.**  
The study of problems related to the area of exceptionality receiving emphasis in the student's degree program. (PR: CI 603, 649, 651 or 674, EDF 621 or 625)
- 615 **Special Education Research, Part II. 3 hrs.**  
As a part of the requirements for this course, the student will submit a written, bound document, which will be added to the college library collection. (PR: CISP 611)
- 626 **Special Education: Diagnostic-Clinical Practices. 3 hrs.**  
Team approach to diagnosis and treatment of exceptional children. (PR: CISP 520)
- 627 **Trends and Issues in Special Education. 3 hrs.**  
An in-depth look at current issues affecting all areas of special education as well as issues specific to each special education category.
- 629 **Special Education: Seminar 3 hrs.**  
Research methods and current significant findings in special education. Guest speakers. Advanced special education students only.
- 645 **Special Education: Education of Emotional Disturbances. 3 hrs.**  
Recognition of emotional-social, disturbances, assessment of educational needs, establishment of programs to implement behavioral change and provide necessary modification in educational programs to remediate learning and behavioral difficulties of children.
- 646 **Special Education: Field Experiences: Learning Disabilities. 3 hrs. S.**  
Supervised experiences of one semester in field work with children or youth who exhibit symptoms of problems in learning.
- 647 **Special Education: Education of Learning Disabilities. 3 hrs. I.**  
Theories, diagnosis, and teaching strategies concerning children who exhibit symptoms of any or several learning disabilities.
- 649 **Special Education: Field Experiences: Emotional Disturbances. 3 hrs.**  
Supervised field experiences (one semester) working with children who exhibit symptoms of emotional disturbances-behavioral disorders. (PR: CISP 520 and CISP 624)
- 650 **Special Education: Diagnostic Evaluation and Prescriptive Teaching Techniques. 3 hrs.**  
Educational assessment and diagnostic evaluation for remediation-amelioration; advanced course for providing understanding and utilization of evaluation, teacher assessment, and analysis for programming for exceptional individuals. (PR: CISP 626)
- 651 **Special Education: Field Experience: Mental Retardation. 3 hrs.**  
All-day supervised teaching in special classes in the public schools required of all students who are completing curriculum for teachers of mentally retarded children. (PR: CI 533 and CI 553)
- 661 **Introduction to Preschool Special Education. 3 hrs.**  
An overview of early childhood special education programs including historical events, legislation, the population served, program models and components and current issues and trends.

- 662 **Instructional Characteristics of Autism. 3 hrs.**  
A lecture-discussion course, designed to provide students with an understanding of the learning characteristics of autistic children and research-based instructional techniques for teaching and managing behavior. (PR: CI 427 or 527)
- 663 **Developmental Issues in Preschool Special Education. 3 hrs.**  
An examination of the normal development of young children, the interrelated effects of impairment in various areas of development and strategies for intervention.
- 664 **Practicum in Autism. 3 hrs.**  
This course contains two components: a competency-based practicum experience with autistic students and a seminar with regular discussions and readings on practical issues concerning the education of autistic children. (PR: CI 427 or CI 527 and 662)
- 665 **Assessment in Preschool Special Education. 3 hrs.**  
An overview of issues in the identification, screening and assessment of young handicapped children, specific assessment techniques for working with families and interdisciplinary teams in the assessment process.
- 666 **Curriculum and Methods in Preschool Special Education. 3 hrs.**  
A review of curriculum development and methodology used to teach young children with handicaps. Evaluation techniques, program development and management, adaptation of materials and equipment and program models are presented.
- 673 **Field Experience: Preschool Special Education. 3 hrs.**  
Supervised participation and directed teaching activities in an early childhood special education program across ages, disabilities and severity levels. Activities with non-handicapped preschoolers are also required.
- 674 **Practicum: Preschool Special Education. 3 hrs.**  
Supervised teaching in a variety of early childhood special education programs across ages, disabilities, and severity levels. Experiences with non-handicapped preschoolers are required. Specific competencies will be individually determined.

#### CURRICULUM AND INSTRUCTION: VISUAL IMPAIRMENTS (CIVI)

- 500 **Introduction to Visual Impairments. 3 hrs.**  
Introduction to educational programs and services for students with visual impairments, history, definitions, incidence and prevalence, development, psychosocial aspects, service delivery models, issues, and professionalism.
- 501 **Braille Reading and Writing. 3 hrs.**  
Knowledge and skills in reading and writing literary braille code, braillewriter, slate and stylus, proof-reading, interlining, basic Nemeth mathematics code, textbook formatting, computer translation, overview of other braille codes.
- 502 **Structures and Functions of the Human Visual System. 3 hrs.**  
Structure and function of the eye, development of the visual system, causes of eye conditions, vision assessments, environmental modifications, relationship to other disabilities, and neurological aspects of visual impairment.
- 503 **Instructional Strategies for Teaching Students with Visual Impairments. 3 hrs.**  
Design and adaptation of instruction for students with visual impairments, expanded core curriculum, teaching literacy and other communication skills, assessment, early childhood intervention, parent involvement, and collaboration.
- 504 **Instructional Strategies for Teaching Students with Multiple Impairments. 3 hrs.**  
Strategies for students with visual impairments and severe/multiple disabilities, interaction of sensory disabilities with other disabilities, functional curricula, alternative communication and mobility systems, and collaboration.
- 505 **Basic Orientation and Mobility Skills. 3 hrs.**  
Strategies for teaching and reinforcing orientation mobility skills, basic concept development, movement, exploration of space in the home and school environment, environmental orientation, and collaboration with O & M specialists.
- 506 **Practicum in Visual Impairment. 1-6 hrs.**  
Three hundred documented hours of supervised practicum experiences with students with visual impairments, including those with severe/multiple disabilities ranging from infancy to early adulthood. (PR: Permission of instructor)
- 507 **Advanced Braille and Technology for Teaching Students with Visual Impairments. 3 hrs.**  
Codes and techniques for advanced braille. Essential skills in transcribing Nemeth code for mathematics and science, formatting techniques, and computer translation. (PR: CIVI 501 or equivalent)

## DIETETIC INTERNSHIP (DTS)

- 560 **Professional Development. 1-4 hrs.**  
Activities designed to meet the supervised practice needs of dietetic interns. CR/NC grading.
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 591-594 **Workshop. 2-3; 2-3; 2-3; 2-3 hrs.**  
Workshop in selected areas of dietetics.
- 670 **Nutrition Intervention in Dietetics. 3 hrs.**  
Integrates normal and clinical nutrition with behavioral, natural, and social sciences to enhance dietary compliance among populations at nutritional risk. Systematic approach to assessment, instruction, and evaluation. Applied research in dietetics. (PR: Dietetic Internship Students or permission)
- 673 **Administrative Dietetics. 3 hrs.**  
Overview of management/administrative concepts for directing resources within a variety of food and nutritional service/programs. Planning, implementing, and evaluation techniques to measure organizational performance. Applied research in dietetics. (PR: Dietetic Internship Students or permission)
- 675 **Dietetic Internship Practicum I. 3 hrs.**  
Supervised practice experience focusing on the nutritional screening assessment and education of individuals and groups across the lifespan in a variety of community and long-term settings.
- 676 **Dietetic Internship Practicum II. 3 hrs.**  
Supervised practice experience focusing on the procurement, production, distribution, and service within school- and hospital-based food service management systems.
- 677 **Dietetic Internship Practicum III. 3 hrs.**  
Supervised practice experience focusing on skills required to become a dietitian in a clinical setting. Nutritional screening, assessment, and education of individuals with complex medical conditions will be emphasized.
- 679 **Nutrition Interventions II. 3 hrs.**  
Utilizes current technologies for information and communication related to selected acute and chronic diseases. Individual educational plans are designed and implemented.
- 690-691 **Seminar in Research and Communication. 1-3; 1-3 hrs.**  
Extensive reading and reports from current literature in selected areas of dietetics.

## ECONOMICS (ECN)

- 501 **Economic Analysis. 3 hrs.**  
Overview of the basic principles of both microeconomics and macroeconomics.
- 505 **Environmental Economics. 3 hrs.**  
The application of basic economic theory to a consideration of wide range of environmental problems, including pollution, natural resource exhaustion, population and economic growth. (PR: ECN 253 or permission of GSM academic advisor)
- 508 **Comparative Economic Systems. 3 hrs.**  
Marxism, capitalism, communism, fascism and socialism considered as theories, movements and actual political economics. (PR: ECN 253, or permission of GSM academic advisor)
- 515 **Regional Economics. 3 hrs.**  
A study of location theory and regional development within a framework of economic theory. (PR: ECN 253 or permission of GSM academic advisor)
- 520 **International Economics. 3 hrs.**  
Movement of goods and balance of payments among nations; exchange rates; exchange controls and tariffs; problems and policies. (PR: ECN 253 or permission of GSM academic advisor)
- 522 **Introduction to Mathematical Economics. 3 hrs.**  
Modern mathematical methods for use in economics and other social sciences. (PR: ECN 253 and Mathematics 203, or permission of GSM academic advisor)
- 540 **History of Economic Thought. 3 hrs.**  
Economic theories and ideas from the earliest economists to those of Marshall and Keynes. (PR: ECN 253 or permission of GSM academic advisor)
- 550 **Public Finance. 3 hrs.**  
Analysis of governmental activities pertaining to raising of revenue and expenditure of monies; analysis of public debt and fiscal programs at all levels of government. (PR: ECN 253 or permission of GSM academic advisor)
- 560 **Economic Development. 3 hrs.**  
A study of the problems, dynamics and policies of economic growth and development in underdeveloped and developed countries. (PR: ECN 253 or permission of GSM academic advisor)



- 561 **Economics Education Workshop. 3 hrs.**  
Intensive review of subject matter and teaching methods in economics for elementary and high school teachers. (PR: Consent of instructor or grant scholarship)
- 562 **Economics Education Workshop 1-3 hrs.**  
Intensive review of subject matter and teaching methods in economics for elementary and high school teachers. (PR: Consent of instructor or grant scholarship)  
Note: Students who have taken the Social Studies workshop in American Capitalism Seminar for credit may not take ECN 561 and 562, American Capitalism Seminar, for credit.
- 620 **The United States and The Global Economy. 3 hrs.**  
A study of the interdependent and transnational nature of the global economy with an emphasis on contemporary global economic issues, commercial policies, trading blocs, developing countries and world economic agencies. (PR: GSM admission)
- 630 **Managerial Economics. 3 hrs.**  
Utilization of microeconomic theory and optimization techniques for management decision making. (PR: Full M.B.A. admission)
- 644 **Advanced Economic Theory. 3 hrs.**  
Macroeconomic theory. The aggregate consumption function; other determinants of the level of aggregate income. Post Keynesian theory. General equilibrium theory, economics of welfare. (PR: ECN 326 and full M.B.A. admission)
- 650-651 **Special Topics. 1-3; 1-3 hrs.**  
Members of the department may teach, when necessary, any economics subject not listed among current course offerings. (PR: Nine hours of economics and permission of division head and of GSM academic advisor)
- 656 **Labor Economics. 3 hrs.**  
Theoretical and empirical analysis of labor markets, wage determination, hours of work, unemployment and inflation, unions and collective bargaining and related subjects in their social and legal contexts. (PR: Full M.B.A. admission)
- 660 **Independent Study. 1-4 hrs.**  
Independent study of a specific nature under the supervision of a qualified faculty member. Hours of credit are determined by the magnitude of the project. (PR: Permission of division head and of GSM academic advisor)
- 681 **Thesis. 3-6 hrs.**  
(PR: Permission of division head and full M.B.A. admission)

## EDUCATION (See Curriculum and Instruction)

### EDUCATIONAL FOUNDATIONS (EDF)

- 502 **Psychology of the Middle Childhood Student. 3 hrs.**  
A course in the study of developmental principles relating to the physical, cognitive, social, and moral development of the middle childhood student 10-14 years old.
- 510 **Contemporary Issues in Education. 3 hrs.**  
The impact of contemporary forces in education with emphasis on current educational issues.
- 513 **Human Growth and Development Birth-8. 3 hrs.**  
A study of various topics and instructional implications for birth-8
- 514 **Human Growth and Development Adolescents. 3 hrs.**  
A study of various topics and instructional implications for adolescents.
- 515 **History of Modern Education. 3 hrs.**  
Our debt to the ancient Hebrews, Greeks, and Romans. Emphasis also is placed upon the movements since the beginning of the Renaissance.
- 517 **Statistical Methods. 3 hrs.**  
A foundation course in descriptive and inferential statistics as applied in education and the social sciences.
- 535 **Tests and Measurements. 3 hrs.**  
History, philosophy and elementary statistical methods for testing, measuring and evaluating pupil behavior are studied.
- 537 **MAT Level I Clinical Experience. 0 hrs.**  
Twenty-hour public school clinical experience in middle/secondary schools designed to provide an opportunity for MAT students to work with faculty, staff and students in a teaching environment. (CR: EDF 616)
- 580-583 **Special Topics. 1-4 hrs.**
- 585-588 **Independent Studies. 1-4 hrs.**



- 610 **Trends and Issues in Education. 3 hrs.**  
An investigation of current trends and issues in education through extensive reading, research and discussions. Implications for schools, classrooms, and teachers are the focus of the course.
- 612 **Educational Evaluation. 3 hrs.**  
A study of the fundamental skills needed to evaluate educational progress at the individual, classroom, program, and school levels.
- 615 **History of Education in the United States. 3 hrs.**  
Development of public and private educational systems in the United States.
- 616 **Advanced Studies in Human Development. 3 hrs.**  
The nature of human growth and development from infancy through adulthood. *MAT students only.* (CR: EDF 537)
- 617 **Multiple Regression. 3 hrs.**  
A first course in Multiple Regression Analysis and its application. Designed to be cross-disciplinary. Of interest to students in Education, the Social, Behavioral and Natural Sciences.
- 619 **Educational Psychology. 3 hrs.**  
Study of learning theories and their applications to teaching.
- 621 **Educational Research and Writing. 3 hrs.**  
Research methods, techniques, and their application to education.
- 625 **Qualitative Research in Education. 3 hrs.**  
Study of qualitative research methods: understanding historical and philosophical foundations of qualitative research and developing expertise in qualitative research strategies including participant observation, interviewing and inductive content analysis of data.
- 630 **Comparative Education. 3 hrs.**  
The study of the origins, nature, scope, basic literature and methodology of comparative education.
- 631 **Gender and Education. 3 hrs.**  
The course focuses on gender relations in education and schooling. The course addresses gender in relation to curriculum and knowledge, pedagogy and instructional arrangements, and administration and policy issues. (PR: EDF 621 or equivalent)
- 635 **Policy Studies in Education. 3 hrs.**  
The course focuses on current policy issues facing educators today. The course offers conceptual and analytical tools for a critical examination of the uncertain political environment of schooling.
- 637 **MAT Level II Clinical Experience. 0 hrs.**  
Thirty-hour secondary public school experience provides opportunity for preservice, master's-level teachers to put theory into classroom practice through observation, participation, reflection, individual/small group teaching, and up-front classroom teaching. (PR: EDF 537; CR: CI 515)
- 640 **Literature. 1-3 hrs.**  
A program of reading, either extensive or intensive, and reports on a group of outstanding contributions to education; readings selected with guidance of advisor. Only one registration for this course is permitted. (CR: Permission of instructor)
- 641 **Seminar. 2-3 hrs.**  
A guided program of readings, reports and discussions. No student may register for this course a second time.
- 660 **Philosophy of Education. 3 hrs.**  
Surveys basic philosophy schools and concepts and their application to educational practice.
- 665 **Sociology of American Schools. 3 hrs.**  
American school organizational patterns interpreted sociologically; role of power and bureaucracy, social and cultural change, stratification and social mobility, and values; analysis of school rituals and ceremonies.
- 677 **MAT Level III Clinical Experience. 3-6 hrs.**  
Culminating clinical experience through directed activity in a clinical setting for MAT students. (PR: EDF 537 and EDF 637)
- 679 **Problem Report. 1-3 hrs.**  
The preparation of a written report on a research problem, experiment or field project in education. This report is not a thesis; students must complete an additional 33 credit hours unless 697 is followed by 681 for 3 hours credit.
- 681 **Thesis. 3-6 hrs.**  
May be taken for 3 hours of credit by students whose reports in 679 were excellent and are of such character as to warrant further research. Students completing 679 and 681 for a total of 6 hours may qualify for the master's degree by earning an additional 26 hours of credit. Students completing 681 must defend their thesis in an oral examination.

## ELECTRICAL ENGINEERING (EE)

- 650-653 **Special Topics. 1-4 hrs.**  
Formal study of electrical engineering topics of current interest. (PR: Consent)

## ENGINEERING (ENGR)

- 610 **Applied Statistics 3 hrs.**  
Practical application of statistical techniques to decision-making, forecasting, optimization, experimental design. Interpretation of data using central tendency and dispersion, t-test, F-test, variance analysis, correlation, and linear regression. (PR: Permission)
- 620 **Computer Applications 3 hrs.**  
Introduction to current software technology to solve problems of interest to technical professionals. Covers the use of tables, databases, modeling, curve fitting, and solution of equations. (PR: Permission)
- 650-653 **Special Topics. 1-4 hrs.**  
Formal study of engineering topics of current interest. (PR: Consent)
- 685-688 **Independent Study. 1-4 hrs.**  
An approved study of special interest concerning engineering, under the supervision of a faculty member. (PR: Consent)

## ENGINEERING MANAGEMENT (EM)

- 601 **The Management Process. 3 hrs.**  
This course covers the management process and the structural, organizational and behavioral principles needed by managers to function effectively in organizational environments.
- 650-653 **Special Topics. 1-4 hrs.**  
Study of special topics of an advanced nature. (PR: Consent)
- 660 **Project Management. 3 hrs.**  
Provides the student with a practical knowledge of how to integrate effectively the functional efforts of many in the execution of programs and projects.
- 664 **Management of Research & Development Organizations. 3 hrs.**  
Techniques and methods for effective management of research and development organizations, projects, and personnel. (PR: EM 601)
- 665 **Management of Engineering Organizations. 3 hrs.**  
Techniques and methods for effective management of engineering firms, departments, and personnel. (PR: EM 601)
- 670 **Seminar in Engineering Management. 3 hrs.**  
Provides the student an opportunity to examine issues in engineering management and to evaluate their consequences in organizations, in the profession, and in society. (PR: Consent)
- 675 **Engineering Economics. 3 hrs.**  
The concepts and methods for the financial calculations involving time value of money and uncertainty. Capital and departmental budgeting processes and engineering inputs to cost accounting. (PR: Consent)
- 694 **Engineering Law. 3 hrs.**  
The American legal system, contracts and specifications, liability of professional engineers, product liability, agency relationships, patent and proprietary rights, and special problems in contracts are studied.

## ENGLISH (ENG)

- 502 **Composition and Rhetoric for Teachers. 3 hrs. S.**  
Study of rhetorical invention and models of composing process, with intensive practice in writing.
- 508 **Advanced Expository Writing. 3 hrs.**  
An advanced general composition course for all graduate students. Practice in the rhetorical types and styles used by professionals in all fields. Assignments adapted to the student's major.
- 509 **Milton. 3 hrs.**  
Biographical and critical study, including Milton's English poetry and prose, and his literary and intellectual milieu.
- 510 **Shakespeare's Comedies, Tragicomedies, and Romances. 3 hrs.**  
Intensive study of Shakespeare's comedies, tragicomedies, and late romances. Also includes the Sonnets and Venus and Adonis. (PR: Graduate Students Only)
- 511 **Chaucer. 3 hrs.**  
The poetry of Chaucer, chiefly the Canterbury Tales, in the light of medieval tradition and critical analysis.

- 512 **Shakespeare's Histories and Tragedies. 3 hrs.**  
Intensive study of Shakespeare's Histories and Tragedies. (PR: Graduate Students Only)
- 513 **English Novel to 1800. 3 hrs.**  
Defoe, Richardson, Fielding, Smollett, and Sterne, with supporting study of their most important predecessors and contemporaries.
- 514 **Nineteenth Century English Novel. 3 hrs.**  
Austen, Scott, the Brontës, Eliot, Dickens, Thackeray, Trollope, Meredith, Hardy, Butler, Wilde, and their contemporaries.
- 515 **Victorian Poetry. 3 hrs.**  
Emphasis on Tennyson, Browning, Arnold, Hopkins, Hardy and the pre-Raphaelites.
- 517 **English Drama to 1642. 3 hrs.**  
Non-Shakespearean English drama from its beginnings to the closing of the theatres.
- 519 **Approaches to Teaching Literature. 3 hrs.**  
The intensive study of the pedagogy of literature and literary critical theory and its classroom applications.
- 521 **American Literature to 1830. 3 hrs. Alternate years.**  
Study of American literature of the Puritan, Colonial, and Federal periods, including such authors as Jonathan Edwards, Edward Taylor, Benjamin Franklin, Phillis Wheatley, Washington Irving, and William Cullen Bryant.
- 522 **American Literature, 1830-1865. 3 hrs. Alternate years.**  
American literature of the Romantic Period, including such authors as Emerson, Poe, Melville, Hawthorne, Whitman, and other figures of the period.
- 523 **American Literature, 1865-1914. 3 hrs. Alternate years.**  
American literature of the Realistic and Naturalistic periods, including such authors as Howells, Twain, James, Dreiser, Dickinson.
- 525 **Southern Writers. 3 hrs.**  
A survey of the poetry, fiction, nonfiction, and drama indigenous to the American South, including Old South, post-Civil War, and Modern periods, and emphasizing the Southern Literary Renaissance.
- 528 **International Literature. 3 hrs.**  
Readings in contemporary literature from the non Anglo-European world. Texts will be taken from Asian, African, South American, Australian, and other authors. No North American or Western European authors will be read. (PR: ENG 102 or 302 or 20111)
- 533 **Contemporary English Poetry. 3 hrs.**  
Principal poetry since the Victorian period.
- 534 **Contemporary American Poetry. 3 hrs.**  
Principal poetry since 1900.
- 536 **Medieval English Literature. 3 hrs.**  
Old English elegiac and heroic poetry; Middle English lyrics and romances; the Ricardian poets and Malory.
- 537 **Tudor Literature: Poetry and Prose of the Sixteenth Century. 3 hrs.**  
Survey may include works by More, Skelton, Wyatt, Sidney, Spenser, Nashe, Marlowe, Raleigh, Lyly, and Shakespeare, excluding drama.
- 538 **Seventeenth Century Literature: Poetry and Prose. 3 hrs.**  
Survey may include Donne and the Metaphysical poets, the Cavalier lyricists, Bacon, Browne, Herbert, Jonson, Burton, Walton, Hobbes, and Bunyan.
- 546 **Drama of the Restoration and 18th Century. 3 hrs.**  
Trends, movements, and dramatic types in the English theatre of this period.
- 547 **English Romantic Poets. 3 hrs.**  
Emphasis on Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.
- 555 **Literary Criticism. 3 hrs.**  
Historical study, with application of principles.
- 558 **Contemporary Fiction: Form & Theory. 3 hrs.**  
Readings in contemporary fiction addressing the work in terms of the formal and theoretical concerns that drive it. Cutting edge texts that challenge our notions of genre, form, theory, and practice. (PR: ENG 102 or 302 or 20111)
- 562 **Restoration and Eighteenth Century English Poetry and Prose. 3 hrs.**  
British poetry and prose of the Restoration and eighteenth century (1660-1800), exclusive of the novel. Authors studied include Dryden, Swift, Pope, Johnson, Boswell, Wollstonecraft. Emphasis on satire, biography, essay. (PR: English 102 and 20111)
- 565 **Literature of War: (specific war). 3 hrs.**  
Examines the literary responses to an individual war and discusses the artistic, cultural, and historical contexts of those responses.



- 575 **Introduction to Linguistics. 3 hrs.**  
The structural and descriptive approach to the study of the English language.
- 576 **Modern Grammar. 3 hrs.**  
A descriptive analysis of the structure of present-day American English, utilizing the basic theory of generative transformational grammar.
- 578 **Introduction to Sociolinguistics. 3 hrs.**  
Sociolinguistics is the study of the effects of language in society, relevant to discourse practices, language attitudes, variations, shifts, and changes. (PR: EGL 102 or 302 or 201H)
- 580-583 **Special Topics. 1-4 hrs. each.**  
(PR: Permission of the chair)
- 585-588 **Independent Study. 1-4 hrs.**  
(PR: Permission of the chair)
- 591 **Creative Writing: Poetry Workshop. 3 hrs.**  
A practical and intensive class in exploring the varieties of creative expression; exercises on the creating of verse in different forms and styles.
- 592 **Creative Writing: Fiction Workshop. 3 hrs.**  
A forum for presentation, discussion, and refinement of the student's work, either short stories or novels.
- 601 **Folk and Popular Literature. 3 hrs.**  
A study of types, variants, backgrounds, and influences.
- 610 **Readings in English and American Literature. 2-3 hrs.**  
Independent reading in a field not covered by regularly scheduled courses. Limited to English majors who have been admitted to candidacy. (PR: Permission of the chair)
- 611 **Independent Readings. 3 hrs.**  
Independent readings and research. Open only to students with an M.A. degree with a major in English or English Education.
- 616 **Essayists of the 19th Century. 3 hrs.**  
Major British writers of the period.
- 620 **Twentieth Century Drama. 3 hrs.**  
Major British and American dramatists since 1870.
- 624 **Twentieth Century British Novel. 3 hrs.**  
Major British novelists of the twentieth century.
- 625 **Twentieth Century American Novel. 3 hrs.**  
Major American novelists of the twentieth century.
- 628 **Twentieth Century African-American Literature. 3 hrs.**  
An intensive study of selected novels, plays and poems of the period.
- 630 **Materials and Methods of Research. 4 hrs.**  
Instruction and practice in scholarly literary research. Required among first 12 hours of coursework and prior to admission to candidacy for the Master of Arts degree with a major in English.
- 631 **Major American Authors. 3 hrs.**  
An intensive study of one, two, or three selected American authors. (PR: ENG 630 or permission of the chair)
- 632 **Topics in American Literature. 3 hrs.**  
Concentrated study of continuing themes or influences in American literature; for example, narrative perspectives, regional influences, or conflicting agrarian and industrial values. (PR: ENG 630 or permission of the chair)
- 636 **Selected English Writers. 3 hrs.**  
An intensive study of a small group of selected English writers such as the Metaphysical Poets, the Cavalier Poets, or the Bloomsbury Group. (PR: ENG 630 or permission of the chair)
- 637 **Topics in English Literature. 3 hrs.**  
A concentrated study of themes or influences in English literature; for example, narrative strategies, medievalism, the pastoral mode, or conflicting moral, social or literary values. (PR: ENG 630 or permission of the chair)
- 640 **Teaching College English. 3 hrs.**  
Required for graduate assistants in English.

*The following four courses are for in-service teachers only and require permission of the chair and the Director of Writing.*

- 641 **Advanced Composition Institute I. 3 hrs.**  
The study of characteristics of effective writing instruction; strategies of effective writers; an introduction to teaching writing with technology; an introduction to field research in writing. (PR: Graduate School Acceptance and Permission)

- 642 **Advanced Composition Institute II. 3 hrs.**  
Advanced Composition Institute II is a seminar course, a follow-up to the intensive summer Advanced Composition Institute I. (PR: ENG 641)
- 643 **Electronic Writing Project. 3 hrs.**  
Study in the application of teaching writing with technology. Teachers create online syllawebs, databases, peer responses, and conferencing environments, and use technology for research, for teaching research, and for publication. (PR: Graduate School Acceptance and Permission)
- 644 **Teacher Inquiry. 3 hrs.**  
An intensive study of composition research methodologies (ethnographic study, classroom based inquiry, reflective practice, qualitative research) with a proposal for an inquiry project. Upon completion, Fellow becomes part of Teacher Inquiry Community (TIC). (PR: ENG 641, 642, and permission)
- 679 **Problem Report. 1-3 hrs.**
- 681 **Thesis. 1-6 hrs.**

## ENVIRONMENTAL ENGINEERING (ENVE)

- 611 **Air Pollution Design I: Control of Gaseous Emissions. 3 hrs.**  
An introduction to adsorption, condensation, incineration, absorption, and process modification relevant to the design of abatement systems for gaseous air pollutant emissions. (PR: unit operations, thermodynamics and calculus)
- 612 **Air Pollution Design II: Control of Particulate Emissions. 3 hrs.**  
An introduction to equipment, processes, and basic principles relevant to the design of particulate collection systems including electrostatic precipitators, fabric filtration units, cyclones, and high energy scrubbers. (PR: ES 604 or courses in physics, fluid mechanics, and process design)
- 615 **Environmental Chemistry. 3 hrs.**  
Fundamental principles governing the various aspects of chemistry relevant to the environment will be addressed. The chemistry of waste treatment, cyclical processes and other applications will be evaluated. (PR: Consent)
- 616 **Principles of Biological Waste Treatment. 3 hrs.**  
Principles and practices of the process design of biological systems employed in wastewater treatment, including such topics as microbial metabolism, oxygen transfer, and biomass-separation. Lectures, laboratory, and field trips. (PR: ES 651)
- 617 **Physiochemical Treatment of Water and Wastewater. 3 hrs.**  
A unit operation/unit process approach to industrial and advanced waste treatment covering physical and chemical methods. Application of methods to specific waters and wastes. Lectures and laboratory sessions. (Prerequisite: ENVE. 615)
- 618 **Pollution Prevention. 3 hrs.**  
Introduces the student to the basic understanding and criteria required for establishing a pollution prevention program, including a review of successful industry practices. Emphasis on management strategies. (PR: undergraduate degree in science or engineering)
- 620 **Solid Waste Management. 3 hrs.**  
Solid waste management and minimization: options, methods, laws and regulations. Landfill design, testing, operation, monitoring, and closure. Use of composting in landfills. Incinerator design and operation. Separation and recycling approaches.
- 625 **Hazardous Waste Management. 3 hrs.**  
Options and methods of managing hazardous waste. Landfill design, testing, operation, monitoring, and closure. Incinerator design, testing, operation, and monitoring. Design and operation of treatment facilities. Waste reduction practices.
- 650-653 **Special Topics**  
Occasional special offerings in Environmental Engineering. (PR: Consent)
- 663 **Environmental Permitting. 3 hrs.**  
The permit process for the construction and operation of facilities, including stream crossing, wetlands, etc.; permits under Clean Air Act, Clean Water Act, NPDES, RCRA and TSCA.
- 673 **Industrial Ventilation. 3 hrs.**  
The design and analysis of industrial ventilation systems, including properties of air contaminants; hood, duct and fan design; system performance; mine ventilation; air cleaning devices; testing; diagnosis; troubleshooting, cost analysis. (PR: Consent.)
- 675 **Industrial Noise Control. 3 hrs.**  
Physics of sound, absorption and reflection, sound level measurements and instruments, and noise control criteria; audiometry and the physiology of hearing; community noise abatement; laws and regulations. (PR: undergraduate degree in science or engineering)

- 680 **Air Pollutant Dispersion and Meteorological Modeling. 3 hrs.**  
 Meteorological concepts with emphasis on air pollution: atmospheric dynamics, adiabatic processes; temperature profiles, behavior of stack effluent, atmospheric chemistry, attenuation of solar radiation, and climatology application to dispersion models. (PR: undergraduate course in physics, and spreadsheet capability)
- 681 **Environmental Engineering Design. 3 hrs.**  
 Principles of engineering design of water and wastewater treatment systems and processes, including physical, chemical, and biological treatment and handling of treatment residuals. Includes coverage of relevant water quality concepts. (PR: Engineering degree or permission)
- 682 **Environmental Remediation Technologies. 3 hrs.**  
 Decontamination or removal of pollutants from soil. Aeration of excavated soil on site. Use of solvents and surfactants as removal aids. Removal of soil for treatment at an off-site facility. (PR: ES 651)
- 683 **Environmental Geotechnology. 3 hrs.**  
 Surface and subsurface geology; geotechnical properties of soil and rock. Geotechnical engineering design aspects of landfills, groundwater barriers, tunneling. Mechanics of ground movement; sediment and erosion control. (PR: engineering or geology degree)

### ENVIRONMENTAL SCIENCE (ES)

- 600 **Introduction to Environmental Science. 3 hrs.**  
 The principles of chemistry, geology, and mathematics used in pollution analysis and control. Topographic maps, environmental regulations, field testing, and compliance. Economics of use of pollution control devices.
- 602 **A Study of the West Virginia Environment. 3 hrs.**  
 An overview of the diversity of the local natural environment, including the plants, insects, amphibians, reptiles, other wildlife, and the impact of human activities on the local environment.
- 603 **Seminar In Current Environmental Issues. 3 hrs.**  
 The influence of environmental laws, common law, contract law, tort law, and regulatory interpretations, as well as the impact of citizens' groups, professional societies, and trade associations on current practice. (PR: Consent)
- 604 **Air Pollution. 3 hrs.**  
 Major air pollution sources; meteorological concepts; physical and chemical characterization; effects on plant and animal life; and development of air pollution laws, with emphasis on West Virginia regulations. (PR: Consent)
- 605 **Analytical Principles of Environmental Sampling. 3 hrs.**  
 Identifying and measuring contaminants in air, water, soil, and sludge. Methods of analysis including gas chromatography, nuclear magnetic resonance, colorimetry, infrared absorption, ultraviolet absorption, atomic absorption, and mass spectroscopy. (PR: Chemistry and ES 600, or equivalent experience)
- 609 **Topics in Bioscience Education. 1-6 hrs**  
 Selected topics of interest to teachers of biology. (PR: Consent)
- 610 **Environmental Sampling Practice. 3 hrs.**  
 Current practice in environmental testing and monitoring. Traditional wastewater tests, bioassay analysis, aquatic toxicity. Current procedures in gas chromatographic analysis, mass spectrometry. Sample preservation, quality control, and quality assurance. (PR: analytical chemistry and instrumental methods, or ES 605)
- 614 **Risk Assessment Applied to Air Pollutants. 3 hrs.**  
 The analysis of public health and safety risks, including the physical, medical, legal, public policy, and public awareness aspects, and such issues as the meaning of "risk" and "uncertainty." (PR: Consent)
- 620 **Environmental Management Systems. 3 hrs.**  
 EMS principles and elements; environmental, health and safety regulatory issues; ISO 14000 EMS specifications and guidelines; environmental auditing; environmental performance evaluation; life cycle assessment and environmental labeling.
- 626 **Remote Sensing and Map Use. 3 hrs.**  
 Introduction to topographic, soil, and geologic maps and aerial and satellite photography as sources of environmental information. Application of various data sources to specific types of environmental problems.
- 630 **Environmental Site Assessment. 3 hrs.**  
 Site inspection and investigation, emphasizing the "due diligence" clause of Section 107 of the Comprehensive Environmental Response Compensation Liability Act of 1980, site remediation, and data analysis and reporting.
- 640 **Groundwater Principles and Monitoring. 3 hrs.**  
 Introduction to groundwater hydrogeology; including porosity, hydraulic conductivity, aquifers, groundwater flow, well hydraulics, groundwater geology, and water chemistry. (PR: A background in environmental science or geology is recommended)



- 645 **Applied Hydrogeology. 3 hrs.**  
The fundamentals of hydrogeology are utilized to implement a case study investigation of a contaminated groundwater site from the planning stage through a final report. (PR: ES 640 or equivalent experience)
- 646 **Dynamics of Ecosystems. 3 hrs**  
Species interaction; population, community and ecosystem ecology; productivity; nutrient cycling; physiological ecology, population dynamics; pollution and conservation; and aquatic, marine, and terrestrial ecosystems. (PR: Consent)
- 648 **Vegetation of West Virginia. 3 hrs.**  
Introduces the student with a minimal biology background to basic field and laboratory botany. Introduction to science of plant taxonomy and community ecology, with emphasis given to West Virginia. (PR: Consent)
- 650-653 **Special Topics in Environmental Science. 1-4 hrs.**  
(PR: Consent)
- 654 **Environmental Microbiology. 3 hrs.**  
Microbiology of the environment; ecology of the microbial cell; microbial ecosystems; the microbe's interaction with other micro-organisms and macro-organisms; how micro-organisms obtain nutrients, and the effect on the environment. (PR: General biology and general chemistry or consent)
- 655 **Environmental Ethics. 3 hrs.**  
Introduction to the subject of ethics, environmental ethical theory, moral reasoning, free market regulation, right to know, proprietary information, product liability, cost-benefit analysis, risk assessment, waste disposal, and resource depletion. (PR: Consent)
- 656 **Preparation and Evaluation of Environmental Impact Statements. 3 hrs.**  
A practical course designed to provide students with the ability to prepare and evaluate impact statements. The course is based on the concepts of the environment as a single interrelated system.
- 660 **Environmental Law. 3 hrs.**  
Introduction to major federal environmental legislation and related state programs, including policy issues, judicial review, and practical effects. Includes CERCLA, RCRA, Clean Water Act, Clean Air Act, NEPA, ESA, and SDWA. (PR: Consent)
- 661 **Environmental Regulations 3 hrs.**  
Practical applications and concentrated study of regulations under all major federal environmental programs, including permitting, reporting, and other compliance issues. Includes discussion of procedures used in development of regulations. (PR: ES 660)
- 662 **Environmental Policy 3 hrs.**  
Introduction to processes for formulation and development of env. policy, including administrative procedure and the policy process. Discussion of current env. policy issues in relevant political, legal, social, and scientific contexts.
- 671 **Industrial Hygiene Science I. 3 hrs.**  
Measurement and evaluation of exposure to hazardous airborne gases, vapors, dusts, and mists; technology for making known concentrations of contaminants in air for calibrations, and an introduction to respiratory physiology. (PR: Consent)
- 672 **Industrial Hygiene Science II. 3 hrs.**  
Biological measurements of exposure and the measurement and evaluation of physical stress such as noise, heat extremes, and ionizing and non-ionizing radiations. Engineering and administrative control of workplace health hazards. (PR: ES 671)
- 673 **Applied Environmental Toxicology. 3 hrs.**  
Acute effects irritation and sensitization, reproduction and teratology, mutagenesis, cancer, immunotoxicology, neurotoxicology, pharmacokinetics and metabolism, and combustion toxicology. Toxicology testing, hazard assessment, regulations, and development of appropriate workplace exposure limits. (PR: strong background in science, including organic chemistry and biology, or equivalent field experience)
- 674 **Epidemiological Health Research Techniques. 3 hrs.**  
An introduction to techniques of epidemiological health research. The primary focus will be health problems in the industrial setting.

#### FAMILY AND CONSUMER SCIENCE (FCS)

- 501 **Maternal and Child Nutrition. 3 hrs.**  
Nutritional requirements during prenatal and early growth periods; surveys of nutritional status.
- 502 **Foods of the World. 3 hrs.**  
Characteristics and cultural aspects of the foods of the world.
- 505 **Quantity Food Production. 3 hrs.**  
Basic principles of quantity food selection, preparation, and service. Laboratory application in local food institutions.

- 507 **Food Service Systems Management. 3 hrs.**  
Administration of food service in institutions.
- 510 **Nutrition in Aging. 3 hrs.**  
Nutritional needs of the elderly and diseases responding to nutritional therapy. Government food programs for the elderly.
- 515 **Family Relationships. 3 hrs.**  
Relationships in the family during its life cycle, with some consideration of family life in other cultures.
- 516 **Prenatal and Infant Care. 3 hrs.**  
Prenatal and postnatal care for mothers, development of the fetus and care of the infant throughout the first three years.
- 531 **Guidance of the Young Child: Practicum. 3 hrs.**  
Techniques of guidance of young children with emphasis on adult child interaction.
- 532 **Parenting. 3 hrs.**  
Examination of current challenges, problems, and issues in the field; analysis of effective strategies for parenting.
- 535 **Administration of Day Care Centers. 3 hrs.**  
Instruction and practice in the development of day care centers for three and four year old children and administration of programs in these centers. Laboratory participation required.
- 540 **Nutrition in the Home and School. 3 hrs.**  
Fundamental principles of human nutrition and their application in the home and school. Designed primarily for elementary teachers.
- 544 **Consumer Education. 3 hrs.**  
Analysis of economic factors related to provision of consumer goods and services; investigation of sources of consumer information; and means of providing economic security for families.
- 560 **Professional Development. 1-4 hrs.**  
Courses and activities designed to meet the specific inservice needs of public school personnel. Credit may be used for certificate renewal and salary upgrading, if approved, but not in degree programs. CR/NC grading.
- 562-564 **Professional Development. 1-4; 1-4; 1-4 hrs.**  
Courses and activities designed to meet the specific inservice needs of public school personnel. Credit may be used for certificate renewal and salary upgrading, if approved, but not in degree programs. CR/NC.
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 591-594 **Workshop. 2-3; 2-3; 2-3; 2-3 hrs.**  
Workshop in selected areas of family and consumer sciences. Credit for not more than two workshops may be counted for the master's degree.
- 600 **Philosophy and Trends in Family and Consumer Sciences. 3 hrs.**  
Major contemporary educational theories and their relationship to trends in the field of family and consumer sciences. (PR or CR: EDF 621)
- 601 **Evaluation in Family and Consumer Sciences. 3 hrs.**  
Procedures for appraising student progress in the attainment of objectives; construction of evaluation instruments; analysis and interpretation of data.
- 602 **Curriculum Development in Family and Consumer Sciences. 3 hrs.**  
Examination of bases for family and consumer sciences curricula; development of curricula for junior and senior high school programs, utilizing various organizational patterns.
- 603 **Current Issues in Child Development. 3 hrs.**  
A study of current issues and research in child development. Designed for students with a background in child development seeking updated information or more in-depth study.
- 605 **Recent Developments in Clothing. 3 hrs.**  
Survey of recent literature and theory in the field of clothing.
- 606 **Recent Developments in Foods. 3 hrs.**  
Survey of recent literature and theory in the field of foods.
- 661 **Family Economics. 3 hrs.**  
Factors affecting material level of living for families, expenditure patterns, and impact of social change on resource allocation. (PR: FCS 544)
- 665 **Family Resource Management Theory and Research. 3 hrs.**  
Analysis of home management theory and concepts as revealed through current research in the field. (PR: FCS 527)
- 679 **Problem Report. 1-3 hrs.**
- 681 **Thesis. 1-6 hrs.**

- 684-685 **Special Problems in Family and Consumer Sciences. 1-3; 1-3 hrs.**  
Problems of particular interest to the graduate student. Registration by permission of advisor. Not more than four hours of seminar credit may be counted toward a master's degree.
- 690-691 **Seminar. 1-3; 1-3 hrs.**  
Extensive readings and reports from current literature in selected areas of Family and Consumer Sciences. Not more than six hours of seminar credit may be counted toward a master's degree.

### FINANCE (FIN)

- 510 **Principles of Business Finance. 3 hrs.**  
Business finance from the viewpoint of the financial manager. Use of financial statements, tools, and concepts for measuring and planning for profitability and liquidity. (PR: ACC 216 or ACC 510, ECN 253 or ECN 501, MGT 218, and MTH 203 or MGT 500)
- 580 **Special Topics. 1-4 hrs.**
- 620 **Financial Management. 3 hrs.**  
An examination of business corporations practicing at the level of the individual firm with emphasis on quantitative analysis of the variables which affect liquidity and profitability. (PR: MGT 601, ACC 613 and full M.B.A. admission or permission of GSM academic advisor)
- 625 **Financial Problems in Business. 3 hrs.**  
Recognizing and solving financial problems through the use of case presentations and/or corporate annual and interim reports. (PR: FIN 620 and full M.B.A. admission or permission of GSM academic advisor)
- 626 **Security Analysis and Portfolio Management. 3 hrs.**  
Analytical procedures used by institutional portfolio managers to measure both past performance of holdings and anticipated market performance of current offerings. Emphasis in this course may be expected to be more centralized in the area of fundamental analysis. (PR: FIN 620 and full M.B.A. admission or permission of GSM academic advisor)
- 627 **Financial Institutions and Markets. 3 hrs.**  
An in-depth study of the flow of funds in aggregate financial systems, with emphasis on those in the United States. Because interest rates and bank reserve requirements of Federal Reserve System are all dynamic in character, the content of this course may be expected to vary as financial events of the future dictate. (PR: FIN 620 and full M.B.A. admission or permission of GSM academic advisor)
- 650 **Special Topics. 1-3 hrs.**  
(PR: Permission of the division head, full M.B.A. admission, and permission of GSM academic advisor)
- 660 **Independent Study. 1-4 hrs.**  
Independent study of a specific nature under the supervision of a qualified faculty member. Hours of credit are determined by the magnitude of the project. (PR: FIN 620 and permission of division head or permission of GSM academic advisor)
- 681 **Thesis. 1-6 hrs.**  
(PR: Permission of the division head and full M.B.A. admission)

### FORENSIC SCIENCE (FSC)

- 602 **Fingerprints. 1 hr.**  
Analysis of inked prints by the modified Henry System, detection of latent finger & palm prints using chemical and optical methods. (PR: Consent of Instructor)
- 604 **Genetics and DNA Technology. 3 hrs.**  
An introduction to crime scene investigations, physical evidence collection, inorganic and organic analysis, serology, fingerprints, arson, drugs, documents, firearms and DNA technologies.
- 605 **Forensic Science Digital Imaging. 3 hrs.**  
Introductory course in digital image processing. Covers techniques used in forensic laboratory to enhance, analyze, and catalog digital images. Instruction in laboratory setting.
- 606 **Crime Death Investigation. 2 hrs.**  
Establishes foundations and techniques for proper crime scene investigation with or without a victim's body. Logical approach for collecting evidence and documenting scene and collection process.
- 608 **Forensic Science II. 3 hrs.**  
An in-depth analysis of both clinical and forensic aspects of toxicology from the viewpoint of the forensic and medical examiner's toxicology laboratories. This course also serves as the basis for taking more advanced courses offered as electives through the Department of Pharmacology.
- 612 **Introduction to Microscopy/Scientific Photography. 2 hrs.**  
Introduction to various types of microscopy used in forensics, including scanning electron microscopy, light and fluorescence microscopy and polarizing microscopy.



- 614 Forensic Science Technologies. 4 hrs.**  
A course covering multiple topics in forensic science including infrared spectroscopy, paint analysis, ballistics, explosives, arson, glass fracture, and questioned documents. This course affords students the opportunity to learn about a wide variety of topics that will help them in their future careers. (PR: Consent of Instructor)
- 616 Forensic Laboratory Techniques I. 4 hrs.**  
Introduction to laboratory techniques used to test evidentiary materials collected at crime scenes.
- 620 Forensic Laboratory Techniques II. 4 hrs.**  
A continuation of F.L.T I. but with emphasis on DNA technologies and toxicological procedures.
- 650-653 Special Topics. 1-4 hrs.**  
Present course material on special areas of research or topics which are not routinely covered in existing courses.
- 665 Legal Issues, Court Procedures for Forensic Scientists. 3 hrs.**  
Covers the American legal system with specific emphasis on expert witnessing by forensic scientists. Both the federal and state systems of justice are addressed, plus topics such as the federal rules of evidence and discovery. Frye and Daubert considerations on admissibility of scientific evidence and expert witnessing are discussed. Mock trials provide experience in the courtroom. (PR: CJ 321, Consent of Instructor)
- 679 Special Problems. 1-4 hrs.**  
Students will be assigned specific areas of study for independent investigation. (PR: Consent of advisor)
- 680 Seminar. 1 hr.**  
Faculty, student and guest speaker presentations of topics pertinent to forensic science and molecular biology and toxicology.
- 681 Thesis. 1-6 hrs.**  
Research conducted in the laboratories at Marshall University which is focused on a problem of forensic importance. The original research problem will be written up as a formal document and submitted as part of the requirements to fulfill a Master of Science degree in the research track.
- 685 Introduction to Research. 1-6 Hrs.**  
Directed research which can be used to satisfy requirements for a Master of Science Degree in Forensic Science.

### FRENCH (FRN)

The following courses may serve as a minor in some programs.

- 535 19th Century Literature. 3 hrs.**  
The French romantic movement as exemplified in the poetry, drama, and the novel of the period. (PR: 6 hours of literature numbered 317 or above or equivalent)
- 536 19th Century Literature. 3 hrs.**  
Realistic and naturalistic fiction, realism in the theatre, and selected poems of Baudelaire, the Parnassians, and the Symbolists. (PR: 6 hours of literature numbered 317 or above or equivalent)
- 580-583 Special Topics. 1-4; 1-4; 1-4; 1-4 hrs. On demand.**  
A course for advanced students sufficiently prepared to do constructive work in phases of the language or literature of interest to them. (PR: 6 hours of literature numbered 317 or above or equivalent and consent of instructor.)
- 585-588 Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**

### GEOGRAPHY (GEO)

- 501 Historical Geography of the United States. 3 hrs.**  
Study of coastal settlements, the population spread through Appalachia and the Mississippi Valley, and the development of intermountain and Pacific Coast centers.
- 502 Geography of Appalachia. 3 hrs.**  
A study of settlement, transportation, manufacturing, agriculture and resource potential.
- 503 Geography of Asia. 3 hrs.**  
Special attention given activities and environment in continental countries and nearby islands.
- 505 World Political Geography. 3 hrs.**  
A systematic and regional survey of world political problems and international relations stressing studies of the United States, Europe, and the Soviet Union.
- 508 Geography of Mexico and Central America. 3 hrs.**  
A geographical study of agriculture, transportation, settlement, geopolitics, and natural resources.
- 510 Urban Geography. 3 hrs.**  
Study of city function, patterns, past and current problems confronting the city including planning, zoning, housing, and urban renewal.

- 512 **Geography of Russia and CIS. 3 hrs.**  
Geographical appraisal of cultural, political, and economic aspects of Russia and the Commonwealth of Independent States.
- 514 **Methods and Techniques of Regional Planning. 3 hrs.**  
Introductory planning with emphasis on methods, techniques, tools and principles necessary to accomplish objective regional planning.
- 515 **Regional Planning and Development. 3 hrs.**  
The philosophy, theories, and principles involved in planning of urban and rural areas.
- 516 **Urban and Rural Land Use. 3 hrs.**  
A study of the principles and techniques of urban-rural land use, and the problems and issues encountered in the practices of land use.
- 517 **Coal Industries Studies: Past & Present. 3 hrs.**  
An interdisciplinary study for all facets of the coal industry within a historic perspective. Emphasis is placed upon coal industry of West Virginia and the tri-state region.
- 518 **Geography for Teachers. 3 hrs.**  
A study of elements of geography most essential for effective teaching of geographic content in elementary education and the social studies.
- 520 **Field Geography of West Virginia. 3 hrs.**  
Type areas in lumbering, mining, agriculture, and industry studied through field methods.
- 525 **Climatology. 3 hrs.**  
A study of elements of weather and climate, methods of climatic classification, and distribution and characteristics of world climatic regions.
- 529 **Cartography. 3 hrs.**  
Understanding principles and developing skills in the use of cartographic drafting equipment and in map making.
- 530 **Cartography and Geographic Information Systems. 3 hrs.**  
Introduction to computer use in mapping and geographic information systems.
- 580-584 **Special Topics. 1-4 hrs.**  
Selected Geography subjects to cover unusual geography topics not in the regular course offerings of the department
- 585-588 **Independent Study. 1-4 hrs.**
- 601 **Problems in Geography of the Far East. 3 hrs.**  
Agriculture, industry, transportation, and trade of selected regions in eastern Asia and the islands of the western Pacific Ocean.
- 602 **Problems in Geography of Europe. 3 hrs.**  
Consideration of problems in selected countries following a geographical review.
- 603 **Problems in Geography of North America. 3 hrs.**  
Relationship of human activities to natural environment in selected regions.
- 604 **Problems in Geography of Latin America. 3 hrs.**  
Problems studied in each country following a geographical review.
- 605 **Geography in World Political Affairs. 3 hrs.**  
Key nations of world studied in light of significance of geographic items and their effects on international relations.
- 606 **Field Problems in Geography of the Tri-State Area. 3 hrs.**
- 607 **Problems in World Economic Geography. 3 hrs.**  
Problems of world exchange of outstanding trade items.
- 608 **Problems in Geography of Africa and Australia. 3 hrs.**  
Selected regions studied in both continents.
- 609 **Geographical Research. 3 hrs.**  
Research methods stressed with special attention given to a consideration of the literature of the field.
- 620 **Conservation Education. 3 hrs.**  
Presents elements of conservation education in the specific areas of soil, water, and human conservation.
- 679 **Problem Report. 1-3 hrs.**
- 681 **Thesis. 1-6 hrs.**
- 690 **Internship in Geography. 3 hrs. I, II.**  
Professional work experience in applied geography with an approved agency.

#### GEOLOGY (GLY)

- 510 **Big Bend Field Excursion. 2 hrs.**  
Field trip to Big Bend National Park, Texas to study the structure, stratigraphy, igneous geology, metamorphic geology, paleontology and natural history of this national park. (PR: 12 hours of geology)

- 518 **Invertebrate Paleontology. 4 hrs. II. Alternate years (even numbers)**  
Taxonomy and morphology of the major invertebrate phyla with an introduction to biometrics as applied to paleontology. 3 lec-2 lab. (PR: 201 and 325 or permission).
- 521 **Petrology. 4 hrs. I. Alternate years (even numbers)**  
Identification and classification of igneous, sedimentary and metamorphic rocks, their origin and occurrence; their geologic and economic. 3 lec-2 lab. (PR: GLY 200, 314 or consent)
- 522 **Economic Geology. 4 hrs. II., Alternate years (even numbers)**  
Origin, distribution and economics of the metallic and nonmetallic ore deposits. 3 lec-2 lab. (REC: GLY 201, 314, or equivalent)
- 523 **Sedimentary Petrography. 4 hrs. I., Alternate years (odd numbers)**  
Megascopic and microscopic identification and a depositional and post-depositional interpretation of the sedimentary rocks. 3 lec-2 lab (PR: GLY 201 and 314 or consent)
- 525 **Geochemistry. 4 hrs. II., Alternate years (odd numbers)**  
Introduction to the principles of geochemistry. The application of chemistry to the study of the Earth and to geologic problems. Laboratory work includes analysis of rocks, soils, and waters. 3 lec - 2 lab (PR: GLY 200, CHM 211 & 217 or permission)
- 526 **Geophysics. 4 hrs. II. Alternate years (even numbers)**  
Development of seismic, gravity, magnetism, electrical and thermal methods to study the structure and dynamics of the earth. 3 lec-2 lab. (PR: GLY 200, PHY 201, MTH 229)
- 527 **Fossil Fuels. 4 hrs. II, Alternate years (odd numbers)**  
The origin and occurrence of petroleum, coal, and natural gas; the relationships of accumulations to depositional environments and structural history; methods used in exploration, evaluation and recovery. 3 lec-2 lab. (PR: GLY 313, 325 or consent)
- 530 **Computer Methods in Geology. 4 hrs. II. Alternate years (odd numbers).**  
The computer will be used for compilation, reduction, data analysis and modelling from a wide range of geological problems. Existing and student developed programs will be used. 3 lec-2 lab. (PR: 12 hrs. GLY and MTH 130.)
- 551 **Principles of Geomorphology. 3 hrs. I., Alternate years (odd numbers).**  
Principles of identification and analysis of the world's superficial features in terms of stratigraphy, structure, processes, tectonics and time. 3 lec. (REC: GLY 200, 210 or equivalent)
- 551L **Principles of Geomorphology Laboratory. 1 hr. I., Alternate years (odd numbers).**  
(CR: GLY 551, required of majors, non-majors elective).
- 555 **Hydrogeology. 3 hrs. I. Alternate years (odd numbers)**  
The properties of water, the hydrologic cycle with emphasis on surface and groundwater processes. The uses, needs and problems associated with water resources. 3 lec. (PR: GLY 200; CR: GLY 555L for geology majors)
- 555L **Hydrogeology Laboratory. 1 hr. I, Alternate years (odd numbers)**  
A two hour laboratory of practical hydrogeologic problem solving. (PR: GLY 200; CR: GLY 555, required of majors, non-majors elective)
- 556 **Environmental Geology. 3 hrs. II. Alternate years (even numbers)**  
Through lecture and demonstration, the interactions of man and the earth, dealing with natural resources, natural hazards, cultural and urban geology and future planning are explained. (PR: GLY 200, 210L)
- 556L **Environmental Geology Laboratory. 1 hr. II, Alternate years (even numbers)**  
A laboratory to complement GLY 556, Environmental Geology, dealing with current solutions to environmental problems through real life exercises (PR: GLY 200, 210L, 451, 451L; CR 556 for Geology majors).
- 557 **Engineering Geology. 3 hrs. I, alternate years (even numbers).**  
A course for geology majors employing geological principles and methods to solve geotechnical engineering problems. (PR: GLY 200, 210L, 451, 451L or by permission of instructor)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 640 **Physical Aspects of Geology. 1-4 hrs. I, II.**
- 641 **Biological Aspects of Geology. 1-4 hrs. I, II.**
- 642 **Chemical Aspects of Geology. 1-4 hrs.**
- 681 **Thesis. 1-6 hrs. I, II, S.**

#### HEALTH CARE ADMINISTRATION (HCA)

- 600 **The Health Care System. 3 hrs.**  
This course is designed to provide managers with in-depth knowledge of the current health care system, covering the structure and delivery of care, the providers and payers, and the various players in the system. The internal and external forces impacting the system are discussed. Problems in the health care system are explored and evaluated with respect to the issues of access, cost, and effectiveness. (PR: GSM admission or permission of GSM academic advisor)



- 610 **Health Care Financial Management. 3 hrs.**  
Course provides an overview of health care financial management, with special emphasis upon the aspects of financial systems in hospitals that differ from typical financial systems. It includes analysis of capital formation, cash flow management and determination of working capital requirements. (PR: HCA 600)
- 615 **Health Care Economics. 3 hrs.**  
The health care industry is unique. Unlike in other markets, the consumer finds it difficult to evaluate quantity, quality, and pricing. Traditional market forces are modified by government, third-party payers, and professional interests. This course applies economic principles to this unique environment. (PR: HCA 600)
- 620 **The Ethical Dimension of Health Care Management. 3 hrs.**  
Emphasis in this course is on the way managers in health care settings incorporate ethical dimensions into their decision-making. It looks at the wide variety of ethical issues faced by these managers, focusing on those related specifically in the decisions they make about their organization, personnel, and services. Specifically covered are issues regarding the allocation of scarce resources, the type and availability of care for special populations, and conflicts of interest. (PR: HCA 600)
- 630 **Legal Issues in Health Care Management. 3 hrs.**  
This course provides students with a legal framework to analyze health care organizations and their operations. The federal and state legal systems are reviewed and regulatory programs and their requirements discussed. Topics include: tax exemptions, antitrust laws, corporate liability, provider-patient legal issues (contracts and negligence), patient rights, facilities licensure and accreditation, and reimbursement issues. Court cases, as well as governmental agency rulings and findings, are analyzed for their applications to health care management. (PR: HCA 600)
- 640 **The Health Care Professional. 3 hrs.**  
This course presents an overview of various professional and managerial topics relevant to the health care professional. Each offering of the course focuses on a particular health profession. Emphasis is on defining the profession, understanding its historical development and evolution, examining professional roles, tasks, responsibilities, and accountabilities in current practice, studying the interaction with other professionals, delineating the parameters of the professional in ethical decision-making, and recognizing and responding to challenges faced in contemporary practice and in planning for the future. (PR: HCA 600)
- 650 **Comparative Health Systems. 3 hrs.**  
A survey of health care provision systems throughout the world. (PR: HCA 600)
- 651 **Health Care Operations Management. 3 hrs.**  
An investigation of the use of operations management techniques and methodologies that are useful in the health care industry. (PR: HCA 600)
- 652 **Health Care Finance. 3 hrs.**  
An examination of the various financial systems present within the American health care systems. Special emphasis placed upon the management of assets, cost control, and budgeting. (PR: HCA 600)
- 653 **Managed Health Care. 3 hrs.**  
An investigation of managed care systems within the United States. Emphasis placed on identifying practices that promote quality care at an affordable cost. (PR: HCA 600)
- 654 **Human Resource Management in Health Care. 3 hrs.**  
An investigation of the human resource function found within contemporary health care provision systems. Discussion of future challenges facing the function in this turbulent environment. (PR: HCA 600)
- 655 **Health Care Marketing. 3 hrs.**  
An investigation of the role of marketing in today's health care organizations. Specific topics include market segmentation, consumer behavior, promotion, and environmental analysis. (PR: HCA 600)
- 656 **Management of Medical Technology & Information Systems. 3 hrs.**  
An investigation of the place technology, primarily hard technology, plays in the formulation of health care policy and strategies. Special emphasis placed on the management of medical information systems. (PR: HCA 600)
- 657 **Health Care Law & Public Policy. 3 hrs.**  
An examination of the legal, regulatory, and policy-making interactions between government, society, and health care organizations and providers. (PR: HCA 600)
- 658 **Long Term Care. 3 hrs.**  
An examination of the range of health and social services that are needed to compensate for the functional disabilities of people. Review of available services and governmental policies and regulations. (PR: HCA 600)
- 659 **Health Care for Rural and Underserved Populations. 3 hrs.**  
An investigation of how health care is provided to rural Americans. Special attention given to the health care systems that provide medical care to the peoples of Appalachia. (PR: HCA 600)

- 660 **Independent Study in Health Care Management. 1-3 hrs.**  
The course is designed to facilitate individual study of selected topics of interest in health care management. (PR: HCA 600 and permission of program director)
- 671 **Health Care Practicum. 1-6 hrs.**  
Project-oriented experience in health care operations and organizations. Intended for those students with insufficient experience in the field. (PR: Permission of program director and HCA 600)
- 681 **Thesis. 1-6 hours.**  
(PR: Permission of program director and HCA admission)
- 695 **Field Research in Health Care Management. 3 hrs.**  
In this course, each student selects an in-depth organizational research project on a particular management problem in a health care organization. In this "hands-on" project, the student serves as a consultant to the health care organization, conducting research, analyzing data, and making recommendations for the solution(s) to the management problem. Projects focus on such topics as strategic planning, productivity, quality assurance, risk management, and joint ventures. Field research projects are selected in conjunction with the program coordinator during the semester prior to course enrollment. (PR: Completion of all 600-level required HCA courses, plus permission of program director)
- 697 **Special Topics in Health Care Management. 3 hrs.**  
The course is designed to allow group study of selected topics of current interest in health care management. (PR: Consent of instructor)

### HEALTH EDUCATION (HE)

- 526 **Curriculum in Health Education. 3 hrs. I.**  
A study of principles, objectives, and procedures in curriculum construction for elementary and secondary programs. Historical and philosophical perspectives. Study of existing curricular patterns. (PR: HE 220, HE 221, HE 321 and HE 325)
- 530 **Health Issues in Physical Education and Athletics. 3 hrs.**  
A survey of current health issues such as sanitation, contagious diseases, substance abuse, ergogenic aids, and diet/nutrition in PE and athletics. (PR: HE 201, 215, 221, 435.)
- 540 **Health Evaluation for the Athletic Trainer I. 3 hrs.**  
A study of common problems and illnesses of athletes and other physically active individuals and the proper methods of evaluating these complaints.
- 560-564 **Professional Development (Plus title that identifies content). 1-4; 1-4; 1-4; 1-4; 1-4 hrs.**  
Courses and activities designed to meet the specific in-service needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrading if approved but not for degrees.
- 580-583 **Special Topics in Health Education. 1-4; 1-4; 1-4; 1-4 hrs.**  
An in-depth examination of selected Health Education topics through a course, seminar or workshop.
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 640 **Health Evaluation for the Athletic Trainer. 3 hrs.**  
An in-depth study of common problems and complaints of athletes and the proper method of evaluating those complaints.

### HISTORY (HST)

- 502 **American Intellectual History 1865 to Present. 3 hrs.**  
A critical examination of intellectual, creative and literary movements in the modern era.
- 503 **American Urban History. 3 hrs.**  
A study of the political, economic, social, and intellectual impact of the city upon American History, and the impact of history upon the growth of urbanization.
- 504 **American Diplomacy, 1789-1900. 3 hrs.**  
American foreign policy from colonial times to 1900 emphasizing the gradual development of the United States and its achievement of membership in the family of nations.
- 505 **American Diplomacy, 1900-Present. 3 hrs.**  
American foreign relations in the 20th century. The gradual retreat from isolation in the period between World Wars I and II and modern American involvement in international commitments will be stressed.
- 506 **Tudor and Stuart England, 1450-1688. 3 hrs.**  
A history of England under the Tudors and Stuarts, focusing primarily on demographic, social, cultural, and political developments.
- 509 **American Revolution. 3 hrs.**  
A varied view of the American Revolution and its impact on the American people.

- 510 **Conquering the Continent: America's Frontier Experience. 3 hrs.**  
A survey of the American frontier experience with particular emphasis on the fate of the American Indian, the impact on the environment, and the character of the American-created culture.
- 511 **American Social and Cultural History 1607 to Present. 3 hrs.**  
A study of the changes and continuities in American Social and Cultural History from 1607 to present.
- 513 **History of the Old South, 1492-1860. 3 hrs. Alternate years.**  
The History of the Old South is a study of the political, economic, social, and cultural conditions in the South that led to the development of the South as a distinct section in the United States.
- 514 **Civil War and Reconstruction. 3 hrs.**  
The course will include a discussion of the economic, political, social, and cultural differences leading to the Civil War, the war itself, and an analysis of the political and economic importance of reconstruction.
- 515 **History of the New South, 1877 to the Present. 3 hrs.**  
The History of the New South is a study of the political, economic, social, and cultural changes in the South after Reconstruction that explain conditions in the contemporary South.
- 516 **American Social Movements. 3 hrs.**  
A study of the social movements which have influenced the course of American History. Includes abolition, women's rights, Progressivism, civil rights.
- 521 **The Era of the Renaissance and Reformation. 3 hrs.**  
The impact of the Renaissance upon esthetic, economic, and political developments especially in the 15th and 16th centuries. The decline of Catholicism and the growth of the Protestant movement, and the influence of the two movements upon each other is stressed.
- 522 **The French Revolution and the Napoleonic Era. 3 hrs.**  
Society and government in Europe before the French Revolution and the influence of the enlightenment; ideas and changes introduced by the revolution and Napoleon and their effect on the institutions and economy of Europe.
- 523 **U.S. Latin American Relations. 3 hrs.**  
An appraisal of political, economic, and cultural relations of the U.S. and Latin America in a historical context with emphasis on the period since 1945.
- 524 **U.S. Science and Technology. 3 hrs.**  
A study of the development and impact of science and technology in the U.S. with special emphasis on the modern period.
- 525 **European History 1814-1914. 3 hrs.**  
A century of European political, economic, and social history. Its relationship to and influence upon the history of other world areas is noted. The impact of imperialistic rivalry is emphasized.
- 526 **European History 1914 to Present. 3 hrs.**  
The impact of World War I upon Europe, the era between two world wars, the search for world peace, World War II and its aftermath are major topics of consideration.
- 528 **Intellectual and Cultural History of Modern Europe. 3 hrs.**  
A survey of the main currents in European thought and culture in the 19th and 20th centuries.
- 529 **Russia to 1917. 3 hrs.**  
A survey of Russian history to 1917 which examines Russia before the Russians, Kievan Russia, Appanage Russia, Muscovite Russia and Imperial Russia. Emphasis is on Imperial Russia.
- 530 **Soviet Russia and Beyond. 3 hrs.**  
The rise and fall of the Soviet Union, with emphasis on political and economic changes and Soviet foreign policy, and including an examination of the aftermath of the Soviet Union's collapse.
- 531 **America in the Gilded Age. 3 hrs.**  
A study of America's transformation from a rural, agrarian nation into an urban, industrial world power, the final destruction of the American Indian, the settlement of the West, and the farmers' revolt.
- 532 **America Matures, 1900-1945. 3 hrs.**  
An examination of the social, political, and economic trends in the U.S. in the first half of the 20th Century, emphasizing social upheavals, conflicts, and reform movements at home and abroad.
- 533 **In Our Time-America Since 1945. 3 hrs.**  
A study of America since World War II focusing mainly on domestic politics, foreign affairs, the civil rights movement, the rise of minorities, and the fragmentation of American society.
- 534 **The American Experience in Vietnam. 3 hrs.**  
A study of the origin and escalation of American involvement in Vietnam, the domestic impact of the war within the United States and the collapse of the South Vietnamese government.
- 535 **Modern Japan. 3 hrs.**  
Begins with an overview of nineteenth century Japan and stresses the twentieth century rise of Japan to the position of world power.
- 540 **West Virginia History. 3 hrs.**  
An interdisciplinary study of the state, its people and its institutions within the national context.



- 580-583 **Special Topics. 1-4 hrs.**  
 585-588 **Independent Study. 1-4 hrs.**  
 600 **Methodology: Seminar in Historical Methods. 3 hrs.**  
 A research and writing seminar in which students are taught and must exhibit the skills and methodologies of practicing research historians.
- 602 **Stuart England, 1603-1714. 3 hrs.**  
 An analysis of the Social, Intellectual, Economic, Cultural, and Political History of England in the Stuart Century.
- 603 **Seminar in U.S. Economic History. 3 hrs.**  
 A reading and research course in which a student investigates topics related to the economic and business growth of the United States in the context of America's legal, government and social institutions. Emphasis will be on development of international economic institutions and the American role in the global environment.
- 605 **American Colonial History. 3 hrs.**  
 A study of the English colonies in America with emphasis on slavery, minorities, and social and economic change.
- 607 **Problems in European History, 1890-1923. 3 hrs.**  
 An analysis of the politics, diplomacy and military strategy of the period of the First World War. Special emphasis is given to the origin of the war, the war itself, the peace settlement and the Russian Revolution and its aftermath.
- 610 **Readings in History. 2-3 hrs.**  
 Readings in topics fitted to the need of the individual student. They may deal with any graduate area. This course is ordinarily restricted to off-campus students and is used sparingly.
- 620 **Seminar in American Historical Biography. 3 hrs.**  
 A reading and research course in which a student investigates biographical topics regarding the men and women whose lives illuminate the American experience. The course will cover a wide range of activities, including the social, political, cultural, and economic development of the United States and the region.
- 625 **Rebirth of Europe, 1939-Present. 3 hrs.**  
 Background and course of World War II, European politics since 1945, developments in international affairs with emphasis on Cold War, economic and social trends, thought and culture.
- 632 **Seminar in Reconstruction. 3 hrs.**  
 A reading and research course in which each student investigates a specific issue related to the reunification of the nation after the Civil War.
- 633 **Problems in American History, 1877-1917. 3 hrs.**  
 A research course in which the student probes a selected problem within the chronological span, 1877-1917.
- 634 **Problems in American History Since 1917. 3 hrs.**  
 A research course in which a student probes a selected problem within the period since 1917.
- 635 **Oral/Local History Seminar. 3 hrs.**  
 The course examines the field of oral history. Students will apply oral methodology and other primary sources documentation in researching a local topic.
- 636 **Seminar in Women's History. 3 hrs.**  
 A reading and research course in which the student investigates selected topics related to the history of women in America or Europe.
- 650-651 **Special Topics. 1-4; 1-4 hrs.**  
 (PR: Permission of Instructor)
- 679 **Problem Report. 1-3 hrs.**
- 680 **Public History Internship. 1-6 hrs.**  
 Internship in an approved setting in Public History, Archives, Museum, Oral History, or Historical Preservation. Interns will be supervised by on-site staff and History Faculty.
- 681 **Thesis. 1-6 hrs.**

## HOME ECONOMICS (See Family and Consumer Sciences)

## HUMANITIES (HUMN)

- 530 **Technology and the Humanities. 3 hrs.**  
 This course surveys the effects of electronic media on the humanities and how they are taught in the postmodern society. Content will subsume both philosophical/theoretical issues and technical matters.

- 600 **Introduction to Study in Humanities. 3 hrs.**  
Interdisciplinary core course addresses questions/concepts central to the humanities. Texts from philosophy, history, literature, the arts and the sciences provide insights into selected historical periods. Open to non-degree students.
- 601 **Literary Theory and Criticism. 3 hrs.**  
Core course introduces modern critical approaches, concepts and methods of research and scholarship in the broad field of literature. Open to non-degree students.
- 602 **Historical Studies. 3 hrs.**  
Core course acquaints students with problems of historical knowledge, changes in the interpretation of history, nature of historical forces, and methods of historical research. Open to non-degree students.
- 603 **History and Theory of the Arts. 3 hrs.**  
Core course provides chronological survey of the arts, emphasizing the social, political and/or religious motives that underlie artistic production. Emphasis on theories of modern art. Open to non-degree students.
- 604 **Expository Writing for Research. 3 hrs.**  
This core writing course develops proficiency in writing for research. Note: a degree student may demonstrate competency through an alternative assessment to have the requirement waived. Open to non-degree students.
- 605 **Western Traditions and Contemporary Cultures. 3 hrs.**  
Using primary materials from different cultural periods, as well as contemporary critical analyses, this core course explores epistemological questions that underlie conflicts between cultures. Open to non-degree students.
- 650 **Selected Topics. 1-9 hrs.**
- 680 **Independent Research Symposium. (formerly 701), 3 hrs.**  
Prerequisite: 24 credit hours, required courses, and comprehensive examination. A pro-seminar required of all Humanities degree students who are beginning the thesis or final project. S-U grade.
- 681 **Independent Research Symposium. (formerly 702), 3 hrs.**  
Prerequisite: Humanities 680. A continuation of the pro-seminar for students electing the thesis option. The student will produce a thesis suitable for submission to a committee. S-U grade.

#### HUMANITIES: ARTS AND SOCIETY (A & S)

- 500 **Study of Periods and Movements in Western Art and Music. 3 hrs.**  
The course relates major periods, schools, and movements to the culture of the place and time. May be repeated for a maximum of 6 hours.
- 501 **Studies in Non-Western Art and Music. 3 hrs.**  
Studies emphasizing non-Western art or music (e.g., Chinese art; art of the Middle East). May be repeated for a maximum of 6 hours.
- 510 **Comparative Arts. 3 hrs.**  
Study of artistic movements and specific stylistic features in art, music and literature. May be repeated for a maximum of 6 hours.
- 550 **Sunrise Internship. 3 hrs.**  
A specially designed project under the guidance of specialists at Sunrise Museums (requires special permission from the program director and Sunrise Museums).
- 560 **Film Art and the Popular Media (formerly Media 560). 3 hrs.**  
A consideration of films as the successor to earlier popular literatures. Relevant aspects of media history and techniques will be examined.
- 600 **Selected Topics in Arts and Society. 1-6 hrs.**  
Selected topics in arts and society. The specific topic will be announced in the schedule of classes. Students may take up to nine hours in selected topics.
- 620 **Selected Topics in Decorative Arts. 1-6 hrs.**  
Selected topics in history and practices of decorative arts (e.g., interior design, furniture styles, architecture).

#### HUMANITIES: CULTURAL STUDIES (CULS)

- 500 **Studies in Thought and Culture. 3 hrs.**  
Basic concepts and cultural expressions in words, principally of area or period studies, such as classical Western, medieval Western, modern European and American.
- 530 **Fundamental Approaches to Communication Criticism. 3 hrs.**  
Course examines the theoretical approaches to criticism across the broad range of media, with focus on the philosophy behind each and on their various applications.

- 540 **World Religions. 3 hrs.**  
Study of several religions as they developed within their individual times and cultures.
- 550 **Ethics. 3 hrs.**  
A critical examination of ethical theories as seen in a detailed examination of several works. Theories may include naturalism, intuitionism, non-cognitivism, utilitarianism, and natural law.
- 560 **History of Ideas. 3 hrs.**  
A study of the efforts of philosophers to construct general conceptions of the world. Recent approaches in the investigation of ontology and cosmology will be examined.
- 600 **Selected Topics in Cultural Studies. 1-6 hrs.**  
Selected topics in an area of cultural studies. The specific topic will be announced in the schedule of classes. Students may take up to nine hours in selected topics.
- 610 **Seminar in Appalachian Culture. 3 hrs.**  
Exploration of selected aspects of culture (e.g., art, music, folklore, history, literature), emphasizing regional culture from an interdisciplinary perspective.
- 620 **Women, Men, and Cultural Change. 3 hrs.**  
A study of gender differences from sociological and philosophical perspectives. Topical areas covered include communications, law, literature, popular culture, ethics, and business.
- 650 **Classical Foundations in Communication Studies. 3 hrs.**  
Course surveys major contributions to rhetorical theory during the classical period and the development of rhetorical criticism in the centuries since. Philosophers/writers will include Plato, Aristotle, Cicero and Quintilian.
- 652 **Communication and Social Movements. 3 hrs.**  
Course examines the role of communication in successful social movements. Contemporary reform movements are analyzed to determine communication strategies, organizational issues, leadership concerns and rhetorical focus.
- 653 **Media and the Political Process. 3 hrs.**  
An introduction to the study of political rhetoric, the course relates rhetorical theory to political communication and considers the impact of political communication in government, the electoral process, and society.

#### HUMANITIES: HISTORICAL STUDIES (HIST)

- 580 **Ethnic History of West Virginia. 3 hrs.**  
This course focuses on the contributions that individuals and groups with diverse ethnic backgrounds have made to the economic, social, and cultural history of the state.
- 585 **Coal Mine Life, Work and Culture in West Virginia. 3 hrs.**  
This course provides students with a better understanding of the continuing economic, political, environmental and cultural impact which the extraction of coal has had on West Virginia.
- 600 **Selected Topics in Historical Studies. 1-6 hrs.**  
Selected topics in history. The specific topic will be announced in the schedule of classes. Students may take up to nine hours in selected topics.
- 601 **Historic Preservation. 3 hrs.**  
Course broadens historical awareness and provides practical applications of historical knowledge. It covers the built environment and focuses on the history, processes and legal basis of the historic preservation movement.
- 620 **Civil War and Reconstruction. 3 hrs.**  
This course examines the complex causes and lasting effects of the American Civil War. Issues such as slavery, sectionalism, emancipation and Reconstruction will receive attention.

#### HUMANITIES: LITERARY STUDIES (LITS)

- 510 **Comparative Approaches to Literature. 3 hrs.**  
Exploration of literature via literary movements, themes, genres, or relationship to other disciplines. Specific works will be read and discussed as examples of the announced approach.
- 520 **Creative Writing and Practical Criticism. 3 hrs.**  
Exploration of the possibilities for communication and expression in contemporary writing with emphasis on comprehension of structure, technique and self-criticism of the writing experience.
- 522 **Selected Topics in Writing. (formerly Media 522), 3 hrs.**  
The study of selected topics in writing (e.g., the expository essay, screen-writing, techniques of editing, etc.)
- 540 **Studies in Mythology/Folklore. 1-6 hrs.**  
Selected topics in mythology and folklore (e.g., folk drama, folk tale, folk art). May be repeated for a maximum of 6 hours.



- 580 **Literature for Teachers. 3 hrs.**  
Study and appreciation of selected works with special reference to the high school curriculum.
- 600 **Selected Topics in Literary Studies. 1-9 hrs.**
- 615 **Modern Southern Literature. 3 hrs.**  
Course surveys important figures in Southern literature since the Southern Literary Renaissance of the 1920s and the Agrarian and Fugitive Movements.
- 625 **Updating Shakespeare: Text, Stage, and Film. 3 hrs.**  
Focusing on selected Shakespearean plays, this course considers recent critical interpretations and explores how these have influenced stage and film productions. Contemporary adaptations of the plays will also be considered.
- 636 **Literature and Society in Late 18th C. England. 3 hrs.**  
This course examines biographies, social, political and scientific writings, literary texts and the arts from 1750-1800 to understand English culture and the eighteenth-century world.
- 660 **Modern Irish Novel. 3 hrs.**  
This course examines the subject matter, techniques, and critical background of the modern Anglo-Irish novel. Students will study representative examples by major novelists from the Republic and Northern Ireland.
- 662 **Twentieth-Century Irish Drama. 3 hrs.**  
From the founding of the Abbey Theatre to the present, this course traces the development of Irish drama as art form and cultural artifact.
- 670 **Contemporary World Fiction. 3 hrs.**  
Contemporary works of shorter fiction from around the world offer opportunities to apply cultural critiques and comparative literary perspectives, while considering the different national and cultural traditions represented.

#### HUMANITIES: STUDIO ART (ARTS)

- 500 **Selected Topics in Studio Arts. 1-6 hrs.**

#### INDUSTRIAL AND EMPLOYEE RELATIONS (IER)

- 600 **Development of Labor Relations. 3 hrs.**  
An historical survey of the organized labor movement in the United States and review of legislation affecting the American worker. Attention is given to the industrial relations system of the United States as it relates to those of Western Europe and other nations. (PR: GSM admission or permission of GSM academic advisor)
- 605 **Human Resource Economics. 3 hrs.**  
Economic issues in the employment and compensation of labor. Topics emphasized include labor force composition and growth, structure and functioning of labor markets, unemployment, wage theories, wage levels and structures, the economic influence of unions, income distribution, and human capital models. (PR: ECN 253 or ECN 501 plus GSM admission)
- 610 **Collective Bargaining. 3 hrs.**  
A comprehensive survey of collective bargaining with special emphasis given to philosophy, structure, and the process of negotiations. Attention is also given to important developments and emerging trends in collective bargaining. (PR: IER 600)
- 615 **Arbitration and Grievance Procedures. 3 hrs.**  
A study of grievance procedures and arbitration as formalized in labor-management relations, including an analysis of principles and practices of complaint handling, review of concepts and methodology in such grievance handling, review of the role of arbitration as a dispute resolution mechanism, utilization of factfinding and mediation as alternate mechanisms, the preparation and handling of materials in briefs or oral presentations, and the function or role of the arbitrator, impartial chairman, umpire, or similar neutral. (PR: IER 600)
- 630 **Labor Law. 3 hrs.**  
A survey and analysis of the labor relations law; examination of the extent to which the law regulates and protects concerted action by employees in the labor market; considerations and analysis of the legal framework within which collective bargaining occurs; and analysis of major aspects of employer-employee law, such as wrongful discharge, discrimination, and safety and health law. (PR: IER 600)
- 640 **Structural Issues in Union Management Relations. 3 hrs.**  
A study of the organizing structure found in various types of unions, their operating procedures, governing bodies, and the interrelationships existing at the local, international, and federation levels. Review of the dual role of unions as both societal institutions and employee agents. Discussion of trade union philosophy from early beginnings to the present. Consideration is given to the different philosophical, political, and structural characteristics of American unions and European/Asian unions. (PR: IER 600 and GSM admission)

- 650 **Industrial Psychology. 3 hrs.**  
Survey of the applications of psychological principles and of research methodologies to the various human problems in industry, such as personnel selection and appraisal; the organizational and social context of human work; the job and work situation; human errors, accidents, and safety; and the psychological aspects of consumer behavior. (PR: GSM admission)
- 660 **Independent Study. 1-4 hrs.**  
Independent study of a specific nature under the supervision of a qualified faculty member. Hours of credit are determined by the magnitude of the project. (PR: Permission of division head or GSM academic advisor)
- 665 **Administration of Compensation and Fringe Benefits. 3 hrs.**  
The development and administration of wage and salary programs, and an analysis of both private and public health, welfare and pension plans. Topics investigated include motivation theory, factors influencing compensation levels, forms of compensation, including incentive plans and fringe benefits, a critical examination of financing, administration, and general effectiveness of the plans, special issues of managerial compensation, comparable worth, special and related issues. (PR: MGT 620 and GSM admission)
- 670 **Personnel Selection and Testing. 3 hrs.**  
A study of the personnel employment and selection processes. Emphasis is placed on the rationale for selection and placement; the procedures and problems in recruitment and selection; and the use of tests, interviews, and other selection devices. Special attention is given to the criterion problem and legislation and/or governmental regulations affecting selection procedures. (PR: GSM admission)
- 675 **Human Resource Development and Training. 3 hrs.**  
This course teaches students how to develop management training modules and materials. Students also learn and use advanced techniques in training design and group facilitation. (PR: GSM admission)
- 680 **Labor and Employee Relations in Public Employment. 3 hrs.**  
An examination of the development, practices and extent of collective bargaining between federal, state, and local governments and their employees. Emphasis is on the public issues related to sovereignty, unit determinations, impact on budgetary and financing processes, representation procedures, unfair practices, scope of bargaining, impasse resolution, and the strike. Some attention is devoted to the legal and ethical problems inherent in these issues. (PR: IER 600)
- 681 **Thesis. 6 hrs.**  
(PR: Permission of program director)
- 697 **Special Topics in Industrial Relations. 3 hrs.**  
Selected topics of current interest in industrial relations. (PR: IER 600 and permission of program director)

### INDUSTRIAL ENGINEERING (IE)

- 639 **Operations Research I. 3 hrs.**  
Examination of the methodology of operations research, including linear programming, transportation methods, network flows, economic analysis, decision analysis, queuing theory and simulation.
- 640 **Operations Research II. 3 hrs.**  
A continuation of IE 540 including an introduction to sensitivity and parametric analysis in linear programming, integer programming, nonlinear programming, dynamic programming, reliability theory, and inventory control. (PR: IE 630)
- 650-653 **Special Topics. 1-4 hrs.**  
Special topics in advanced Industrial Engineering that are not offered regularly.
- 670 **Operations Management. 3 hrs.**  
Examination of the quantitative and conceptual tools for generating goods and services in manufacturing and non-manufacturing organizations.

### INFORMATION SYSTEMS (IS)

- 600 **Management Information Systems. 3 hrs.**  
The course examines personal, work group, and enterprise information systems with respect to their value, their components, and the process of developing them.
- 603 **Programming for Artificial Intelligence. 3 hrs.**  
An introduction to programming for artificial intelligence applications using Prolog.
- 605 **Systems Analysis Techniques. 3 hrs.**  
Introduction to information systems from system implementor's viewpoint; information systems life cycle; techniques of analysis; data dictionaries and data flow diagrams; computer-oriented system description. (PR: Admission to program)

- 610 **Systems Design. 3 hrs.**  
Physical design of information systems; hardware selection; software design, database considerations; program development; software structuring techniques; cost/ performance trade-offs; system implementation; evaluation and optimization techniques. (PR: IS 605)
- 615 **Simulation. 3 hrs.**  
An introduction to computer simulation including use of simulation languages (GPSS, GASP, etc.) and applications of simulation in business and industry. (PR: Admission to the program)
- 618 **Computer Applications in Engineering and Science I. 3 hrs.**  
Computational and algorithmic methods in engineering and science, optimization and numerical analytic techniques including gradient and search methods, linear programming, simulation, and data base mechanics. (PR: Admission to the program)
- 620 **Introduction to Operating Systems. 3 hrs.**  
General principles of managing jobs, processes and storage (real, virtual, auxiliary) in multiprogramming operating systems; interconnection and management of processors in multi-processing and distributed computing system configurations; operating systems comparison. (PR: IS 621 and IS 630, or consent)
- 621 **Information Structures I. 3 hrs.**  
Representation and manipulation of numeric and non-numeric information, linear lists, strings, multilinked structures; sorting and searching; storage management; data structures in programming languages. Relevant aspects of discrete mathematics. (PR: IS 510 or equivalent)
- 622 **Information Structures II. 3 hrs.**  
A continuation of IS 621. Tree, graph, and set structures; file structures for secondary storage; aspects of discrete mathematics. (PR: IS 621)
- 623 **Database Management. 3 hrs.**  
Review of information structures and of relationships among data elements and objects. Relational database theory; design and organization of databases, retrieval structures, and query mechanisms. (Prerequisite: IS 622 or consent)
- 625 **Software Engineering. 3 hrs.**  
The process of developing complex software products. Includes the software life cycle, methods and tools for life cycle phases. Application of concepts, methods, and tools in a class project. (PR: IS 510 or permission)
- 630 **Computer Architecture and Assembly Language. 3 hrs.**  
An introduction to the composition and operation of electronic digital computers and to assembly language programming. (PR: IS 510 or equivalent)
- 635 **Computer Graphics. 3 hrs.**  
An introduction to the areas of computer graphics that are necessary to understand, evaluate, and develop graphics applications. (PR: Admission to program)
- 640 **Programming Languages. 3 hrs.**  
Definition of program environment, program sequence and control, subroutines and other secondary sequences; statement structures, parsing, grammars, etc.; classes of programming languages. (PR: IS 622 or consent)
- 645 **Geographic Information Systems. 3 hrs.**  
Covers the elements of GIS hardware, software, data and infrastructure needs. Input data issues; data types, sources, error, preprocessing, manipulation and analysis, GIS tools and applications. (PR: Consent)
- 650-653 **Special Topics. 1-4 hrs.**  
Varies according to interests of students and instructor. (PR: Consent)
- 655 **Multimedia and Electronic Information Dissemination. 3 hrs.**  
Components of multimedia, such as data, voice, pictures, animations, and videos, and their production, manipulation, dissemination processes. Technologies, processes, and services for electronic dissemination. Applications and current trends. (PR: TM 660 or permission)
- 656 **Communication and Network Technologies. 3 hrs.**  
Different transmission media, digital communications, telecommunications services, types of networks and topologies, network protocols, components, and applications. (PR: IS 622, or TM 660, or permission)
- 660 **Models of Computation. 3 hrs.**  
Switching algebra and relationship to computers; finite automata; Turing machines; recursion; computability and unsolvability. (PR: IS 622, math maturity)
- 670 **Language Translators and Concepts. 3 hrs.**  
Formal language concepts, syntactic analysis; types of translators; detailed review of assemblers, interpreters, and compilers, and techniques of their construction. (PR: IS 622)



- 680 **Social Issues in Information Systems. 3 hrs.**  
Aspects of the interaction of computer systems and society including such topics as system security, respect of privacy, changing job requirements, ergonomics, and moral and ethical considerations. (PR: completion of core, or consent of instructor)
- 690 **Principles of Artificial Intelligence. 3 hrs.**  
A survey of the fields of artificial intelligence and expert systems. Students will work together designing and implementing a project. (PR: Permission)
- 695 **Expert Systems. 3 hrs.**  
A review of expert systems techniques and applications. Participants will develop small expert systems using several different personal computer expert systems development programs (shells).

*The following courses do not count for credit toward the master's degree:*

- 500 **Computer Systems and Structured Programming I. 3 hrs.**  
Introduction to programming; survey of computer information systems. (PR: Facility with algebra)
- 501 **Introduction to Programming Languages. 3 hrs.**  
An introduction to a high level language such as BASIC, C, COBOL, FORTRAN, LOGO and PASCAL. The course assumes a knowledge of at least one other high level language.
- 510 **Computer Systems & Structured Programming II. 3 hrs.**  
A continuation of IS 500. Topics include algorithm development, manipulation of arrays and an introduction to dynamic data structures. (PR: IS 500 or consent.)
- 551 **Computer Programming in Education. 3 hrs.**  
Programming with educational applications. S-U grade.
- 565 **Computers in Management. 3 hrs.**  
Basic computer concepts, equipment, and use of applications programs (word processor, spreadsheet, data base).

### INSTRUCTIONAL TECHNOLOGY AND LIBRARY SCIENCE (ITL)

Marshall University does not have a master's degree or certification in Library Science.

- 515 **Reference and Bibliography. 3 hrs.**  
Study of the basic reference sources for elementary and secondary school libraries. Emphasis on materials evaluation, the reference interview, search strategies, and the impact of new technologies.
- 520 **Cataloging. 3 hrs.**  
Fundamentals of cataloging and classification, applying AACR2, the Dewey Decimal system, and related aids to the organization of library materials. Implications of new technology for technical services will be addressed.
- 525 **Library Organization and Administration. 3 hrs.**  
Principles of administration for elementary and secondary school library-media centers and public libraries, including personnel, facilities, budgets, program planning and evaluation, publicity and public relations, audiovisual equipment and materials, computer hardware and software, and methods and materials, for teaching library skills.
- 550 **Library Practice (Field Work). 3 hrs.**  
Experiences in the application of techniques of library service, adapted as far as possible to the student's needs.
- 560-563 **Professional Development. 1-4; 1-4; 1-4; 1-4 hrs.**  
Course designed to meet the specific inservice needs of public school teachers, media personnel, and librarians. Credit may be used for certificate renewal and salary upgrading but not for degree programs.
- 565 **Utilization of Instructional Technology. 3 hrs.**  
Utilization of instructional technology materials, equipment, and techniques.
- 566 **Production of Instructional Materials. 3 hrs.**  
Basic techniques in making slides, photographs, dry and wet mountings, transparencies, posters, charts, and similar graphic instructional materials.
- 567 **Basic Media Skills Development for Instructional Design. 3 hrs.**  
Basic techniques in producing and using a variety of audiovisual aids, i.e., photography, scripting, developing logos, audio-recording, and layout and design of manuals. This course also prepares one to produce a slide-tape presentation.
- 568 **Computer Graphics in Instructional Technology. 3 hrs.**  
A basic course designed to assist the student in becoming familiar with a variety of software graphics packages.
- 580-583 **Special Topics. 1-4 hrs.**  
(PR: Permission)

- 585-588 **Independent Study. 1-4 hrs.**  
(PR: Permission)
- 591-594 **Workshop in Instructional Technology. 1-4 hrs.**  
Workshop in selected areas of educational media.
- 607 **The Library and the Curriculum. 3 hrs.**  
Survey of elementary and secondary school curricula with emphasis on materials which enrich the teaching of various subjects.
- 610 **Advanced Administration of Libraries/Media Centers. 3 hrs.**  
Application of administrative techniques to processes and activities of various types of libraries and media centers. (PR: ITL 425 or 525 for Library Science majors)
- 615 **Advanced Reference. 3 hrs. Study of specialized reference tools.**  
(REC: ITL 515 or permission of instructor)
- 620 **Advanced Cataloging and Classification. 3 hrs.**  
Covers Library of Congress and Dewey Decimal classification systems. Practice in detailed descriptive and subject cataloging of special materials, including nonprint materials. (PR: ITL 520 or permission of instructor)
- 630 **Camcorder Utilization. 3 hrs.**  
The participants develop the skills necessary to produce on-site instructional VHS videotapes and computer-generated instructor's guides. (PR: ITL 565/568 or permission).
- 632 **Media in Instructional Design. 3 hrs.**  
Practical use of instructional design techniques in producing a slide/tape program along with instructor's guide. (PR: ITL 566 or 567 or permission of instructor)
- 640 **Readings in Instructional Technology. 3 hrs.**  
Readings and reports on significant publications in the educational media field, stressing print, non-print, or both types of media. May be taken only once. (PR: Permission)
- 641 **Seminar. 3 hrs.**  
Supervised program of readings, reports, and individual and group projects. (PR: Six hours of graduate work in ITL or permission)
- 679 **Problem Report in Instructional Technology or Library Science. 3 hrs.**  
Preparation of a written, filmed, graphic or similar research project. Must be completed by those who later enroll for ITL 681, Thesis, but is not restricted to such persons. (PR: Six hours of approved graduate work in ITL and permission)
- 681 **Thesis in Instructional Technology or Library Science. 3 hrs.**  
Available only to those whose work in ITL 679 was exemplary and worthy of expansion. Successful completion of ITL 679 and ITL 681 reduces the total credit hours required for the degree by three hours. (PR: ITL 679 or equivalent and permission)

### JOURNALISM AND MASS COMMUNICATIONS (JMC)

- 500 **Photojournalism. 3 hrs.**  
A course in advanced techniques for newspaper and magazine photography, concentrating on the creation, design and use of photographic essays and picture stories. (PR: JMC 360)
- 502 **Law of Mass Communication. 3 hrs. I, II, S.**  
Legal aspects of mass communication as they apply to the professional journalist.
- 504 **History of American Journalism and Mass Communications. 3 hrs. II.**  
The development of the press in the United States, the contributions of American journalists, the rise of radio and television, and the relationship of communication developments to political, economic and social trends in America.
- 508 **Advertising Research. 3 hrs. I.**  
Lectures, readings, and discussions relating to all media advertising. Students may select special areas of interest.
- 510 **Magazine Editorial Practices. 3 hrs.**  
Study of the organization and functions of the magazine editorial department, with practice in planning magazine content, laying out pages and establishing production procedures.
- 512 **Mass Media Sales. 3 hrs.**  
A survey of the requirements, relationships, and functions of mass media sales in the context of the media buying environment.
- 514 **Reporting Public Affairs. 3 hrs. II.**  
Instruction in reporting local, state and federal government; politics, finance and labor; social and environmental issues and other matters, with emphasis on background and interpretation. Course includes field trips and guest speakers.

- 525 **Advertising Campaigns. 3 hrs. II.**  
Students function as an advertising agency to plan, prepare, and present local and national advertising campaigns. Problems of the advertiser and the agency are considered.
- 528 **Supervision of School Publications. 3 hrs.**  
A comprehensive study of advising and producing school publications, with emphasis on methods, for teachers of journalism.
- 530 **Magazine Article Writing. 3 hrs. I.**  
Fundamentals of researching and writing factual articles for popular magazines; techniques of selling articles to magazines.
- 532 **Corporate and Instructional Video. 3 hrs.**  
Development of the use of video for communication and instruction in business, agencies, and education. Production and use of video units for specific objectives.
- 533 **Radio-Television Programming. 3 hrs.**  
Principles of programming, including audience analysis, production, purchase, and scheduling of various formats.
- 534 **Advanced Video. 3 hrs.**  
Development of the elements necessary for the production of detailed video projects. Students study the creation and production of public affairs, educational and creative video programming. (PR: JMC 332 or equivalent)
- 535 **Radio-Television Law and Regulation. 3 hrs.**  
Development and current status of the legal structure of broadcasting in the United States.
- 536 **International Communications. 3 hrs.**  
Development of various systems of mass communications and comparison with the United States.
- 537 **Public Relations Writing. 3 hrs. I.**  
Theory and practice of various writing challenges encountered by public relations practitioners. Some consideration of publications design. (PR: JMC 201, 241 and 330 or equivalent)
- 538 **Public Relations Case Studies. 3 hrs. I.**  
Examination of the handling of public relations problems and opportunities by business, educational, governmental, and social organizations, with particular emphasis on public relations analysis and problem solving. (PR: JMC 330 or equivalent)
- 539 **Public Relations Campaign Management. 3 hrs. II.**  
Applying the four-step public relations process to an organization's program or campaign. Includes execution of public opinion research and development of original communication tools. Competitive agency model generally used. (PR: JMC 537 and 538)
- 540 **Mass Communications Ethics. 3 hrs. I, II, S.**  
Study of basic concepts underlying contemporary American mass communications operations and practices and how those concepts affect professional ethics in the field. Examination of ethical conflicts encountered and application of ethical principles when determining solutions.
- 545 **Advertising in Modern Society. 3 hrs.**  
An examination of issues and problems affecting the advertising industry and a study of advertising's impact on and responsibility to society.
- 550 **Contemporary Issues in Radio and Television. 3 hrs.**  
An examination of the current political, social, economic and legal issues affecting the decision-making process in the newsrooms and programming centers of the electronic media.
- 555 **Women, Minorities and the Mass Media. 3 hrs.**  
A seminar that explores the portrayals and participation of women and people of color in the mass media.
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs. I, II, S.**
- 590 **Journalism and Mass Communications Internship I. 1-3 hrs. I, II, S.**  
Supervised journalistic work with the professional media. Course is for students without substantial professional media experience. Arrangements must be made in advance with the school's internship director.
- 591 **Journalism and Mass Communications Internship II. 1-3 hrs., I, II, S.**  
Supervised journalistic or mass communications work with professional media including newspapers, magazines, radio, television, advertising and public relations departments or agencies. Students must have completed a previous internship. (PR: Permission and JMC 590)
- 597-598 **Instructional Television Course. 1-4 hrs.**  
A course based upon Instructional Television Series broadcast by public television. The student is responsible for viewing the series on the air and satisfying all course requirements announced by the department.



- 601 **Theory of Mass Communication. 3 hrs. I, II.**  
Major theoretical concepts in mass communications are studied as a basis for understanding the communication process and the institutional impact of the mass media on the individual and on society. Required of all majors.
- 602 **Mass Communications Research and Methodology. 3 hrs. I, II.**  
Research techniques applied to problems of mass communication including computer applications, with emphasis on mastery gained by participation in specialized research projects. Required of all majors.
- 603 **Media Management. 3 hrs.**  
An in-depth examination of the process and practice of media management.
- 606 **Depth Reporting. 3 hrs.**  
Depth reporting of social and environmental activities and problems, with emphasis on thorough research and documentation. Articles will be submitted for publication.
- 609 **Seminar in Public Relations. 3 hrs.**  
Theoretical and practical aspects of public relations, with special projects and readings to provide skills and insights requisite to success in the profession. Seminar discussions and research projects.
- 612 **History of Mass Communication, Specialized Study. 3 hrs.**  
Analysis of mass media development in the United States and of current media problems, with emphasis on research. (REC: JMC 504 or equivalent)
- 630 **Seminar in Media Criticism. 3 hrs.**  
Intensive critical analysis of broadcasting programs and programming procedures from the sociocultural, literary, political and industry points of view.
- 632 **Seminar in Public Broadcasting. 3 hrs.**  
Examination and evaluation of the unique content, policies, and prospects of public broadcasting.
- 634 **Issues in Radio and Television. 3 hrs.**  
Problems in the broadcast field on varied subjects which concern the industry.
- 650-651 **Special Topics. 1-3 hrs.**
- 681 **Thesis. 1-6 hrs. (PR: Consent of advisor)**
- 685-688 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Permission of dean)

#### LATIN (LAT)

- 503 **Roman Comedy. 3 hrs.**  
(PR: 6 hours of Latin literature numbered 304 or above or equivalent)
- 504 **Roman Elegy: Propertius and Tibullus. 3 hrs.**  
Close readings in Latin of selections from elegies of Propertius and Tibullus. (PR: 6 hours of Latin literature numbered 304 or above or equivalent)
- 509 **Roman Satire: Horace, Martial, Juvenal. 3 hrs.**  
Close readings in Latin of selections from the satires of Horace and Juvenal and the epigrams of Martial. (PR: 6 hours of Latin literature numbered 304 or above or equivalent)
- 510 **Tacitus (Selections From): Annals, Agricola. 3 hrs.**  
(PR: 6 hours of Latin literature numbered 304 or above or equivalent)
- 580-583 **Special Topics in Latin. 1-4; 1-4; 1-4; 1-4 hrs. I, II.**  
(PR: 6 hours of literature numbered 304 or above or equivalent and consent of instructor)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**

#### LEADERSHIP STUDIES (LS)

- 500 **Introduction to School Leadership. 3 hrs.**  
Examination of fundamental purposes, functions, and structure of public schools. It is also an introduction to the standards and to the capstone assessment process which students must complete for graduation.
- 506 **Planning, Research and Evaluation for School Leaders. 3 hrs.**  
This course is designed to avail potential school administrators with an understanding of planning strategies, academic research, action research, and program evaluation methods, with the intent of their being able to write a cogent, data-based school improvement plan.
- 510 **The Principalship. 3 hrs.**  
The Principalship is a study of school management as it relates to ethical behavior, and to support services, information systems, fiscal matters, and facility utilization and maintenance.
- 512 **Curriculum Leadership. 3 hrs.**  
This course addresses the role of the principal in the development and implementation of school curriculum. This includes developmentally appropriate curriculum design, special education curriculum and modifications, the integration of technology, and authentic assessment.

- 515 **Instructional Leadership. 3 hrs.**  
This course is designed to develop skills in instructional leadership, including instructional supervision, instructional strategies, program development, instructional evaluation, and human relations.
- 520 **Administration of Elementary, Middle and Secondary Schools. 3 hrs.**  
This course addresses the concerns of the school leader, including instruction, learning, communication, discipline, parental involvement, instructional organization, climate, facilities, professional development, and personnel practices. Emphasis is placed on the physical, social/emotional, and cognitive/intellectual characteristics of children and the implications for developmentally appropriate school administration.
- 530 **Human Relations. 3 hrs.**  
This course assesses and develops students' knowledge and skills in interpersonal relations and ethical practices. It provides structured experiences in group processes, verbal and non-verbal communications, leadership styles, and team building.
- 532 **Human Relations in the Public Sector. 3 hrs.**  
This course is designed to help prospective leaders in the public sector establish and maintain positive interpersonal relationships with their constituents.
- 535 **Technology and the Classroom. 3 hrs.**  
This course is designed to examine the effects of technology, both pedagogical and practical, on the educational process.
- 550 **Schools as Systems. 3 hrs.**  
This course assesses and develops students' knowledge and skills in change strategies, school cultures, systems theory, and understanding of the school in relation to other systems, agencies and organizations.
- 561-563 **Professional Development. 1-4 hrs.**  
These courses and activities are designed to meet the specific in-service needs of public school administrators. Credit in these courses may be used for certificate renewal and salary upgrading but not in degree programs.
- 585-588 **Independent Study 1-4 hrs.**  
By arrangement only.
- 600 **School Personnel Administration 3 hrs.**  
This course offers an examination of personnel functions including recruitment, selection, orientation, evaluation, and retention with particular emphasis on staff development.
- 610 **Leadership for School Improvement. 3 hrs.**  
Leadership preparation for developing and implementing a shared vision and strategic plans focused on teaching and learning, implementing change, applying leadership theory and acting with understanding of society's influences.
- 615 **Leadership in the Public Sector. 3 hrs.**  
This course will enable potential leaders in the public sector to define and evaluate personal and organizational goals and to develop strategies to achieve shared goals.
- 625 **Human Resources Management. 3 hrs.**  
This course develops knowledge of the major functions and tasks necessary for the development of human resources.
- 630 **School and the Community. 3 hrs.**  
This course provides students the opportunity to study the concept of community, to examine relationship patterns, to explore the possibilities for combining the resources of the school and community in the interest of school improvement, and to evaluate communication strategies designed to enhance the school-community relationship.
- 645 **Community Relations in the Public Sector. 3 hrs.**  
This course examines the public perception of the justice system and how this perception impacts public support and the success of the system.
- 675 **Legal and Policy Issues. 3 hrs.**  
This course examines the principal's role and responsibility related to law and administrative policy.
- 685 **Internship: Portfolio Assessment. 3 hrs.**  
This course provides training and assessment experiences for students seeking initial certification as a school principal. The student's degree portfolio and capstone assessment will be completed. (PR: Completion of degree/certification courses and consent)
- 691 **The Attendance Director. 3 hrs.**  
This course is designed to develop the skills needed for the school attendance director to manage attendance programs, policies, and programs.
- 692 **Internship: School Social Services. 3 hrs.**  
This course will require school social service workers and attendance directors to demonstrate proficiency in those administrative and leadership skills required for managing school social services and student attendance programs.

- 700 **Superintendency. 3 hrs.**  
This course examines the roles, relationships, behaviors and competencies which characterize school superintendents and their staffs.
- 705 **Administrative Theory. 3 hrs.**  
This course analyzes administrative theories and their application to organizational leadership and management.
- 710 **Principles of Leadership. 3 hrs.**  
This course is a study of the characteristics and behaviors of leaders. Emphasis is on the development of understandings and abilities which will work in different situations.
- 714 **Administration and Organization of Higher Education. 3 hrs.**  
This course is a survey of higher education with attention to administrative functions at the campus level.
- 716 **Governance of Higher Education. 3 hrs.**  
This course is designed to develop an understanding of the structure of governance of multi-campus public higher education systems.
- 717 **Student Personnel Administration in Higher Education. 3 hrs.**  
This course surveys the purpose and functions of student personnel administration in higher educational institutions and the administrative procedures developed to accomplish these purposes.
- 718 **History of American Higher Education. 3 hrs.**  
This course will present a historical overview of the factors that influence the development of higher education in America.
- 719 **Introduction to Doctoral Studies. 3 hrs.**  
This course is designed to introduce students to the tasks and processes involved in the completion of the doctoral requirements. (PR: Admission to the Cooperative Doctoral Program)
- 720 **Public School Finance. 3 hrs.**  
This course examines concepts in the financing and economics of public education.  
(PR: Principal or supervisor certificate or consent)
- 724 **Organizational Analysis. 3 hrs.**  
This course is an interdisciplinary approach to the study of organizational structure, relationships, and functions focusing on problems and alternatives for solving them.
- 725 **Higher Education Finance 3 hrs.**  
This course examines basic concepts in the financing and economics of higher education.
- 726 **Institutional Advancement in Higher Education. 3 hrs.**  
This course will require students to understand the broad area of institutional advancement, including major campaigns, donor research, donor recognition programs, restricted gifts, etc.
- 730 **Facility Planning and Management. 3 hrs.**  
This course teaches the systematic collection and utilization of data in planning for educational facilities. (PR: Principal or supervisor certificate or consent)
- 740 **Public School Law. 3 hrs.**  
This course presents the effect of case, statutory, and constitutional law as adjudicated in state and federal courts on public school operation. (PR: Principal or supervisor certificate or consent)
- 745 **Higher Education Law. 3 hrs.**  
This course presents the effect of case, statutory, and constitutional law as adjudicated in state and federal courts on higher education operation.
- 746 **Administration of Community and Technical Colleges. 3 hrs.**  
This course provides an opportunity for students to examine a specific institutional type and explore its developmental and functional relationship within the total framework of higher education.
- 748 **Adult and Continuing Education Administration. 3 hrs.**  
This course develops an understanding of the principles, concepts, and processes involved in planning learning experiences for adults within the framework of higher education.
- 755 **Internship: Administration in Higher Education 3 hrs.**  
This course provides a field experience in higher education administration. (PR: Consent)
- 756 **Current Issues in Higher Education. 3 hrs.**  
This course focuses on current and emerging problems of higher education. It deals with both societal and internal factors which impinge on the administration of colleges and universities.
- 760 **Politics of Education. 3 hrs.**  
This course explores the social process of governance in the public schools including higher education. The milieu of federal, state, and local inputs will be explored.
- 762 **The Politics of Higher Education. 3 hrs.**  
This course is designed to develop an understanding of the complex internal and external forces and the political processes that affect higher education institutions.



- 764 Advanced Research I. 3 hrs.**  
This course will develop knowledge about and skills in using quantitative and qualitative methods in educational research. It will further prepare doctoral candidates for comprehensive exams as well as dissertation research.
- 765 Advanced Research II in Leadership Studies. 3 hrs.**  
This is an advanced research course directed toward the preparation of a thesis or dissertation. (PR: Consent)
- 770 Practicum. 3 hrs.**  
This is a highly individualized cooperative educational administration experience between the college and another public agency. (PR: Consent)
- 771-772 School District Leadership 3-6 hrs.**  
This is an individualized cooperative field experience in district level school administration. (PR: Consent)
- 775 Seminar. 3 hrs.**  
This course is a concentrated analysis of current problems in educational administration. (PR: Consent)
- 776 Computer Analysis in Leadership Studies Research. 3 hrs.**  
This course provides the development of skills and competencies in data analysis and management. It is designed for doctoral students in the data analysis stage of dissertation preparation. (PR: Consent)
- 780 Special Topics. 1-12 hrs.**  
This course requires study, reading and research in an approved area of education and supervision. (PR: Consent)
- 785 Externship 1-9 hrs.**  
This is a field based program designed for practicing administrators. (PR: Consent)
- 795 Literature. 3 hrs.**  
This is a program of reading, either extensive or intensive, and reports on a group of outstanding contributions to education. The readings are selected with the guidance of an advisor. The program may not be substituted for scheduled courses without approval of the department chair. (PR: Consent)
- 797 Doctoral Research. 1-12 hrs.**  
Dissertation research is the purpose of this course. (PR: Consent)

### LEGAL ENVIRONMENT (LE)

- 691 Government and Business Relationships. 3 hrs.**  
Preparing business executives for dealing with problems of the firm in its relationships with government. Applies case analysis to the board categories of antitrust, trade regulation, and agency regulation. (PR: GSM admission)

### MANAGEMENT (MGT)

- 500 Analytical Methods and Techniques. 3 hrs.**  
Provides competency in some of the basic quantitative skills necessary for analytical work in business administration. Required of all candidates who have had little or no undergraduate background in mathematics.
- 502 Research Methods. 3 hrs.**  
This course provides the student with the necessary knowledge to perform business research. Emphasis is placed on applicable research techniques. In addition, several statistical techniques are covered including multiple regression and analysis of variance. (PR: MGT 500)
- 520 Operations Management. 3 hrs.**  
An examination of the design and operation of systems for the creation of goods and services in both manufacturing and non-manufacturing organizations. Emphasis is placed upon the application of quantitative and conceptual decision tools for the planning and control of production systems. (PR: MGT 500 or MTH 203 and MGT 218; and MGT 320 or MKT 511; and ECN 253 or ECN 501)
- 601 Quantitative Methods for Business. 3 hrs.**  
The use of quantitative methods for managerial decision making. A review of basic calculus and statistics as required in business. Other topics include decision analysis, linear programming, and queuing. (PR: M.B.A. admission)
- 620 Human Resource Management. 3 hrs.**  
The study of policies, methods, and techniques utilized in personnel management and human relations. Specific attention is given to problems of recruitment, selection, compensation, motivation, communications, training, service and benefit programs, performance evaluation, safety, discipline, business ethics, and community relations. (PR: MGT 320 or MKT 511; and GSM admission or permission of GSM academic advisor)

- 630 **Management and Supervisory Skills Development. 3 hrs.**  
An analysis and application of personal and organizational skills associated with the effective management of both public and private sector organizations. Skills to be developed or refined include time management, decision making, delegation, stress management, oral and written communication, team-building and others. Applied exercises, case studies, simulation, role play, films, and other learning methods are emphasized. (PR: MGT 672)
- 650-651 **Special Topics. 1-3; 1-3 hrs.**  
(PR: Permission of the division head and full M.B.A. admission or permission of GSM academic advisor)
- 660 **Independent Study. 1-4 hrs.**  
Independent study of a specific nature under the supervision of a qualified faculty member. Hours of credit are determined by the magnitude of the project. (PR: permission of division head or GSM academic advisor)
- 672 **Theories of Management. 3 hrs.**  
Basic ideas and concepts for the effective management of an organization. Major topics include motivation, communication and decision-making processes, group dynamics, leadership study, conflict management, work and organizational design, and organization development. Emphasis on organizational behavior and theory. (PR: GSM admission)
- 673 **Problems in Personnel Management. 3 hrs.**  
Principles and procedures of the personnel system in the firm; selected areas of recruitment and selection; training and development; performance appraisal and evaluation; general communications system, and role of government in manpower administration. (PR: GSM admission)
- 674 **Production/Operations Management. 3 hrs.**  
A study of operations management methods used in production, manufacturing, services, and other business operations. Includes project management, capacity planning, and transportation problems. (PR: Permission of GSM academic advisor)
- 675 **Problems in Labor-Management Relations. 3 hrs.**  
Comprehensive coverage of the development of the field of industrial relations. The impact of organized labor and federal social legislation of management decision. Alternative directions for future developments are studied. (PR: GSM admission)
- 676 **Organization Theory and Design. 3 hrs.**  
An analysis of organizational systems and subsystems incorporating traditional, behavioral, and situational approaches to organizational and work unit design. Emphasizes environmental interface and interdependencies as functions of internal systems phenomena (PR: M.B.A. admission)
- 678 **Management Information Systems. 3 hrs.**  
To familiarize students with the characteristics and functions of management information systems, as well as the benefits, limitations, and applications for advanced management information systems. (PR: GSM admission)
- 681 **Thesis. 1-6 hrs.**  
(PR: Permission of division head and full M.B.A. admission)
- 692 **Ethics and Global Aspects of Business. 3 hrs.**  
An examination of the administrator's social, ethical, and environmental responsibilities to his employees, customers, and the general public and other external factors which management must be cognizant of in modern society. (PR: GSM admission)
- 699 **Business Policy and Strategy. 3 hrs.**  
The study of administrative decision making under conditions of uncertainty. Policy construction at top administrative levels with emphasis on strategy and ethics with consideration of major functions of the business organization. (PR: Permission of GSM academic advisor)

#### MARKETING (MKT)

- 511 **Marketing and Management. 3 hrs.**  
A comprehensive survey of the fundamental principles of management and marketing applicable to all organizations. Provides the student with a basis for analyzing appropriate situations in a management/marketing framework.
- 580-581 **Special Topics. 1-4; 1-4 hrs.**
- 650-651 **Special Topics. 1-3; 1-3 hrs.**  
(PR: Permission of the division head and full M.B.A. admission)
- 660 **Independent Study. 1-4 hrs.**  
Independent study of a specific nature under the supervision of a qualified faculty member. Hours of credit are determined by the magnitude of the project. (PR: MKT 682 and permission of division head and academic advisor)

- 681 **Thesis. 1-6 hrs.**  
(PR: Permission of the division head and full M.B.A. admission)
- 682 **Advanced Marketing Management. 3 hrs.**  
An integrated approach to marketing from a managerial point of view-making use of economic, quantitative, and behavioral concepts in analyzing and developing a framework for the decision making and implementation of the firm's marketing program. (PR: M.B.A. admission or permission of GSM academic advisor)
- 683 **Advanced Marketing Research. 3 hrs.**  
A study of research methods and procedures used in the marketing process; emphasis will be given to the sources of market data, sampling, preparation of questionnaires, collection and interpretation of data. (PR: MKT 682)
- 685 **Marketing Problems. 3 hrs.**  
Determination of the marketing mix within the framework of the problem-solving and decision-making process. (PR: MKT 682)
- 687 **Seminar in Marketing. 3 hrs.**  
An advanced study of basic concepts of current problems in Marketing. Seminar discussions and research projects. (PR: MKT 682)
- 688 **Advanced Transportation. 3 hrs.**  
Current national transportation problems and a review of the various modes including history of the modes. (PR: MKT 682)
- 689 **Advanced Physical Distribution. 3 hrs.**  
A study of activities concerned with efficient movement of products from the sources of raw materials supply, through production to the ultimate consumer. These include freight transportation, warehousing, order processing, forecasting, etc. (PR: MKT 682)

### MATHEMATICS (MTH)

- 500 **Structure of Algebra. 3 hrs.**  
Informal development of modern elementary algebra. Recommended for pre-service middle school teachers and for elementary and secondary in-service teachers. May not be used for either a 5-12 mathematics specialization or for any degree offered by the Mathematics Department. (PR: MTH 130 or equivalent)
- 501 **Structure of Modern Geometry. 3 hrs.**  
Informal development of geometry with an exploration of probability and statistics. Recommended for pre-service middle school teachers and for elementary and secondary in-service teachers. May not be used for either a 5-12 mathematics specialization or for a degree offered by the Mathematics Department. (PR: MTH 130 or equivalent)
- 511 **Mathematical Modeling. 3 hrs.**  
Students will work in teams to construct mathematical models of various real-world situations. Problems to be modeled will be drawn from diverse areas of application and will use a wide range of undergraduate mathematics. (PR: MTH 231, or 230 and permission of instructor)
- 515 **Applied Mathematics—Boundary Value Problems. 3 hrs.**  
Theory of systems of ordinary differential equations of first order. Theory of homogeneous and non-homogeneous boundary value problems. (PR: MTH 330 and 335, or permission)
- 527 **Advanced Calculus I. 3 hrs.**  
A rigorous study of the real number system, continuity and differentiability of functions of a single variable, integration of functions of a single variable, infinite series. (PR: MTH 231 and 300, REC: MTH 330)
- 528 **Advanced Calculus II. 3 hrs.**  
A rigorous development of algebra and topology of Euclidean spaces, differentiability and integrability of functions of several variables. (PR: MTH 427 or 527)
- 542 **Numerical Linear Algebra. 3 hrs.**  
Direct and iterative methods for numerical solution of linear systems of equations. Eigenvalues and eigenvectors. Error analysis and norms. Related Topics. (PR: MTH 230, 330)
- 543 **Numerical Analysis. 3 hrs.**  
The theory and technique of numerical computation involving the difference calculus, the summation calculus, interpolation methods, solutions of equations, and methods of solution of ordinary differential equations. (PR: MTH 230)
- 545-546 **Introduction to Theory of Statistics I, II. 3; 3 hrs. I (545), II (546)**  
Probability spaces, conditional probability, and applications. Random variables, distributions, expectation, and moments. Parametric statistics: sampling methods, estimation of parameters, tests of hypotheses. (PR: MTH 230 for 545; MTH 445 or 545 for 546)



- 548 **Fundamental Concepts of Modern Geometry. 3 hrs. I.**  
Finite geometries, basic background material for the modern development of Euclidean Geometry, other geometries. (PR: MTH 230)
- 549 **Projective Geometry. 3 hrs.**  
Projective geometry using both synthetic and algebraic methods. (PR: MTH 230)
- 550 **Fundamental Concepts of Modern Algebra. 3 hrs.**  
Structure of the abstract mathematical systems: fields, rings groups, with illustrations and applications from number theory. (PR: MTH 230; REC: MTH 300)
- 580-583 **Special Topics in Mathematics. 1-4; 1-4; 1-4; 1-4 hrs.**  
Courses on special topics not listed among the current course offerings. (PR: Permission of instructor)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Consent of instructor and department chairman)
- 589 **Seminar for Teaching Assistants. 1 hr.**  
An introduction to techniques of teaching mathematics with emphasis on lower-level mathematics courses. (PR: Assignment to teach mathematics as a teaching assistant; CR/NC)
- 591 **Master's Essay. 3 hrs.**  
In-depth exploration of topics related to a theme chosen by the instructor; experience in reading, speaking, and writing mathematics. (PR: Any two of MTH 527, 545, 550, or equivalents.)
- 610 **Modern Algebra. 3 hrs.**  
The structure of semigroups, groups, rings, fields, modules, vector spaces, lattices and related topics. (PR: MTH 450 or 550 or equivalent)
- 630 **Topology. 3 hrs.**  
General topology including separation axioms, connectedness, compactness, convergence, continuity, metric spaces, product and quotient spaces. (PR: MTH 427 or 527 or 450 or 550)
- 640 **Theory of Functions of Complex Variables. 3 hrs.**  
A study of algebra, topology, and geometry of the complex plane; holomorphic functions; conformal mapping; analytic functions and analytic continuation; complex integration; representation theorems; convergence theorems and related topics. (PR: MTH 427 or 527)
- 650 **Theory of Functions of Real Variables. 3 hrs.**  
A study of measure and integration and related topics. (PR: MTH 528 or 428)
- 660 **Stochastic Processes. 3 hrs.**  
Theory and applications of Markov chains. (PR: MTH 445 or 545)
- 661 **Advanced Mathematical Statistics. 3 hrs.**  
Topics in mathematical statistics including distribution theory for functions of random variables, convergence concepts, sufficient statistics, finding optimal estimates for parameters, optimal tests of hypotheses. (PR: MTH 446 or 546 or permission of instructor)
- 665 **Optimization Mathematics. 3 hrs.**  
Classical optimization of functions of several variables. Theory and methods of linear and nonlinear programming. (PR: MTH 231 and consent of department; MTH 427 recommended)
- 670 **Independent Study. 1-4 hrs.**  
An independent program of study of advanced topics not normally covered in other courses. The topics are chosen upon mutual agreement between the student and the instructor. (PR: Consent of instructor and Department Chairman)
- 681 **Thesis. 1-6 hrs.**
- 690-693 **Special Topics. 1-4 hrs.**

## MICROBIOLOGY, IMMUNOLOGY AND MOLECULAR GENETICS (MCB)

- 620 **Principles of Medical Microbiology. 6 hrs. I.**  
The study of microorganisms, immunobiology, immunologic diseases, host resistance and the means by which diseases are produced and prevented. (PR: Organic Chemistry, General Microbiology and consent of instructor)
- 622 **Current Topics in Molecular Biology. 1 hr.**  
Critical discussion of current literature/concepts. Participants present published research papers on topic(s) with a molecular biology component. Presentations are followed by discussion/evaluation of the contribution of the research.
- 642 **Graduate Microbiology I (Physiology/Genetics). 4 hrs. II.**  
An advanced treatment of microbiology with emphasis on the molecular aspects of anatomy, taxonomy, and physiology and genetics of microorganisms.
- 643 **Principles of Immunology. 3 hrs. I.**  
Basic principles of the immune response system of humans and related mammals. Concepts of B & T cell function and interrelationships emphasized. (PR: Cellular and Molecular Biology)

- 648 **Molecular Aspects of Pathogenesis. 3 hrs.**  
An in depth study of molecular mechanisms of bacterial, viral, and immunemediated disease processes.  
Course Requirements: BMS 600 and BIC 620
- 660 **Diagnostic Virology. 3 hrs., II.**  
A comprehensive survey of methodologies used to detect and characterize viral specific antibodies and antigens and the status of cellular immunity in virus infected hosts. (PR: MCB 620)

### MINE SAFETY (MSF)

- 510 **Survey of Mining. 3 hrs.**  
An overview of mining to provide the participant with a general understanding of mining history, development systems terminology, procedures, methods and safety and health activities.
- 511 **Mine Safety Program Analysis. 3 hrs.**  
This course prepares the participant for the effective analysis of safety programs and provides some specific applications in the mining environment.
- 512 **Mine Safety and Health Legislation. 3 hrs.**  
A survey of the legislation that has affected safety and health in mining with special emphasis of the Federal Mine Safety and Health Act of 1977.
- 513 **Mine Safety and Health Management. 3 hrs.**  
This course covers the principles, functions and philosophies of mine management.
- 514 **Hazard Control in Mining. 3 hrs.**  
A study of how to recognize accident potential through-out the mining industry.
- 525 **Statistics/Biostatistics, Epidemiology and Industrial Hygiene. 3 hrs.**  
Statistics/Biostatistics, Epidemiology and Industrial Hygiene as these subjects relate to health hazards in the mining environment. (PR: Module #1 of the Advanced Industrial Hygiene Program)
- 526 **Industrial Toxicology and Airborne Contamination in Mining Environments. 3 hrs.**  
Principles of Toxicology: biochemistry, biological monitoring, biological transformation and chemical hazards. Properties, behavior and measurement of airborne particles. Special topics: sampling and evaluating airborne asbestos dust. (PR: Module #1 of the Advanced Industrial Hygiene Program)
- 527 **Physical and Biological Health Hazards in Mining and Milling Operations. 3 hrs.**  
Physical hazards: heat, noise and radiation. Biological hazards: atmospheric transport of microorganisms that causedisease. (PR: Module #1 of the Advanced Industrial Hygiene Program)
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**  
A study of special topics not offered in regularly scheduled courses.
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 591-594 **Workshop (Selected Topics). 1-4; 1-4; 1-4; hrs.**
- 621 **System Safety Engineering in the Mining Industry. 3 hrs.**  
A study of the analytical tools used in the recognition, evaluation and control of exposure to hazards in the Mining Industry.
- 622 **Accident Prevention in the Mining Industry. 3 hrs.**  
A survey course which discusses why and how mining accidents occur, factors in successful safety programs and the recognition, evaluation, and control of accident causes.
- 624 **Mine Haulage and Transportation. 3 hrs.**  
A study of the operation of hoisting haulage equipment used in the mining industry.
- 625 **Philosophical Concepts of Mine Safety and Health. 3 hrs.**  
An analysis of the philosophies of mine safety and health; application of these philosophies to actual mining situations.
- 626 **Safety and Health Research in the Mining Industry. 3 hrs.**  
An analysis and study of selected works of national and international authors concerning mine safety and health.
- 627 **Health Hazards in Mining. 3 hrs.**  
A broad spectrum approach to the mine health field which includes: the principles for recognition, evaluation and control of health hazards in mining.
- 628 **Man, Machines and the Environment in the Mining Industry. 3 hrs.**  
A study of the interactions of man, machines and the environment. The role of these interactions in causing or in preventing accidents.
- 629 **Problem Analysis and Consultation in Mine Safety and Health. 3 hrs.**  
A study of the rational process of problem solving decision making consultation with emphasis on realistic case studies.
- 631 **Mine Accident Investigation and Reporting. 3 hrs.**  
A study of the principles, techniques and procedures of investigations of mine accidents including attendance in court and report writing.

- 635 **Sampling, Industrial Ventilation, and Respiratory Protective Equipment for Mining and Milling Operations. 3 hrs.**  
Gas, vapor and particulate sampling - industrial ventilation for control of health hazards. Use of respiratory protective equipment to control health hazards. (PR: Module #1 of the Advanced Industrial Hygiene Program)
- 636 **Threshold Limit Values: Sampling and Analytical Techniques. 3 hrs.**  
Threshold limit values and material safety data sheets. Hands-on experience in collecting industrial hygiene samples and subsequent laboratory analysis of the samples. (PR: Module #1 of the Advanced Industrial Hygiene Program)
- 637 **Stress and its Impact on Safety and Health in Mining. 3 hrs.**  
A study on stress and its impact of safety and health in mining. Activities will be scheduled to enable the student to apply, in a work setting, some of the basic stress concepts.
- 679 **Problem Report. 3 hrs.**
- 681 **Thesis. 1-6 hrs.**  
Individual research on a specific problem of concern to the student and of significance to mine safety.
- 690-692 **Seminar. 1-4 hrs.**

## MUSIC (MUS)

- 510 **Introduction to World Music. 3 hrs.**  
This course will survey native musics of Africa, Asia, and the Americas as an aspect of culture. No formal background in music is required, as students will learn techniques for listening and articulating responses to music.
- 526 **American Music and Its Influences. 3 hrs.**  
Musical and cultural influences of European, West African, Caribbean, and Native American societies on United States music from 1650-1920. Specific application to concert music. (PR: Graduate standing or permission of instructor)
- 550 **Guitar Literature. 2 hrs.**  
A survey of the literature for guitar from c. 1400 to the twentieth century; to expose the guitarist to many of the important composers and their works.
- 551 **Guitar Pedagogy. 2 hrs.**  
A survey of guitar pedagogy materials, and a practicum in teaching classical guitar.
- 570 **Music Production Practicum. 1 hr.**  
Application of musical production processes, theories, and techniques. Specialized practical experience in all musical aspects of rehearsal and performance.
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 591-594 **Workshop. 1-4; 1-4; 1-4; 1-4 hrs.**
- 601 **Symphonic Literature. 3 hrs.**  
A survey of orchestra literature beginning with the 16th century; the Mannheim composers, Viennese classics, the Romantists, the national schools, and late European, South American and American developments.
- 604a **Keyboard Literature. 2 hrs.**  
A survey of keyboard literature from the 14th to the 20th century. Emphasis is on stylistic developments and formal procedures.
- 604b **Chamber Music Literature. 2 hrs.**  
A survey of chamber music literature from the Baroque Era to the 20th century. Analysis of form emphasized in the study of string quartet, trio, quintet, and various other combinations.
- 604c **Song Literature. 2 hrs.**  
The song literature of Western Europe and America, also including contemporary material from other countries; interpretation, song study, program building, languages, and interpretation of accompaniments. For singers and accompanists.
- 604d **Choral Literature. 2 hrs.**  
A comprehensive study of the forms and styles of Choral Composition from Renaissance to present day.
- 610 **Philosophy of Music Education. 3 hrs.**  
Basic concepts of music education and their application to problems of music teaching, supervision and administration.
- 611 **Psychology of Music. 3 hrs.**  
Vibrational stimuli, resultant reactions, and factors involved in development of musical skills, as well as measures of aptitude and achievement.
- 612 **Projects and Problems in Music. 3 hrs.**  
Special problems and projects chosen by the student for investigation. Extensive study of a single problem or project in detail.



- 614 **The Teaching of Music Appreciation. 2 hrs.**  
Advanced methods and materials for teaching appreciation of music in grades 1-12.
- 615 **Band Maneuvers and Pageantry. 2 hrs.**  
The marching band. The marching and musical problems which are encountered in training and operating a band for football games and other events involving marching and playing.
- 616 **Curriculum Construction and Revision. 3 hrs.**  
Survey of recent developments in public school curricula and their effect on music offerings. Preparation of course and curricular content.
- 617 **Seminar in Music Education. 3 hrs.**  
An advanced study of basic concepts of current problems in music education.
- 618a **Administration of Instrumental Music. 3 hrs.**  
The planning and operation of the instrumental program and the details of programming the work in a school system.
- 618b **Administration of Choral Music. 3 hrs.**  
A study of the organization of choral music programs including: recruitment, auditions, scheduling, rehearsal arrangement, programming, touring, and budget.
- 619a **Seminar in Vocal Pedagogy. 2 hrs.**  
A study of the techniques of singing and their application to private and class instruction. Emphasis placed upon diagnosis of problems, and teaching under supervision.
- 619b **Seminar in Piano Pedagogy. 2 hrs.**  
An analytical survey of developments in piano techniques and pedagogical procedures with open discussions on various facets of piano teaching.
- 620a **Instrumental Workshop. 2 hrs.**  
Problems of the instrumental teacher at all levels; practical work in the techniques of handling beginning classes and ensembles of all types.
- 620b **Choral Workshop. 2 hrs.**  
A practicum approach to problems of choral techniques and materials with special emphasis placed upon high school and junior high school levels.
- 621 **Introduction to Graduate Studies in Music: Research and Writing. 3 hrs.**  
Introduction to music research with emphasis on investigative methods and applications, procedures, and bibliography. Concentration on expository writing style and format.
- 629a **Choral Conducting and Interpretation. 2 hrs.** Performance analysis of choral music from the Renaissance, Baroque and Classical periods as a basis for the expansion of ability in conducting. Students will conduct university ensembles in rehearsal and performance.
- 629b **Choral Conducting and Interpretation. 2 hrs.** Continuation of Music 629a with emphasis upon Romantic and Contemporary music. Some opportunity given to work with operatic conducting. Does not require Music 629a as a prerequisite.
- 630a **Instrumental Conducting and Interpretation. 2 hrs.** The special problems involved in conducting and training instrumental groups at all levels.
- 630b **Instrumental Conducting and Interpretation. 2 hrs.** A continuation of 630a.
- 640a **Music Theory. 3 hrs.**  
Analytical and writing techniques of 19th and 20th Century music.
- 640b **Music Theory. 3 hrs.**  
Continuation of Music 640a.
- 641 **Advanced Counterpoint. 3 hrs.**  
An intensive study of contrapuntal techniques, styles, and forms through composition and analysis.
- 642 **Procedures and Techniques for Elementary Music (Grades K-6). 3 hrs.**  
Fundamentals of Music: experience in keyboard, guitar, recorder and autoharp. Survey of materials and methodology to aid in establishing program in school music. Non-majors only.
- 645a **Original Composition. 2 hrs.**
- 645b **Original Composition. 2 hrs.**
- 646 **Advanced Choral Arranging. 2 hrs.**  
Techniques of choral composition and arranging with emphasis on the mixed choir. Arrangements and original works sung by choral groups and conducted by students.
- 647 **Advanced Band Arranging. 2 hrs.**  
A study of the scoring for modern concert and marching bands, the transcription of works for other media as well as original works; analysis of band literature, harmonic and formal.
- 648 **Advanced Orchestration. 2 hrs.**  
Scoring compositions from other media for modern orchestras of various sizes.
- 649 **Stage Band Arranging. 2 hrs.**  
A study of the special techniques involved in scoring for the contemporary stage band, including harmony used, voicing of the various instruments, and a study of current practices.

- 650 **Ancient and Medieval Music. 3 hrs.**  
Ancient Greek musical theory, Gregorian chant and its outgrowths, secular monophony, sacred and secular polyphony and its development through the fourteenth century.
- 651 **Music of the Renaissance. 3 hrs.**  
The English, Burgundian and Netherland schools; secular forms; chanson, madrigal, and lied; instrumental music; mannerism and the end of an age.
- 652 **Music of the Baroque Era. 3 hrs.**  
The monodic revolution: madrigal to cantata, opera, oratorio; Italian leaders: Vivaldi, Bach, and Handel.
- 653 **Music of the Classical Era. 3 hrs.**  
Pre-Classic styles and the formation of a classical style in music in symphony, concerto, opera, the sonata, and choral music through Beethoven.
- 654 **Music of the Romantic Era. 3 hrs.**  
A study and evaluation of Beethoven's principal works and the life and works of Schubert, Mendelssohn, Chopin, Schumann, Brahms, and their contemporaries.
- 655 **Contemporary Music. 3 hrs.**  
Musical developments since Wagner: Debussy, Stravinsky, Mahler, Strauss, Schoenberg, Bartok and their contemporaries. Developments in electronic and aleatoric music, and new notations.
- 656 **Seminar in Performance Practice. 2 hrs.**  
Students will prepare and perform music from a selected style period, making their own editions with correct realization and ornamentation. May be repeated for credit.
- 670 **Advanced Materials and Methods (Grades 1-6). 3 hrs.**  
A comprehensive survey of available materials in singing, reading, listening, rhythm, and creating program of school music for the elementary grades; use of such materials in the methodology of teaching. (PR: Graduate music majors only)
- 675 **Creative Activity for Children. 3 hrs.**  
Ways of using creative activity in the music program, methods of presenting creative song writing, rhythms, instrument construction, instrumental expressing, dramatization, program building.
- 679 **Problem Report. 1-3 hrs.**
- 681 **Thesis. 1-6 hrs.**

#### Applied Music

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|------------------------------------|---------------------------------|------------------------------------|
| 680 a,b,c,d. Saxophone. 1-2 hrs.   | 688 a,b,c,d. Trombone. 1-2 hrs. | 694 a,b,c,d. String Bass. 1-2 hrs. |
| 682 a,b,c,d. Flute. 1-2 hrs.       | 689 a,b,c,d. Baritone. 1-2 hrs. | 695 a,b,c,d. Piano. 1-2 hrs.       |
| 683 a,b,c,d. Oboe. 1-2 hrs.        | 690 a,b,c,d. Tuba. 1-2 hrs.     | 696 a,b,c,d. Voice. 1-2 hrs.       |
| 684 a,b,c,d. Clarinet. 1-2 hrs.    | 691 a,b,c,d. Violin. 1-2 hrs.   | 697 a,b,c,d. Organ. 1-2 hrs.       |
| 685 a,b,c,d. Bassoon. 1-2 hrs.     | 692 a,b,c,d. Viola. 1-2 hrs.    | 698 a,b,c,d. Percussion. 1-2 hrs.  |
| 686 a,b,c,d. French Horn. 1-2 hrs. | 693 a,b,c,d. Cello. 1-2 hrs.    | 699 a,b,c,d. Guitar. 1-2 hrs.      |
| 687 a,b,c,d. Trumpet. 1-2 hrs.     |                                 |                                    |

#### NURSING (NUR)

Graduate nursing courses are open only to those students admitted to the nursing program.

- 580-584 **Special Topics in Nursing. 1-4 hrs.**  
Program of study not normally covered in other courses. Topics vary from semester to semester. (PR: Permission of instructor)
- 585-588 **Independent Study in Nursing. 1-4 hrs.**  
Courses taught by tutorials; directed independent readings or research; problem reports, and other activities designed to fill needs of individual students.
- 591-594 **Nursing Workshop. 1-4 hrs.**  
Practical, participatory courses for advanced students. Experience in new techniques and application of new knowledge.
- 602 **Theoretical Foundations in Nursing. 3 hrs.**  
Provides students with opportunity to relate a philosophical and theoretical base to concepts and processes inherent in nursing. Emphasis is on analysis of nursing theories and their relationship and application to research and practice.
- 604 **Leadership in Nursing. 3 hrs.**  
Explores the theoretical basis for effective leadership in nursing. Emphasis is placed on analysis of leadership, characteristics and behaviors of leaders, and the role of the nurse leader.
- 606 **Advanced Nursing Research. 3 hrs.**  
Provides the opportunity to develop a research approach to nursing situations. Focus is upon the development of a research proposal. (PR: or concurrent NUR 602 or Perm)

- 608 Issues in Health Care. 3 hrs.**  
Explores and evaluates concerns germane to contemporary nursing. Focus is upon the role of nursing in addressing health issues affected by social, economic, political, and technological forces.
- 616 Curriculum Development in Nursing. 3 hrs.**  
Introduces the various component in the curriculum development process. Emphasis is on philosophy, objectives, curriculum designs, and program evaluation. Factors influencing curriculum development, implementation, evaluation, and nursing curriculum patterns are examined.
- 618 Teaching in Nursing. 3 hrs.**  
Investigates the responsibilities of the educator in contemporary nursing. Emphasis is upon the instructional process. Practicum allows student to practice the role of the teacher in a variety of educational experiences.
- 622 Advanced Family Nursing I. 5 hrs.**  
Introduction to knowledge and skills essential for comprehensive health assessments, analysis of data, formulation of diagnoses, development of the therapeutic plans, and implementation of health promotion and maintenance activities. Practicum included. (PR or concurrent: NUR 602, NUR 604)
- 624 Advanced Family Nursing II. 5 hrs.**  
Provides advanced knowledge and nursing management of common and acute self-limiting health problems of individuals and families of various age groups. Includes pathology and therapeutic modalities related to specific health problems. Practicum included. (PR: NUR 622, PR or concurrent: NUR 606)
- 626 Advanced Family Nursing III. 5 hrs.**  
Provides advanced knowledge of chronic illness and the long-term nursing management of health care problems. Includes pathology and therapeutic modalities related to management of chronic health problems. Practicum included. (PR: NUR 624)
- 632 School Nurse Practitioner Role in School Health I. 3 hrs.**  
Focus is upon the role of the school nurse practitioner in the school system. (PR: NUR 602, NUR 604 or permission)
- 634 School Nurse Practitioner Role in School Health II. 3 hrs.**  
Focus is upon the role of the school nurse practitioner in providing health care to school age children. (PR: NUR 632 or concurrent or Perm)
- 642 Organizational Dynamics in Nursing. 3 hrs.**  
Focus is upon the organizational dynamics as they apply to the nurse manager role in health care delivery systems.
- 644 Financial Strategies in Nursing Administration. 3 hrs.**  
Examines the financial management role of the nurse administrator in relation to economic, political, and societal trends.
- 646 Nursing Management in Health Care Settings I. 6 hrs.**  
Focuses on the application of theories and principles related to nursing management. Practicum included. (PR or concurrent: NUR 604, NUR 606; PR: NUR 642, NUR 644)
- 648 Nursing Management in Health Care Settings II. 6 hrs.**  
Practicum focuses upon the application of the role components of the nurse manager in selected health care settings. Seminars included. (PR: NUR 646)
- 662 Pharmacology for Nurses in Advanced Practice. 3 hrs.**  
Focus is upon a review of the knowledge base in the basic science of drugs and on how this knowledge base can be applied to client care and education by nurses in advanced practice. (PR: Evidence of current RN license and perm)
- 679 Problem Report in Nursing. 1-3 hrs.**  
The preparation of a written report on a research problem or field of study in nursing.
- 681 Thesis. 1-6 hrs.**  
Individual research in a selected area of nursing under direction of a faculty member. (PR: NUR 606)
- 690-693 Seminar in Nursing. 1-3 hrs.**  
Topics in nursing not covered in other courses; topics will vary.
- 695 Internship: Advanced Family Nursing. 6 hrs.**  
Focus is upon the role of the family nurse practitioner using the case management approach in a supervised contractual work study arrangement with a health care agency. (450 hrs. minimum) (PR: NUR 626)
- 697-698 Instructional TV. 1-4 hrs.**  
A course based upon Instructional Television series broadcast by public television. The student is responsible for viewing the series on the air and satisfying all course requirements.

#### **PARK RESOURCES AND LEISURE SERVICES (PLS)**

- 500 Leisure and Aging. 3 hrs.**  
A course presenting an overview of leisure services for the elderly. Topics include research results, theories, and modern day trends. A wellness model will be included.



- 501 **Administration of Parks and Recreation. 3 hrs.**  
Considers administrative practice and various organizational structures. Includes administrative processes, supervision of personnel, budgeting, and public relations. Requires conducting a case study of an existing park and recreation department, including fiscal and personnel policies and an analysis of the effectiveness of such policies.
- 502 **Assessment and Evaluation in Recreation and Leisure Services. 3 hrs.**  
Theoretical and practical approach to evaluation as applied to recreation and leisure services. Emphasis will be upon developing sound assessment and evaluation methodology applicable to recreation and leisure studies. (PR: PLS 101 or permission)
- 510 **Recreation Area and Facility Maintenance. 4 hrs.**  
A study of the knowledge and skills necessary to supervise and administer the general development and maintenance of park and recreation areas and facilities.
- 511 **Recreation Areas and Facilities. 3 hrs.**  
Basic considerations in the planning and design of recreational and sport areas, facilities, and structures including associated amenities.
- 521 **Recreation for Special Populations. 3 hrs.**  
Study of the use of recreation activities with disabled persons. Techniques in programming and adaptation to meet the leisure needs of special groups in today's society. In association with a therapeutic recreation institution, student must develop a new/revised procedure for providing recreation programs at that institution. (PR: PLS 120 or permission)
- 522 **Therapeutic Recreation in Institutional Settings. 3 hrs.**  
Designed to acquaint students with the role and practice of therapeutic recreation in treatment centers. Requires preparation of an annotated bibliography of current literature in this field and conducting of a case study of therapeutic recreation programmatic offerings in such an institution. (PR: PLS 120 or permission)
- 530 **Environmental Interpretation. 4 hrs.**  
Principles and techniques of environmental interpretation as practiced in federal, state, and private agencies. Student must develop an interpretative brochure and evaluate both a facility and a program. 3 lec.-2 lab.
- 531 **Forest Recreation Planning. 4 hrs.**  
Utilizes the functional planning approach based upon demand and site capability analysis. Student conducts an in-depth recreation capability analysis in an existing park facility, presents this in written form; reviews the current literature on forest recreation development, and makes a final oral report. 3 lec.-2 lab.
- 540 **Off-Highway Vehicle Recreation in America. 3 hrs.**  
A course designed to integrate off-highway vehicle recreation concepts, experiences, research trends, supply and demands, and management issues.
- 580-583 **Special Topics in Recreation. 1-4; 1-4; 1-4; 1-4 hrs.**  
Study of an advanced topic not normally covered in other courses. 3 lec.-2 lab. (PR: Permission of Chairman)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
Requires conducting of individual survey/research projects beyond the requirements for undergraduates. Such projects will be individualized to meet the needs of students while accomplishing some practical need in the field. (PR: Permission)

#### PATHOLOGY (PTH)

- 620-621 **Human Pathology. 7; 7 hrs., I, II.**  
General principles of pathology, systemic pathology, and holistic integration with laboratory medicine and autopsy-clinical-and-cytologic material. (PR: Consent of instructor)

#### PHARMACOLOGY (PMC)

- 610 **Introduction to Pharmacology. 3 hrs., I.**  
An indepth presentation of the history and introductory principles of pharmacology. Designed to acquaint students with pharmacology as a scientific discipline and provide the basis for more advanced courses. (PR: Consent of instructor)
- 615 **Pharmacology Reviews. 1 hr., I, II.**  
A course designed for students to read and discuss recent and classic papers in pharmacological sciences. Students become acquainted with the pharmacology literature and classic advances in the field.
- 620 **Medical Pharmacology. 8 hrs., II.**  
An introduction to the basic concepts of drug actions and therapeutic principles governing drug therapy. Emphasis is placed on general mechanisms, therapeutic uses and toxicity of prototypic drugs. (PR: BIC 620, PHS 629 desirable; consent of instructor)

- 625 Drug Metabolism. 3 hrs., I.**  
Topics will include a discussion of the metabolizing enzymes, enzyme induction and inhibition, toxic metabolites, prodrugs, metabolic disorders and analytical methods for studying drug metabolism. (PR: consent of instructor)
- 630 Chemical Aspects of Pharmacology. 3 hrs., I.**  
An introduction to the chemical principles of pharmacology. The chemical classification, acid-base chemistry and stereochemical properties of drugs and the reactivity of drugs with biological systems will be discussed. (PR: organic chemistry, consent of instructor)
- 633 Vistas in Pharmacology. 3 hrs., I.**  
A discussion and study of recent advances in the various fields of pharmacological investigation. This course is designed to acquaint students with state-of-the-art techniques and developing areas of pharmacology. (PR: PMC 620)
- 635 Neuropharmacology. 3 hrs., I.**  
A study of the actions of drugs on the nervous system.
- 640 Behavioral Pharmacology. 3 hrs., I.**  
Behavioral methods for assaying drug action. (PR: consent of instructor)
- 643 Introductory Cardiopulmonary Pharmacology. 3 hrs.**  
A general overview of the principles of pharmacology and the mechanisms and effects of cardiovascular and respiratory drugs. (PR: PHIS 629 or BSC 522, consent of instructor)
- 645 Advanced Cardiopulmonary Pharmacology. 3 hrs., I.**  
An in-Depth presentation of pharmacological aspects of cardiovascular and pulmonary systems. Current knowledge, principles and methods used in cardiopulmonary research will be discussed. (PR: PMC 620 or PMC 643; consent of instructor)
- 650 General Toxicology. 3 hrs., I.**  
An in depth presentation of the general principles and methods of toxicology. Mechanism, distribution and organ system responses to toxins and methods of toxicological evaluation will be discussed. (PR: PMC 620 or consent of instructor)
- 676-677 Special Topics. 1-4 hrs.**  
Material on special areas of research of topics which are not routinely covered in existing courses.

### PHILOSOPHY (PHL)

- 551 Philosophy of History and Culture. 3 hrs.**  
Ancient and modern theories of the meaning and consequence of history and culture.
- 553 Philosophy of Science. 3 hrs.**  
Crucial concepts in modern science relevant to contemporary philosophical issues concerning man and the universe; special attention to epistemological and ethical implications of natural law, induction, mathematical theory and the new physics.
- 555 Philosophy of Religion. 3 hrs.**  
Theories of the nature and functions of religion, including the meaning of religious language and problems of belief.
- 563 Philosophy of Feminism. 3 hrs.**  
An introduction to contemporary feminist theory including discussion of current gender-related issues.
- 565 Existential Philosophy. 3 hrs.**  
A survey of the contributions of leading existentialist philosophers of the past and present from Kierkegaard and Nietzsche to Sartre and Tillich; course is conducted much like a seminar.
- 580-583 Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 598 Directed Readings in Philosophy. 3 hrs. I, or II.**  
Advanced research adaptable to the needs of students. Regular consultations with the chairman and staff.
- 599 Humanities Seminar. 3 hrs.**

### PHYSICAL EDUCATION (PE)

- 501 Ethics in Sport. 3 hrs.**  
Philosophical and historical background to the development of values in contemporary society and examination of how these are manifested in the sports world.
- 515 Physical Education in Pre-School, Elementary and Middle School. 3 hrs.**  
A study of motor skill principles/movement experiences as they influence the child's total development; specific movement activities are presented in the areas of games, rhythms, basic movements, gymnastics, etc.

- 516 **Planning & Developing HPER & Athletic Facilities. 3 hrs.**  
A course designed to familiarize students with the basic concepts of facility planning and construction. Current trends and innovative designs are reviewed. (Does not fulfill state certification requirements for a superintendent's license.)
- 517 **Teaching College Physical Education. 3 hrs.**  
Prepares students for teaching of college health and physical education courses.
- 522 **Prevention, Care and Treatment of Athletic Injuries. 3 hrs.**  
This course is designed to prepare the athlete for competition, the prevention and protection of the athlete from accidents, the etiology, examination and immediate care of the athlete, and the rehabilitation of the athlete following injury.
- 524 **Sport and Physical Education in the Twentieth Century United States. 3 hrs.**  
The development of recreation, organized sport and physical education programs in the United States, 1900 to present.
- 525 **Sport and Film. 3 hrs.**  
The relationships between sports and feature motion pictures are analyzed in the historical, social, and cultural contexts.
- 530 **Sport Law, 3 hrs.**  
The study of the basic principles of the legal system as they operate in the environment of American sport.
- 548 **Therapeutic Modalities in Sports Medicine. 4 hrs.**  
Investigation and analysis of therapeutic modalities including indications, contraindications, biophysics and procedures. Includes a lab. (PR: PE 201, 215 & Permission)
- 549 **Therapeutic Exercise in Sports Medicine. 4 hrs.**  
Investigation and analysis of current trends in rehabilitation exercise, muscle testing and evaluation. Includes a lab. (PR: PE 201, 215 & Permission)
- 560-564 **Professional Development. (Plus title that identifies content). 1-4; 1-4; 1-4; 1-4; 1-4 hrs.**  
Courses and activities designed to meet the specific inservice needs of public school personnel. Credit in these courses may be used for certificate renewal and salary upgrading if approved but not for degrees. CR/NC grading.
- 569 **Curriculum Development in Physical Education. 3 hrs.**  
A study of the general principles of curriculum development as they relate to physical education. Opportunities are provided to develop and evaluate curriculum.
- 575 **Seminar in Sports Management and Marketing. 3 hrs.**  
This course is designed to provide students with an overview of all aspects involved in the Sports Management and Marketing field through classroom lectures, guest speakers, and field trips.
- 576 **Theoretical and Practical Aspects of Coaching. 3 hrs.**  
An in-depth study of the principles and problems of coaching.
- 578 **Energy Sources, Body Composition and Performance. 3 hrs.**  
Consideration of the energy sources and requirements for various types of physical activity as well as the impact that physical activity can have on body composition and performance. (PR: PE 621 or permission)
- 579 **Trends in Athletic Training. 3 hrs.**  
To provide an in-depth analysis of current trends with regard to administration, liability and insurance. In addition, will cover current standards in surgery, rehabilitation and evaluation of sports related injuries.
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**  
(PR: Approval by the department chairman, instructor and student's committee)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 591-594 **Workshop in Physical Education. 1-3; 1-3; 1-3; 1-3 hrs.**
- 601 **Advanced Exercise Testing. 3 hrs.**  
Exercise testing techniques presented to determine the biological responses to exercise stress and to investigate the physiological limitations to human performance as it relates to disease and/or sport performance. (PR: PE 621)
- 608 **Motor Learning and Performance. 3 hrs.**  
Investigation of variables influencing the learning motor skills. Primary emphasis on psychological factors influencing motor performance. 2 lec-2 lab.
- 610 **Physical Growth and Motor Development. 3 hrs.**  
The study of physical growth and motor development of children from infancy through adolescence. Stages in the development of motor patterns and motor skills will be traced with consideration given to neurological changes and external forces which influence motor development. (PR: PE 621 or permission)
- 615 **Legal Concern in PE and Athletics. 3 hrs.**  
An in-depth analysis of the legal implications of Sports and Physical Education.



- 620 **Substances of Abuse and the Athlete. 3 hrs.**  
An in-depth study of commonly abused substances by athletes as well as current trends in drug testing of athletes. (PR: PE 621, permission)
- 621 **Scientific Aspects of Physical Education. 3 hrs.**  
The study of the scientific basis for physical activity. Consideration will be given to the psychological, sociological, neuromuscular, and physiological characteristics requisite to physical activity. (REC: PE 201 and 345 or equivalent)
- 622 **Physical Education for the Atypical Individual. 3 hrs.**  
A study of the principles and philosophies in the general organization and supervision of programs of physical education for the physically handicapped. The course includes field trips to hospitals, clinics, etc.
- 623 **Medical Aspects in Sports. 3 hrs.**  
Emphasis on the development of skills in recognition of symptoms of illness, injuries and proper procedures of medical care.
- 624 **Issues in Physical Education. 3 hrs.**  
Critical selection and analysis of current controversies in physical education. Analysis includes identification of the content fostering each issue and the systematic probing of administrative tenets and philosophical positions taken by all factions. Attempts at resolution are secondary to exploration and analysis of viewpoints.
- 626 **History and Philosophy of Physical Education and Sport. 3 hrs.**  
An investigation of historical events, political and social climates, and personalities as well as philosophies which have influenced physical education and sport from early civilizations to the present.
- 631-634 **Performance Techniques and Analysis. 3 hrs.**  
Analysis of lead-up, intermediate and advanced techniques of a selected team, individual or dual sports. Emphasis given to mechanics of performance psychological stress components, psychological factors, strategies and teaching/coaching methodology.
- 636 **Structural Kinesiology. 3 hrs.**  
Instruction and laboratory experiences involving musculoskeletal anatomy and biomechanics as applied to human movement.
- 641 **Theories and Factors Relating to Athletic Performance. 3 hrs.**  
Examination of major psychological dimensions underlying the behavior manifested by sports participants. Emphasis given to understanding "why" an individual performs with consequent implications as to "how" he/she performs.
- 642 **Devising and Implementing Training and Conditioning Programs. 3 hrs.**  
Application of neuromuscular and physiological knowledge to the examination of the administration and content of existing exercise programs as well as the development of new programs. (PR: PE 621)
- 643 **Sport in the Social Process. 3 hrs.**  
An in-depth analysis of the processes by which sport evolved as a significant component of modern American life.
- 646 **Athletic Training I. 3 hrs.**  
Training in the diagnosis of injuries in athletics. The student will be expected to participate in diagnostic techniques under the supervision of a trainer.
- 647 **Athletic Training II. 3 hrs.**  
Professional aspects of trainer-doctor and doctor-athlete relations will be taught and exploration of how to professionally handle injuries and cooperation with physicians.
- 651 **Mechanical Analysis of Motor Skills. 3 hrs.**  
Analysis of motor skills through the application of the principles of physics. (REC: PE 321 or equivalent)
- 652 **Administrative Theories in Physical Education and Athletics. 3 hrs.**  
The student is introduced to the background and development of administrative theories in physical education and athletics in a context of a social scientific milieu.
- 654 **Contemporary and Comparative Physical Education. 3 hrs.**  
A study of objectives, methods, personnel, facilities, and program uniqueness of the physical education of selected nations and world regions. National sport programs, international sport programs and competition, and international professional organizations are considered.
- 660 **Internship. 3-6 hrs.**  
Practical experience in a clinical setting. (PR: PE 682, 683, 684)
- 670 **Research in Physical Education. 3 hrs.**  
An examination of experimental research design, laboratory methods, construction of instruments, execution of research, and presentation of research papers with an emphasis on science.
- 681 **Thesis. 1-6 hrs.**

- 682 **Health Promotion, Disease Prevention, and Rehabilitation: Clinical Perspectives. 3 hrs.**  
Examines disorder/disease prevalent in Westernized societies, with special emphasis on the rationale for intervention with exercise, nutrition, behavioral, and related strategies. (PR: PE 621)
- 683 **Cardiovascular Assessment. 3 hrs.**  
Considers cardiovascular assessment strategies, including EKG interpretation, related medical profile variables, patient/client/athlete screening and risk stratification. (PR: PE 621)
- 684 **Developing Exercise, Nutritional, and Behavioral Prescriptions. 3 hrs.**  
Examines prescription strategies for lifestyle intervention. This includes exercise, nutrition, medications, stress management, and smoke cessation. (PR: PE 621, 682, 683)
- 685 **Development and Administration of Preventive and Rehabilitative Medical Programs. 3 hrs.**  
Examines health promotion, disease prevention, and rehabilitation program development and administration strategies in the commercial, corporate, clinical, and community settings. (PR: PE 621, 682, 683, 684, 687).
- 686 **Behavioral Aspects of Wellness, Disease, Rehabilitation. 3 hrs. I or II.**  
Survey course to include the pathophysiology of stress, psychology of health, behavioral modification, neuromuscular relation/stress reduction techniques, program compliance improvement, and health counseling. (PR: PE 641)
- 687 **Cardiac Life Support. 3 hrs.**  
Course is designed to acquaint the student with the current methods in recognizing and treating cardiac conditions. (PR: PE 683 or permission)
- 696 **Seminar in Physical Education. 3 hrs.**  
A course designed for library research and discussion of critical questions in physical education. Topics to be selected will vary according to the interests of the students.

### PHYSICAL SCIENCE (PS)

- 500 **Astronomy. 3 hrs.**  
A study of the stars and planets and galaxies, planetary motion, cosmology and cosmography. Designed to assist teachers and others to develop an interest in astronomy. (PR: PHY 101 or 203 or PS 109 or equivalent)
- 500L **Astronomy Laboratory. 1 hr.**  
Fundamental observations in astronomy and their interpretation through physical laws. Quantitative discussion of orbital motion, time, telescopes, solar system, stars, galaxies, and limited opportunity for astronomical observation. (PR or CR: PS 500)
- 510 **Physical Principles of Remote Sensing with Applications. 4 hrs.**  
A study of the physical systems for collecting remotely sensed data. Statistical/spatial analysis and modeling using image processing/geographic information/spatial analysis computer software systems with earth resource applications. (PR: PHY 203 and 204, MTH 225, or permission)
- 511 **Digital Image Processing and Computer Simulation Modeling. 4 hrs.**  
A study of image processing/geographic information and spatial analysis hardware/software systems, concurrent and parallel image processing modeling scenarios utilizing geobiophysical data for computer simulation modeling and practicum. (PR: PS 410/510 or permission)
- 525 **Development of Scientific Thought. 3 hrs.**  
A study of the people and ideas which have influenced science; the philosophy of their periods; the economic conditions leading to scientific advancement and the works of the foremost scientists in the field. (PR: A total of twelve hours in Physical Science, Physics, and Chemistry courses)
- 570 **Practicum. 4 hrs.**  
Problem solving, geobiophysical modeling, and proposal development techniques in the physical sciences. (PR: PS 411, 511 or Permission)
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 646 **Seminar on Recent Developments in the Physical Sciences. 3 hrs. Offered on demand.**
- 648 **Modern Physics for Teachers. 3-5 hrs. Offered on demand.**  
A course designed to provide additional background material in atomic and nuclear physics for teachers. Lecture and laboratory.
- 649 **Electronics for Teachers. 3-5 hrs. Offered on demand.**  
A course in basic theory of electronics for teachers. Lecture and laboratory.

### PHYSICS (PHY)

- 505 **Optics Laboratory. 2 hrs.**  
A course in optical experiments encompassing geometrical and physical optics. This course is to be taken with Physics 304.

- 512 **Atmospheric Physics with Computer Simulation Modeling. 3 hrs.**  
A general introduction to the earth's atmosphere. The physical and chemical dynamic behavior of the earth's atmosphere will be analyzed by comparing computer simulated profiles with in situ measurements.
- 515 **Electronics Laboratory. 2 hrs.**  
A course in laboratory measurements encompassing transistors, integrated circuits, and their associated circuits. This course is to be taken with Physics 314.
- 521 **Modern Physics Laboratory. 2 hrs.**  
Laboratory exercises on modern physics topics encompassing both experiments of historic significance and current applications. To be taken with Physics 320, or equivalent.
- 542 **Quantum Mechanics. 3 hrs.**  
Alternate years. Mathematical formalism of quantum mechanics, particles in potential fields, perturbation theory and other approximation methods, scattering, applications to simple systems. 3 lec. (REC: PHY 331 and MTH 335 or equivalent)
- 545 **Mathematical Methods of Physics. 3 hrs.**  
Offered on demand. An introduction to the theory of orthogonal functions, curvilinear coordinate systems, vector and tensor fields and their applications in Physics. Problems are drawn from different areas of physics. 3 lec. (PR: PHY 203.)
- 547 **Mechanics for Teachers. 4 hrs.**  
An in-depth study of mechanics for education majors specializing in physics with emphasis on problem solving techniques, demonstrations, experiments and computer applications. (PR: PHY 203, MTH 122, MTH 140)
- 550 **Radiation Physics in the Life Sciences. 4 hrs. II.**  
Alternate years. A course in radiation physics with emphasis on applications in the medical sciences. Designed for students interested in the life sciences. A field trip to the University of Michigan nuclear reactor is an integral part of the course. 3 lec-2 lab/demonstration. (PR: PHY 203 and 204, or consent of instructor)
- 562 **Nuclear Chemistry and Physics. 3 hrs. II.**  
Alternate years. An introduction or the description of nucleons, electric and magnetic properties of a nucleus, nuclear energy levels, nuclear reactions including neutron activation, interaction of particles with matter, and nuclear forces. 3 lec. (PR: PHY 320 and MTH 231 or consent of instructor). See 424d.
- 563 **Nuclear Physics Laboratory. 2 hrs.**  
Laboratory techniques for the measurement of nuclear properties, theory and characteristics of various detectors, statistics of counting, and energy determination of nuclear particles and radiation. This course is to be taken with Physics 462/562. A field trip to the University of Michigan Nuclear Reactor is an integral part of the course.
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 616 **X-Ray Diffraction. 3 hrs.**  
Offered on demand. A study of the properties of X-rays, X-ray diffraction, and crystal structure. 2 lec-3 lab. (REC: CHM 358 or equivalent)
- 631-632 **Seminar. 1; 1 hr. I, II.**
- 640 **Fundamentals of Physics. 4 hrs. S.**  
Offered on demand. A course in fundamental concepts of physics. Subject content varies. Designed primarily to strengthen conceptual understanding of teachers.
- 644 **Atomic Physics. 3 hrs.**  
A historical development of the modern theories concerning the structure of matter, electricity, and light, including applications of optical spectra and X-rays. (PR: PHY 203, 204 or PHY 213, 204 or equivalent)
- 661-662 **Special Topics. 1-3; 1-3 hrs.**
- 682 **Thesis Research. 1-6 hrs. I, II, S.**  
(PR: Graduate status and approval of advisor)

### PHYSIOLOGY (PHS)

- 628 **Mammalian Neurophysiology. 2 hrs.**  
This course is a basic introductory, survey course covering neurophysiology from subcellular level to behavioral level. (PR: Consent of instructor)
- 629 **Mammalian Physiology. 6 hrs. II.**  
A study of mammalian systems including pulmonary, renal, cardiovascular, gastrointestinal, endocrine and reproductive systems. Emphasis will be placed on homeostatic mechanisms and on experimental approaches to physiology. (PR: PHS 628)



- 630 **Experimental Physiology. 1 hr. II.**  
A laboratory course in mammalian physiology which includes instruction in surgical preparation, bioinstrumentation technique and open-chest surgery in dogs. (PR: PHS 629 and consent of instructor. This course may be taken concurrently with 629)
- 631 **Physiology Practicum. 2 hrs. II.**  
Experience in laboratory instruction of medical and graduate students in the mammalian physiology laboratory. (PR: PHS 630 and consent of instructor)
- 632 **Physiology of Sleep. 1 hr.**  
Detailed examination of changes in EEG, EMG, cardiorespiratory function and ocular motility during sleep. (PR: PHS 628, 629)
- 634 **Advanced Neurophysiology. 1-2 hrs., I.**  
Bioelectric potentials. A.C. and D.C. potentials, transcortical potentials, E.E.G., cornea-retinal potential, blood-CSF potential, etc. (PR: PHS 628, 629)
- 638 **Advanced Cardiovascular Physiology. 1-2 hrs., I.**  
(PR: PHS 629)
- 639 **Neurophysiology Research Techniques. 3 hrs.**  
Class participants will be exposed to state-of-the-art neurophysiology research techniques while in the laboratories of neurophysiology faculty.
- 640 **Advanced Renal and Electrolyte Physiology. 1-2 hrs., I.**  
(PR: PHS 629)
- 641 **Recent Advances in Physiology. 1 hr., I., II.**  
Recently published articles in a selected area of physiological investigation will be presented by participants in the class. Each presentation will be followed by a discussion and evaluation of the paper. (PR: Consent of instructor)
- 661 **Endocrinology. 3 hrs.**  
An in depth study of the endocrine system with special emphasis on the role of experimentation in the development of concepts in endocrine physiology (PR: BMS 600) or equivalent, consent of instructor)
- 666 **Physiology of the Cell. 3 hrs.**  
An in-depth study of selected topics in cell physiology.
- 675 **Special Topics. 1-4 hrs.**  
Present course material on special areas of research of topics which are not routinely covered in existing courses.
- 676 **Special Topics. 1-4 hrs.**  
Present course material on special areas of research or topics which are not routinely covered in existing courses.
- 677 **Special Topics. 1-4 hrs.**  
Present course material on special areas of research or topics which are not routinely covered in existing courses.

### POLITICAL SCIENCE (PSC)

- 505 **International Organization. 3 hrs.**  
Study of world and regional organizations as reflections of world politics, as instruments of foreign policies, and as forces for change and order, with emphasis on their role as channels for management of cooperation and conflict.
- 506 **International Politics. 3 hrs.**  
Study of major issues in world politics, with emphasis on theoretical approaches, problems of war and peace, and contemporary trends.
- 507 **Asian Politics. 3 hrs.**  
Study of such nations as India, China, Japan, and Korea in the contemporary setting.
- 508 **Middle Eastern Politics. 3 hrs.**  
Study of the Arab States and such nations as Israel, Iran and Turkey in the contemporary setting.
- 509 **Western Democratic Politics. 3 hrs.**  
Study of such nations as Canada and those of Western Europe, particularly Great Britain and France.
- 510 **Eastern European Politics. 3 hrs.**  
Study of Russia and Eastern Europe.
- 511 **Latin American Politics. 3 hrs.**  
This course studies Latin American politics by sectors, such as landed elites, the military, the church, etc. Various styles of governance are considered. Case examples illustrate concepts discussed.
- 515 **International Law. 3 hrs.**  
Study of theories, origins, sources, development, present state, and trends of international law as a factor in various aspects of international politics.

- 520 **Current World or Regional Issues. 3 hrs.**  
An intensive study of specific world or regional problems, such as the politics of world hunger. The role of multinational corporations, imperialism, third world communist movements, etc.
- 521 **American Political Thought. 3 hrs.**  
Study of the development and influence of American Political Thought with an emphasis on the linkage of ideas to political and economic forces.
- 522 **African Political Systems. 3 hrs.**  
The study of political systems of selected countries, blocs or regions.
- 523 **American Foreign Policy. 3 hrs.**  
The study of descriptive, analytical, and normative aspects of American foreign policy with emphasis on contemporary problems and issues.
- 524 **Comparative Foreign Policy. 3 hrs.**  
Application of the comparative method to foreign policy decision-making and outputs. Comparisons within or between geographic regions.
- 525 **Ancient Medieval Political Thought. 3 hrs.**  
Selective study of classics of Western political theory from earliest times through the 15th century, such as that of Plato, Aristotle, the Romans, Augustine, and Aquinas.
- 526 **Modern Political Thought. 3 hrs.**  
Selective study of classics of Western political theory from the 16th century through the 19th century, such as that of Machiavelli, Bodin, Hobbes, Locke, Rousseau, Hume, Burke, Mill, and Marx.
- 528 **Islamic Political Ideas and Institutions. 3 hrs.**  
A study of Islamic political ideas, practices and institutions and their impact on the rise and development of contemporary Islamic movements, organizations and states.
- 529 **The Politics of Conflict and Revolution. 3 hrs.**  
Study of major theories of conflict and revolution with emphasis on cross-national explanations and outcomes.
- 531 **Political Theory and Public Problems. 3 hrs.**  
Draws upon both classic and contemporary sources of political theory to address basic political issues inherent in public problems.
- 533 **Public Administration and Policy Development. 3 hrs.**  
An examination of alternative theoretical approaches to the study of policy and administration and their implications for the use of policy to shape administrative practice.
- 536 **The American Judiciary. 3 hrs.**  
Structure and behavior in American national and state judicial systems, including analysis of their decision making and policy making functions, their procedures and administration, and problems and trends.
- 540 **Power in American Society. 3 hrs.**  
An examination of some of the major theoretical approaches—pluralist, elitist, etc.—to the study of power. A major concern is on the relationship between the distribution of political resources and the performance of political systems. Efforts to transform political systems are examined on the basis of cross-national research.
- 550 **Administrative Law. 3 hrs.**  
A study of the basic legal framework of administrative organization, including the problems of administrative discretion, rule making and adjudication, regulatory agencies, and administrative responsibility in the democratic state. (PR: PSC 333)
- 552 **Public Personnel Administration. 3 hrs.**  
Survey of Public Personnel Administration with particular attention on various facets of the merit system concept. Psychological and human relations aspects of the work situation and supervisor-subordinate interaction emphasized. (PR: PSC 333 or permission)
- 553 **Governmental Budgetary Administration. 3 hrs.**  
Study of organization, administration, and accountability in the management of public funds, with emphasis on the political decision-making processes of budget formulation, presentation, and execution. (PR: PSC 333 or permission)
- 554 **Administrative Organization and Behavior. 3 hrs.**  
A study of the contributions of the behavioral sciences to the study of organizations with stress on such concepts as leadership, motivation, power conflict, organizational design and decision making.
- 560 **Civil Rights and Liberties. 3 hrs.**  
The basic substantive and procedural elements of American constitutional liberties and civil rights with emphasis on historical development as influenced by social and political forces.
- 561 **Urban Problems and Public Policy. 3 hrs.**  
Study of policy problems of metropolitan areas in terms of structures, alternatives, and outcomes.

- 580-583 **Selected Topics. 1-4; 1-4; 1-4; 1-4 hrs.**  
To offer a course on some special topic which is not adequately treated in the regular course offerings.
- 584 **Constitutional Law. 3 hrs. I.**  
Introduction to the principles of American constitutional law and analysis of constitutional issues, emphasizing leading Supreme Court cases.
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
These numbers are reserved for tutorials, directed and independent research, problem reports, etc.
- 600 **Research Design. 3 hrs.**  
Philosophy of Science as applied to empirical political inquiry; elements of good research design, measurement theory, writing and critiquing research reports. (PR: PSC 211 or permission)
- 601 **Readings in Political Science. 2-3 hrs.**  
Readings to meet the needs and interests of individual students.
- 604 **Data Analysis. 3 hrs.**  
A study of quantitative methods used in empirical research with an emphasis upon applied statistical analysis; writing and critiquing research reports.
- 606 **Seminar in Judicial Politics. 3 hrs.**
- 609 **Seminar in International Relations Theory. 3 hrs.**
- 611 **Seminar in the American Legislative Process. 3 hrs.**
- 612 **Seminar in the American Executive Process.**
- 614 **Seminar in Comparative Politics. 3 hrs.**
- 618 **Seminar in Public Administration. 3 hrs.**
- 621 **Urban Administration. 3 hrs.**  
Principles and methods of urban administration in the U.S.
- 629 **Seminar in Political Thought. 3 hrs.**
- 648 **Seminar in State Government and Politics. 3 hrs.**  
West Virginia government and political problems will receive special attention although other states may be considered.
- 650-651 **Seminar. 3-6 hrs.**
- 652 **Seminar in Political Behavior. 3 hrs.**
- 660 **Seminar in Policy Analysis. 3 hrs.**  
Development of theoretical and methodological skills in the analysis of public problems and the use of policy in problem solving.
- 675 **Legislative Internship. 6 hrs.**  
Intensive work experience in the West Virginia legislative processes coupled with a seminar involving directed reading Legislative Services with only selected students participating. (PR: One semester of graduate work and recommendation of department chairman.)
- 680 **Master's Essay. 3 hrs.**
- 681 **Thesis. 1-6 hrs.**

## PSYCHOLOGY (PSY)

- 502 **Advanced Social Psychology. 3 hrs.**  
Advanced study of selected topics in social psychology.
- 503 **Applied Social Psychology. 3 hrs.**  
Examination of the applications of social psychological methods, theories, principles and research findings to the understanding of social problems.
- 506 **Psychometrics. 3 hrs.**  
Mental test theory and applications.
- 508 **Abnormal Psychology. 3 hrs.**  
Study of the nature, causes and treatment of maladaptive human behavior.
- 515 **Child Psychology. 3 hrs.**  
Introduction to child development with major emphasis on normal growth and development. Specific topics include theories of child development and the biological, mental, emotional, social and cognitive growth and development of children.
- 516 **Psychology of Learning. 3 hrs.**  
Critical study of the major theories of learning and related research.
- 517 **Intermediate Behavioral Statistics. 3 hrs.**  
An intermediate level presentation of descriptive and inferential statistics as applied in behavioral research.
- 518 **Psychology of Personnel. 3 hrs.**  
Psychological principles and methods applied to functions in personnel administration.
- 519 **Theories of Personality. 3 hrs.**  
Discussion of theories of personality with attention given to major philosophies of science research and methodological problems in personality theory and research.



- 520 Introduction to Industrial-Organizational Psychology. 3 hrs.**  
A systematic study of the application of psychological methods and principles in business and industry. Emphasis is on research methods, motivation, training, leadership, personnel selection, employee safety, and job satisfaction.
- 526 Cross Cultural Psychology. 3 hrs.**  
Emic and etic cultural concepts are considered from an American (subcultural) and international perspective. Cultural influences on healing, health and service are covered.
- 527 Computer Applications in Psychology. 3 hrs.**  
An introduction to computer applications in psychology, emphasizing data collection, management, organization, analysis and reporting.
- 533 Current Models of Psychotherapy. 3 hrs.**  
Introduction to theoretical models and related therapeutic strategies which influence the practice of modern psychotherapy.
- 540 Physiological Psychology. 3 hrs.**  
The relationships between physiological functions and biochemical processes and behavior.
- 543 Health Psychology. 3 hrs.**  
Introduction to the contribution of psychology to the promotion and maintenance of health and the prevention and treatment of illness. (PR: PSY 201 & 323)
- 556-557 Research in Psychology. 1-3; 1-2 hrs.**  
A laboratory course designed to give advanced students experience in all aspects of conducting psychological research. (PR: Permission of instructor)
- 560 History and Systems of Psychology. 3 hrs.**  
Overview of Psychology from historical perspective. (REC: 12 hours of psychology or equivalent)
- 580-583 Special Topics. 1-4; 1-4; 1-4; 1-4 hours.**
- 585-588 Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**
- 600 Teaching of Psychology. 3 hrs.**  
A course designed to train psychology graduate students to teach a course in introductory psychology. (PR: Graduate status in Psychology and a minimum of 9 hours Psychology Graduate credit)
- 605 Ethical, Legal, and Professional Issues in Psychology.**  
Introduction to ethical standards and issues, laws which influence psychological practice, and current challenges facing psychology as a profession.
- 608 Differential Diagnosis and Treatment Planning. 3 hrs.**  
A course using the instruments and techniques of psychological clinical assessment to explore psychopathology with an emphasis on differential diagnosis and treatment planning. Students will become competent in the use of the diagnostic and statistical manual for classification of mental disorders and will be able to translate linguistic data into the goals and objectives of a treatment plan.
- 610 Assessment of Adults. 3 hrs.**  
Principles and methods of psychological assessment for adults. Key issues in test construction, and training in report writing. (PR: Admission to Clinical Psychology Program; CR: PSY 620)
- 611 Assessment of Children. 3 hrs.**  
Principles and methods of psychological assessment for children. Key issues in test construction, and training in report writing. (PR: PSY 610; CR: PSY 621)
- 615 Advanced Developmental Psychology. 3 hrs.**  
Psychological development from conception with a focus on major developmental principles, issues, and concepts. An introduction to conducting research with developmental topics and experience in applying basic developmental principles to work situations will be provided. (PR: PSY 515 or equivalent with permission of instructor)
- 616 Human Memory and Information Processing. 3 hrs.**  
Theory and research relating to human learning, memory and decision processes. (PR: PSY 323 or equivalent)
- 617 Applied Developmental Psychology. 3 hrs.**  
Application of research in developmental psychology to issues of causes of clinical problems, issues of parenting, and factors to be taken into account in interventions. (PR: Graduate status)
- 618 Psychopharmacology. 1 hrs.**  
Survey of psychotropic drug substances with emphasis on neuropharmacological bases of drug action, current research methods and therapeutic implications. (PR: PSY 533)
- 619 Psychotherapy with Children. 3 hrs.**  
Discussion and analysis of the major theories of psychotherapy with children including psychoanalytic, client-centered, existential, and behavioral theories. Students will be expected to participate in an experiential component.
- 620 Assessment of Adults Practicum. 1 hr.**  
Students will be expected to administer, score, interpret and write reports for a battery of tests used with adults. Must be taken concurrently with PSY 610.

- 621 **Assessment of Children Practicum. 1 hr.**  
Students will be expected to administer, score, interpret and write reports for a battery of tests used with children. Must be taken concurrently with PSY 611.
- 623 **Experimental Design. 3 hrs.**  
An introduction to the design and interpretation of behavioral research. Emphasis is upon tests of significance and assumptions governing their application. (PR: PSY 517 or equivalent)
- 624 **Multivariate Analysis. 3 hrs.**  
Multivariate analysis in behavioral research including multiple regression, analysis of variance, canonical correlation, and principal components and factor analysis. (PR: either PSY 623 or PSY 652)
- 627 **Social Psychological Bases of Groups. 3 hrs.**  
Examination of the dynamics of groups such as size, cohesion, leadership, norms and communication channels and their effects on the individual members: consideration of the impact of groups on the larger social structure.
- 630 **Adult Diagnosis and Therapy. 3 hrs.**  
Current diagnostic criteria for adult psychopathology, including prevalence, epidemiology and socio-cultural milieu; in-depth presentation of psychotherapy with adults, including psychodynamic, gestalt, crisis and other modalities. (PR: PSY 533 or equivalent, or permission)
- 633 **Individual Psychotherapy and Interviewing. 3 hrs.**  
An introduction to the basic skills and techniques used in treating various forms of psychopathology. (PR: PSY 533 and consent of instructor)
- 634 **Group Therapy. 3 hrs.**  
Different types of group psychotherapy as appropriate for various forms of psychopathology. (PR: Consent of instructor)
- 635 **Child and Family Diagnosis and Therapy. 3 hrs.**  
This course covers psychopathology, diagnosis and treatment of the major child and family disorders including childhood anxiety, depression, delinquency, parent-adolescent conflict, eating disorders, and others. (PR: PSY 533 or equivalent, or permission)
- 637 **Ethics in Professional Psychology. 1 hr.**  
Introduction to ethical issues and decision making in professional psychology. Emphasis is given to APA ethical standards. (PR: Graduate standing in Psychology or permission)
- 650 **Seminar in Performance Appraisal. 3 hrs.**  
The course will offer students a research-based investigation of the performance evaluation process within work organizations. Emphasis is given to human rater x ratee x appraisal system features interactions (PR: Graduate standing in Psychology; or permission of the instructor)
- 651 **Advanced Nonparametric Statistics. 3 hrs.**  
An advanced survey of distribution-free statistical methods; dichotomous observations, one-sample tests, two sample tests for both independent and dependent observations, k-sample tests for both independent and dependent observations, ordinal correlational techniques, and relational measures. This course emphasizes both the theoretical constructs of distribution-free statistics and their application. Computer application of these techniques is stressed. (PR: PSY 517)
- 652 **Advanced Regression Techniques. 3 hrs.**  
Survey course of the theoretical development and application of multiple regression, advanced univariate correlational techniques, covariant analysis, and an introductory factor analysis. The course emphasis is on the application of these techniques to research and data analysis within the student's professional setting. Students will be expected to design and solve problems using computer-based models. (PR: PSY 517)
- 654 **Single Subject Analysis. 3 hrs.**  
Statistical analysis of small group designs as might be found in clinical and field situations. Emphasis will be on time series analysis and computer simulation of single subject and small group behaviors. (PR: PSY 517)
- 670-671 **Clinical Practicum. 1-3; 1-3 hrs.**  
Supervised application of principles of therapy and evaluation in a clinical setting. CR/NR grading. (PR: PSY 611, 633 and consent of instructor)
- 672 **Cognitive Psychology. 3 hrs.**  
Theory and research findings in the process of learning/memory, attention, problem solving, decision making, concept formation and perception. Emphasis will be on the perceptual aspects of cognitive processes as they apply to psychological practices.

- 674 **Biological Bases of Behavior. 3 hrs.**  
A course designed to provide an understanding of the psychophysiological functions of the human organism as an operating entity in the environment. The areas to be covered include the basic characteristics of the nervous system and the internal physiological and biochemical environment; various models of genetic aberrations, stress, drugs and other physiological anatomical factors and their observed effects on behavior. Data will be drawn from experimental work on both human and infrahuman organisms. Both theoretical and applied aspects will be considered. (PR: 6 credit hours in biology or psychology)
- 679 **Testing in Industrial/Organizational Psychology. 3 hrs.**  
An in-depth study of psychological and educational test theory and application. Emphasis is on classical test theory, constructs, and validation, including sources of variance in test scores and prediction of individual performance. Students will be expected to design, construct, and establish reliability and validity on a test as a class project.
- 673 **Paradigms of Training. 3 hrs.**  
Course description subject to approval. Check with Psychology department for update.
- 680 **Clinical Internship. 1-6 hrs. CR/NC.**  
Placement in an approved mental health setting for minimum of 400 hours. Supervised by on-site personnel in addition to psychology faculty. CR/NC grading. (PR: completion of required clinical practicum sequence)
- 681 **Thesis. 1-6 hrs. CR/NC.**
- 683 **Internship in Industrial-Organizational Psychology. 3 hrs. CR/NC.**  
This course will offer students applied observational/research experience in Personnel/Human Resource Departments under the supervision of professionals within the fields of Industrial-Organizational Psychology and Human Resources. CR/NC grading. (PR: Advanced standing and admission into the I/O degree program)
- 684 **Final Project in Industrial/Organizational Psychology. 3 hrs.**  
Course description subject to approval. Check with Psychology department for update.
- 690-695 **Seminar. 1-3; 1-3; 1-3; 1-3; 1-3; 1-3 hrs.**  
Reports on current problems and literature in psychology and related fields; professional ethics. (PR: consent of instructor)

### QUALITY ASSURANCE (QA)

- 635 **Quality Control. 3 hrs.**  
Application of statistical methods to quality control: process control charts and acceptance sampling plans by variables and by attributes. Process improvement techniques.
- 636 **Reliability Estimation and Analysis. 3 hrs.**  
Failure models and distributions, graphical methods of goodness-of-fit and parameter estimation, reliability measures for components and systems, fault trees, accelerated life testing, and censoring mechanisms.
- 650-653 **Special Topics. 1-4 hrs.**  
Special topics in quality assurance. (PR: Consent)
- 676 **Quality Assurance. 3 hrs.**  
Provides a technical overview of quality assurance and managerial implications. Management of total quality systems will be stressed. Concepts from statistical process control will be introduced. Quality costs and audits.

### RELIGIOUS STUDIES (RST)

- 519 **Religious Thought in the Western World. 3 hrs.**  
An analysis of the major schools of religious thought as they have developed in the West.
- 550 **Sociology of Religion. 3 hrs.**  
An investigation into the nature of religion as a social phenomenon.
- 580-583 **Special Topics. 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4 hrs.**
- 599 **Humanities Seminar. 3 hrs.**

### SAFETY TECHNOLOGY (SED)

- 500 **Traffic Law Enforcement. 3 hrs.**  
A course designed to study and evaluate the varied and complex system of laws governing the control of all forms of human traffic law and enforcement on present and future societies.
- 505 **Introduction to Occupational Safety and Health. CR/NC. 1 hr.**  
Introduces students to the basic principles and emerging trends in the safety and health discipline. (All students [except safety majors] will be required to enroll.)



- 510 **Problems and Practices in Traffic Safety and Driver Education. 3 hrs.**  
A survey course for supervisors of traffic accident prevention programs. Examines and evaluates problems, attitudes, activities, and administrative practices in school, city, and state traffic safety programs. Supplements basic teacher training courses in driver education. (PR: SED 235 and 385)
- 536 **Safety Education for Elementary Teachers. 1 hr.**  
Survey of accident prevention methods in the elementary school environment, with emphasis on elementary school safety curriculum, laws, personal protection and resources for elementary school teachers.
- 540 **Industrial Fire Protection. 3 hr.**  
An introductory course that explores the relationship between engineering and fire prevention. Topics include: water supplies, sprinkler systems, behavior of fire and materials, fire protection, fire extinguishers & other systems.
- 550 **Traffic Engineering. 3 hrs.**  
Concerned with traffic and pedestrian flow, channelization, light coordination, intersection control, and devices as related to safe, convenient, and economical transportation of persons and goods.
- 553 **International Safety and Health. 3 hrs.**  
The course covers the impact of globalization on worldwide safety and health programs, and a wide variety of safety and health programs for various countries and multi-national organizations.
- 554 **Industrial Environmental Protection. 3 hrs.**  
Environmental protection as related to industrial settings. Air/water quality, noise and chemical pollution and hazardous material control.
- 554L **Industrial Environmental Auditing/Programming. 2 hrs.**  
Concerns development of an industrial environmental protection program for a small plant, including workplace experience in sampling/measurement of contaminants. (PR: SED 454, or 554 or 647)
- 557 **Biological Monitoring. 3 hrs.**  
The course covers the rationale for a biological monitoring program. Toxicokinetics, hazard potentials, and mechanism for exposure measurements are also covered. (PR- SED 554)
- 558 **Hospital Safety. 3 hrs.**  
The course covers the various aspects of safety and health in professional health care services.
- 565 **Accident Investigation/Reconstruction. 3 hrs.**  
An introductory course in accident investigation designed to give insight into the recognition and collection of evidence, collection and recording data and reconstructing the accident based on the facts.
- 575 **System Safety Engineering. 3 hrs.**  
A study of the analytical tools used in the recognition, evaluation and control of exposure to hazards in industry. (PR: MTH 120 or higher)
- 580-581 **Special Topics. 1-4 hrs.**
- 582 **Special Topics. 1-4 hrs.**
- 583 **Special Topics. 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs. (Permission)**
- 589 **Process Safety Management. 3 hrs.**  
A study of the latest industrial safety information which will assist the student in designing a program to reduce or eliminate all incidents which downgrade the system. (PR: SED 565)
- 591-594 **Workshop. 1-4; 1-4; 1-4; 1-4 hrs.**
- 597 **Occupational Safety and Health Programs. 3 hrs.**  
Safety functions in industry. Principles of organization and application of safety programs. Prevention, correction and control methods are outlined and evaluated.
- 598 **Environmental Safety and Health Legislation. 3 hrs.**  
A survey of the legislation that has affected the safety movement with special emphasis on the 1969 Coal Mine Health and Safety Act and the 1970 Occupational Safety and Health Act.
- 599 **Occupational Safety Program Management. 3 hrs.**  
A study of safety programs at the state and local levels including the administrative, instructional, and protective aspects of a comprehensive safety program in schools, occupations, home and public.
- 600 **Occupational Epidemiology. 3 hrs.**  
Study of epidemiological methods to assess the patterns and determinants of health and disease in populations.
- 601 **Safety in Transportation. 3 hrs.**  
Concerned with safe, efficient movement of people and goods. Involves highway, air, water, pipeline, and rails.
- 606 **Field Experience for the Safety Specialist. 3 hrs.**  
Concerned with the visitation and evaluation of the safety program of various agencies in the region.

- 610 Philosophical and Psychological Concepts of Occupational Safety and Health. 3 hrs.** An analysis of the educational philosophies and the application of these philosophies to occupational safety. A study of the effect of occupational safety on modern living.
- 630 Current Literature and Research in Occupational Safety and Health. 3 hrs.** An analysis and study of selected works of national and international authors concerning significant works in Occupational Safety.
- 645 Safety Engineering and Equipment Design. 3 hrs.**  
The design and engineering of facilities and equipment to meet the physical needs of the human as well as enhancing production.
- 647 Industrial Hygiene. 3 hrs.**  
Concerned with environmental health and safety hazards that arise out of or occur during work of employees.
- 647L Quantitative Industrial Hygiene Lab. 3 hrs.**  
A laboratory course designed to complement Industrial Hygiene. (CR: SED 647)
- 648 Industrial Ventilation. 3 hrs.**  
The course will cover the techniques of development, design, maintenance, and trouble shooting of industrial ventilation systems. Also the types of ventilation systems used for different types of toxic materials. (PR: SED 647 or SED 554 or permission)
- 649 Physical and Biological Hazards. 3 hrs.**  
The course will cover sources of biological and physical hazards for various industries and occupations. Hazard controls and preventive techniques will also be covered.
- 650 Internship for the Safety Specialist. 3 hrs.**  
Supervised experience on the job site. Involves the student working under safety personnel and analyzing and writing of experiences. (Permission)
- 651 Industrial Toxicology. 3 hrs.**  
The course will emphasize the principles of toxicology, dose-response relationships, xenotoxins, the distribution of toxins, and the storage of toxins. (PR: SED 554 or SED 647)
- 652 Industrial Noise and Vibration. 3 hrs.**  
A study of the physical characteristics of noise and vibration, and its effects on the human body. (PR: SED 554 or SED 647)
- 660 Human Factors in Accident Prevention. 3 hrs.**  
A study of the psychological principles and their applications to accident causation and prevention.
- 661 Advanced Occupational Ergonomics. 3 hrs.**  
The study and application of occupational ergonomics to the design and evaluation of various work environments. (PR: SED 660)
- 662 Methods in Work Analysis. 3 hrs.**  
To study, utilize, and critique several existing ergonomic analysis methods for specific intended purpose, and provide directions for new methodologies. (PR: SED 660)
- 669 Traffic Safety Management. 3 hrs.**  
Concerned with the total Traffic Safety Management Program, including vehicle registration, driver licensing, motorcycle driver education, and motor vehicle registration.
- 679 Problem Report. 1-3 hrs. (Permission)**
- 681 Thesis. 1-6 hrs.**
- 690-692 Seminar. 1-4 hrs.**

### SCHOOL PSYCHOLOGY (SPSY)

- 500 Student at Risk. 3 hrs.**  
Examination of issues related to serving students at risk within a school-community context. Environmental, familial, educational, and personal factors which place students in jeopardy will be explored as will strategies and/or techniques and programs for intervening in the lives of the at risk student. The literature related to drug and alcohol, dropping out, under-achievement, suicide, teenage pregnancy, child abuse and neglect, among others, and the educator's role and responsibility will be addressed.
- 525 Child Psychopathology. 3 hrs.**  
Introduction to the diagnosis of child psychopathology with major emphasis on developmental and acquired disorders, theories and syndromes of childhood. Appropriate placement and treatment models are considered.
- 601 School Practices I. 3 hrs.**  
Introduction to the roles and functions of school pupil personnel professionals, models of operation, problems, issues, and techniques. The organization and administration of school systems and philosophy of education are considered. Students may be expected to spend a minimum of one-half day a week observing in a local school.

- 602 **Issues in School Psychology. 3 hrs.**  
Examination of current professional issues, theoretical model and research related to delivery of school-based psychological services. Examination of the variety of methodologies and strategies for children of diverse backgrounds and exceptionalities. (PR: SPSY 601 or concurrently with 601).
- 616 **Advanced Developmental Psychology. 3 hrs.**  
Psychological development from conception with a focus on major developmental principles, issues, and concepts. An introduction to conducting research with developmental topics and experience in applying basic developmental principles to work situations will be provided.
- 617 **Prevention and Consultation Services in the Schools. 3 hrs.**  
Examination of current professional issues, theoretical models, and research related to the design and implementation of school-based primary prevention programs.
- 619 **Direct Intervention Services in the Schools. 3 hrs.**  
Delivery of mental health services in the schools focused on planning, implementing, and evaluating interventions for children who are experiencing problems. Strategies will include assessment, 504 accommodations, remedial labs, special education services and alternatives, behavior management, crisis intervention, short term counseling and therapy. (PR: SPSY 616 or PSY 615)
- 621 **Assessment of Children Practicum. 1 hr. CR/NC.**  
Students will be expected to administer, score, interpret and write reports for a battery of tests used with children.
- 622 **Assessment of Children. 3 hrs.**  
Theory and practice of child assessment including intelligence, personality and ability areas using a variety of norm referenced and criterion referenced measures. Specific instruction in report writing is included. Must be taken concurrently with 621
- 734 **Linking Assessment to the Curriculum. 3 hrs.**  
Advanced exploration of use of assessment approaches which have direct application to curriculum interventions with individual and groups of children to include criterion referenced, curriculum based and informal as well as norm-referenced approaches. (PR: SPSY 602, 619, 621, CISP 535 and CIRC 636)
- 740 **Practicum in School Psychology. 3 hrs. CR/NC.**  
Assessment behavior management and consultation experiences in a school setting, supervised by a certified school psychologist for 2 days per week. (PR: SPSY 734 or concurrent).
- 745 **Internship in School Psychology. 1-12 hrs. CR/NC.**  
Students may apply for permission to enroll for this course with the Coordinator of Field-Based Experiences. Students must request internship from the program faculty at least one semester in advance of their starting dates. This requires full-time experience for one school year or one half-time experience for two consecutive school years (minimum of 1200 clock hours). Each 1 hour credit requires 100 clock hours. The internship in School Psychology requires a contractual agreement between the school system, the university, and the student that outlines the responsibilities of each party. Students will be expected to assume the roles and responsibilities of functioning school psychologists in a school. (PR: SPSY 740)

## SOCIOLOGY (SOC)

- 501 **Population and Human Ecology. 3 hrs.**  
The course focuses on population and its relation to characteristics of environment. Specifically, it is designed to discuss the interaction of population processes and resources.
- 503 **Social Research II. 3 hrs.**  
Intermediate social research methodology with emphasis on research design. 2 lec-2lab. (Required of all M.A. candidates). (PR: SOC 344, 345 or equivalent)
- 508 **The Family. 3 hrs.**  
Theoretical analysis of the family as a primary social institution. (PR: SOC 200 or permission)
- 513 **Social Movements and Social Change. 3 hrs.**  
Analysis of large-scale social change, including intentional social movements and revolutions. (PR: SOC 200)
- 520 **Criminology. 3 hrs.**  
An overview of sociological criminology, including an examination of explanations of criminal behavior, types of criminal activity, and an analysis of the criminal justice system. (PR: SOC 200 and SOC 311 or permission)
- 521 **Sociological Theory. 3 hrs.**  
Examination of the emergence and development of theoretical orientations in Sociology. (PR: SOC 200)
- 523 **Social Class, Power and Conflict. 3 hrs.**  
Theoretical analysis of economic and political inequality and the role of social conflict in the process of large-scale social organization. (PR: SOC 200)



- 525 **Race and Ethnicity. 3 hrs.**  
 Diverse theoretical approaches to the meaning of race and ethnicity and the character of racial/ethnic relations, with substantive focus primarily on the U.S. (PR: SOC 200)
- 528 **Medical Sociology. 3 hrs.**  
 Social organization of modern medicine and allied health delivery systems. (PR: SOC 200 or departmental permission)
- 532 **Sociology of Appalachia. 3 hrs.**  
 Study of the economics, politics, and social relations of Appalachia, including contemporary debates. (PR: SOC 200)
- 533 **Industrial Sociology. 3 hrs.**  
 Study of the organization and structure of the workplant as a social system; the meaning and organization of work; managerial functions; management-labor relations; and human relations in industry. (PR: SOC 200 or permission)
- 535 **Juvenile Delinquency. 3 hrs.**  
 A sociological analysis of juvenile crime, including a review of the origins of juvenile delinquency, an evaluation of causal theories, and an overview of the juvenile justice system. (PR: SOC 200 and SOC 311 or permission)
- 540 **Introduction to the Sociology of Aging. 3 hrs.**  
 An introduction to the social processes and consequences of growing older for both the individual and society. (PR: SOC 200 )
- 542 **Urban Sociology. 3 hrs.**  
 The sociology of urban and metropolitan communities. (PR: SOC 200 or permission)
- 543 **Evaluation Research. 3 hrs.**  
 Analysis and application of theories and methods for assessing the outcomes of applied organizational services and programs to affect change in people and for social conditions. (PR: SOC 200)
- 545 **Social Statistics II. 3 hrs.**  
 Intermediate level statistical analysis, including analysis of variance and covariance, 2 lec-2 lab. (Required of all M.A. candidates). (PR: SOC 345 or equivalent)
- 550 **Sociology of Religion. 3 hrs.**  
 An investigation into the nature of religion as a social phenomenon. (PR: SOC 200 or permission)
- 552 **Sociology of Death & Dying. 3 hrs.**  
 The study of death and dying as a societal and cultural phenomenon. Explores how institutions within our society deal with death. (PR: SOC 200 or permission)
- 555 **Sociology of Sex and Gender. 3 hrs.**  
 Analysis of social differentiation and inequality by gender, with a focus on the contemporary U.S. (PR: SOC 200)
- 564 **Complex Organizations. 3 hrs.**  
 Analysis of complex organizations with special attention given to bureaucratic organization. (PR: SOC 200)
- 570-571 **Sociological Field Experience. 3; 3 hrs.**  
 Supervised field work in a social organization or community working on practical problems. (PR: SOC 406 or 506 or permission)
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**  
 Study of topics not covered in regularly scheduled courses. (PR: Graduate majors, SOC 200 or permission)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
 Individual study of topics not offered in regularly scheduled courses. (PR: For majors only; advance departmental permission is required)
- 597-598 **Instructional Television Course. 1-4 hrs.**  
 A course based upon Instructional Television Series broadcast by public television. The student is responsible for viewing the series on the air and satisfying all course requirements announced by the department.
- 601 **Advanced Sociological Theory. 3 hrs.**  
 Examination of current issues and controversies in Sociological theory. (PR: SOC 421 or SOC 521)
- 602 **Contemporary Social Change. 3 hrs.**  
 Theories of social change and their uses in analyzing social change of today. (PR: SOC 200 or permission)
- 603-604 **Behavioral Science I and II. 3; 3 hrs.**  
 Seminar in behavioral science theory. (PR: SOC 200 or permission)
- 615 **Applied Demography. 3 hrs.**  
 The focus of this course is to study the application of the principles and methods of demography to decision making and planning problems in both public and private setting. (PR: SOC 200 or permission)

- 620 **Criminology. 3 hrs.**  
Seminar in crime and delinquency. (PR: SOC 200 or permission)
- 640 **Problems and Prospects for an Aging Society. 3 hrs.**  
Seminar in current and anticipated social consequences of aging for individuals and society and societal responses to this process. (PR: SOC 200 or permission)
- 655 **Feminist Social Theory. 3 hrs.**  
Diverse theoretical perspectives on the origins and nature of gender, inequality. Emphasis on contemporary debates and their political implications. (PR: SOC 200 or permission)
- 668 **Seminar. 1-3 hrs.**  
Topics vary from semester to semester. (PR: SOC 200 or permission)
- 679 **Problem Report. 1-3 hrs.**  
The preparation of a written report on a research problem or field study in sociology under direction of member of graduate faculty. (PR: Departmental permission)
- 681 **Thesis. 1-6 hrs. I, II, S.**  
Individual research in a selected field of sociology under the direction of a graduate faculty member of the department. (PR: Admission to candidacy and staff approval of thesis proposal.)

### SPANISH (SPN)

- 505 **Pedagogy and Instructional Experience in the Middle School. 3 hrs.**  
Students plan and deliver beginning Spanish instruction to middle school students.
- 506 **Composition, Conversation, and Introduction to Hispanic Literature. 3 hrs.**  
Continuing supervision of students' teaching experiences. Continued attention to advanced grammar concepts, composition and conversation, and reading proficiency with an emphasis on the introduction of Hispanic literature.
- 510 **Spanish Literature from the Cid Through the 17th Century. 3 hrs.**  
On demand. Readings, lectures, reports and discussions of significant literary works from the Cid through the 17th century. (PR: 6 hours of literature numbered 318 or above or equivalent)
- 560 **The Modernist Movement. 3 hrs. S.**  
The precursors of the Modernist Movement, its chief exponents, and its influence on the literature of Spanish America and Spain. Readings, lectures, discussions, and reports in Spanish. (PR: 6 hours of literature numbered 318 or above or equivalent)
- 561 **Advanced Syntax and Stylistics. 3 hrs. S.**  
A detailed analysis of Spanish syntax and shades of meaning with the writing of original compositions in Spanish to perfect the student's own style. (PR: SPN 204 or equivalent)
- 580-583 **Special Topics. 1-4; 1-4; 1-4; 1-4 hrs.**
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
Independent research in selected areas of Spanish and Spanish American literature that are not available in other courses in the catalog. The student has the opportunity to become familiar with leading authorities and bibliographies. Conferences and reports in Spanish. (PR: 6 hours of literature numbered 318 or above or equivalent and permission of instructor)
- 610 **Readings in Spanish or Spanish American Literature. 1-3 hrs.**  
Readings designed for the graduate student who has the interest and the ability to study in depth a certain author, genre, or literary movement. (PR: 6 hours of literature numbered 318 or above or equivalent and permission of instructor)
- 612 **Spanish-American Romanticism. 3 hrs.**  
Leading writers and trends in thought and versification of the romantic period. (PR: 6 hours of literature numbered 318 or above or equivalent)
- 620 **Spanish Romanticism. 3 hrs.**  
The trends and characteristics of the romantic period in the writings of its leading exponents in lyric poetry, non-dramatic prose, and the theatre. (PR: 6 hours of literature numbered 318 or above or equivalent)
- 625 **Spanish Literature of the Twentieth Century. 3 hrs.**  
Emphasis on prose, poetry and the theatre since 1936, including writers in exile. (PR: 6 hours of literature numbered 318 or above or equivalent)
- 679 **Problem Report. 1-3 hrs. (PR: Permission)**
- 681 **Thesis. 1-6 hrs. (PR: Permission)**

### SPECIAL EDUCATION (See Curriculum and Instruction)

**SPEECH**  
(See Communication Studies)

**SPEECH PATHOLOGY**  
(See Communication Disorders)

**TECHNOLOGY AND ENGINEERING (TE)**

- 601 Technology and Engineering Seminar 2 hrs. S/U.**  
Orientation of the participants to the CITE graduate programs; technical report writing and communication skills; introduction to practical elements of the discipline; outline final comprehensive project requirements.
- 698 Comprehensive Project I. 2 hrs. S/U.**  
A real-world problem or concept is selected by the student as the basis of his or her comprehensive project. Research techniques are outlined. Student submits a final proposal for the comprehensive project. (PR: TE 601 and have completed min. 17 credit hours)
- 699 Comprehensive Project II. 2 hrs. S/U.**  
Student is expected to finalize comprehensive project at the end of this course period. The student submits final comprehensive project and makes a formal oral presentation. (PR: TE 698 and have completed min. 25 credit hours)

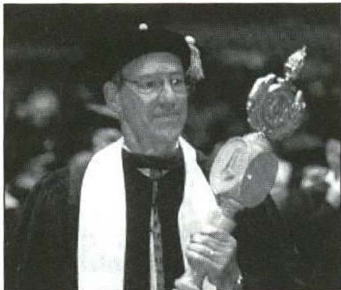
**TECHNOLOGY MANAGEMENT (TM)**

- 600 Program Introduction Seminar. 1 hr.**  
This course reviews fundamental mathematical and statistical methods, presentations, report writing, group project skills, and use of case studies. An orientation and overview to the degree program are also provided. (PR: Full Admission to TM program, or permission of TM Program Director)
- 610 Technology and Innovation Management. 3 hrs.**  
Provides a comprehensive introduction to technology and innovation management. Considers issues relating to international markets, innovation, and rapidly changing technology. Also covers effective organizational and managerial approach to technology. (PR: Full Admission to TM program, or permission of TM Program Director)
- 612 Economic and Financial Analysis for Technology Management. 3 hrs.**  
Tools and techniques for financial analysis, cost estimation, budgeting, and control, for technology-oriented projects and organizations. Includes financial statements, economic analysis, reporting, and life-cycle costing and control principles. (PR: TM 610 or permission of Program Director)
- 615 Information Technology Strategies. 3 hrs.**  
This course provides sound principles for managing information technology-computers and telecommunication systems - as well as the processes and procedures for applying the principles. (PR: TM 610 or permission of Program Director)
- 620 Technology Planning. 3 hrs.**  
Methods of technology planning, strategic management, and forecasting for use in technology intensive organizations are discussed, including technology life cycles and strategies for commercializing products. (PR: TM 610 or permission of Program Director)
- 630 Quality and Productivity Methods. 3 hrs.**  
Study of quality and productivity improvement methods with emphasis on applications to knowledge worker organizations. Examines total quality management, and personal and organizational productivity improvement processes. (PR: TM 610 or permission of Program Director)
- 650-653 Special Topics. 1-4 hrs.**  
Occasional offerings of current topics in technology management, providing important supplementary material for participating students. (PR: Full Admission to TM program or permission of TM Program Director)
- 660 Computing and Information Systems Technologies. 3 hrs.**  
Provides a broad understanding of computing and information systems technologies with emphasis on development, current trends, strategic and tactical management, and legal and regulatory issues. (PR: TM 615 or permission of Program Director)
- 685-688 Independent Study. 1-4 hrs.**  
An approved study of special interest concerning technology management, under the supervision of a faculty member. (PR: Full Admission to TM program, or permission of TM Program Director)



## THEATRE (THE)

- 510 **Playwriting. 3 hrs.**  
Study of dramatic structure, characterization, dialogue, themes, sounds, and spectacle, including the writing of one-act plays. (PR: THE 101 or permission of instructor.)
- 520 **Acting for the Musical Theatre. 3 hrs.**  
Analysis of musical scripts: study of spoken and musical scenes; staging musical numbers; and preparation of audition material. (PR: THE 222)
- 521 **Acting for the Camera. 3 hrs.**  
Projects in acting for the camera. Video taping of selected acting exercises. (PR: THE 222)
- 523 **Stanislavsky System of Acting. 3 hrs.**  
Study of the Stanislavsky System of Acting and using it in preparing and performing excerpts from plays.
- 536 **Children's Theatre. 3 hrs.**  
Theory, direction, and staging of plays for children.
- 537 **Directing I. 3 hrs.**  
Introduction to theories, principles, techniques, and history of directing. (PR: THE 150, 151, 152, and 222)
- 538 **Directing II. 3 hrs.**  
In-depth study of directorial approaches. Analysis of contemporary movements and leaders in the field. Students must stage productions as part of class requirement. (PR: THE 537 or permission of instructor)
- 539 **Directing for the Camera. 3 hrs.**  
Projects in directing for the camera. Video taping of selected directing exercises. (PR: THE 437/537 or permission of instructor)
- 540 **Theatre History to 1660. 3 hrs.**  
Survey of man's activities in the theatre from primitive times to 1660. (PR: THE 101 or permission of instructor)
- 541 **Theatre History since 1660. 3 hrs.**  
Survey of man's activities in the theatre from 1660 to the present. (PR: THE 101 or permission of instructor)
- 550 **Stage Lighting III. 3 hrs.**  
Advanced study in the aesthetic principles of lighting design. Emphasis on design principles in non-proscenium theatres. (PR: THE 350)
- 560 **Scene Design II. 3 hrs.**  
Advanced work in the process and styles of design for the stage. Emphasis on abstraction, different materials, and designing for various theatre forms. (PR: THE 261, 360)
- 580-583 **Special Topics in Theatre. 1-4; 1-4; 1-4; 1-4 hrs.**  
Program of study not normally covered in other courses. Topics vary from semester to semester. (PR: Permission of chairman)
- 585-588 **Independent Study. 1-4; 1-4; 1-4; 1-4 hrs.**  
Courses taught by tutorials; directed independent readings or research; problem reports, and other activities designed to fill the needs of individual students. (PR: Permission of chair)



# The Faculty

\* Signifies Associate Status

† Signifies Full Doctoral in the Biomedical Sciences

## DIVISION OF ACCOUNTANCY AND LEGAL ENVIRONMENT

### *Professor*

**Gary Saunders**, B.E.S. 1964, MBA, Marshall; DBA 1977, Kentucky

### *Associate Professor*

**Patricia A. Broce**, B.B.A. 1984, Marshall; M.B.A., 1986, Marshall; D.B.A., 1991, Kentucky (C.P.A.)

**Bruce P. Conrad**, B.S., 1970, Baldwin-Wallace College; M.B.A. 1983, SUNY (CPA, CFP)

**Robert F. Forçét, Sr.**, B.A., 1975, Florida Atlantic; M.B.A. 1989, U. of New Hampshire (C.P.A.)

**Stephen Jakubowski**, B.S. 1974, St. Joseph College; M.S. 1977, Central Michigan; Ph.D. 1988, Kent State

**Anna Lee Meador**, B.S., 1960, M.S. 1983, Marshall; D.B.A, 1989, Memphis State (C.P.A.)

### *Assistant Professor*

**Suneel K. Maheshwari**, B.C. 1985, Delhi; M.M.S. 1987, U. of Bombay; M.C. 1991, Miami; Ph.D. 1998, Florida Atlantic

## ADULT AND TECHNICAL EDUCATION

### *Professor*

**Howard R. Gordon**, B.S. 1979, M.S. 1981, Tuskegee Institute; Ed.D., 1984, Virginia Polytechnic Institute

**LeVene A. Olson** (div. chair), B.S. 1966, Ed.D. 1971, Georgia

**Clara C. Reese**, B.A. 1969, Lenoir Rhyne; M.S. 1972, Ed.D. 1980, North Carolina State.

**Laura Wyant**, B.A. 1982, M.S. 1988, Marshall; Ph.D., 1995, Ohio State

### *Assistant Professor*

\***Betty Sias**, B.A. 1992, M.S. 1994, Marshall

## ANATOMY, CELL AND NEUROBIOLOGY

### *Professor*

**Patrick I. Brown**, (Assoc. Dean for Academic and Student Affairs), B.A. 1965, Murray State; M.S. 1967, Kentucky; Ph.D. 1975, Southern Illinois

**William Rhoten** (chair), B.S. 1965, Colorado State; M.S. 1968, Illinois; Ph.D. 1971, Pennsylvania State

**Sasha Zill**, B.A. 1966, Columbia; Ph.D. 1979, U. of Colorado Medical School

*(continued)*

*Associate Professor*

**Mitchell Berk**, B.S. 1971, M.S. 1973; U. of Illinois (Urbana); Ph.D. 1978, George Washington

**Stephen E. Fish**, B.A. 1965, Sonoma State; Ph.D. 1979, California-Davis

*Adjunct Professor*

\***Jai Parkash**, B.A. 1975, U. of New Delhi; M.Sc. 1978, M. Phil. 1980, Ph.D., 1986, Jawaharlal Nehru U.

## ART

*Professor*

**Earline Allen**, B.A. 1965, M.A. 1966, Marshall; M.F.A. 1978, Ohio

**Michael I. Cornfeld**, B.A. 1964, Indiana; M.F.A. 1967, Carnegie Institute

**Robert Lemon**, B.A. Bard, 1963; M.A. 1969, Ph.D. 1976, Ohio

**Susan Power**, B.F.A. 1973, M.A. 1975, Ed.D. 1982, U. of Georgia

**Robert E. Rowe**, B.A. 1978, U. Fla.; M.A. 1978, Indiana U.

**Stanley Sporny**, B.F.A. 1968, Philadelphia College of Art; M.F.A. 1972, Pennsylvania

*Associate Professor*

**Susan Jackson**, B.A. 1979, MA 1981, Ph.D. 1991, Ohio.

**Beverly Marchant**, B.A. 1968, Randolph-Macon Woman's College; M.A. 1973, Virginia Commonwealth; Ph.D. 1983, State U. of NY-Binghamton

**Peter A. Massing**, B.F.A. 1985, NY at Buffalo; M.F.A. 1989, Ohio State

*Assistant Professor*

**Jonathan Cox**, B.F.A. 1972, U. of Florida; M.F.A. 1975, Rhode Island School of Design

## BIOCHEMISTRY and MOLECULAR BIOLOGY

*Professor*

**Michael Moore**, B.S. 1966, St. Joseph's; M.S. 1969, Ph.D. 1975, Georgia

†**Richard Niles**, B.A. 1968, Rhode Island College; M.S. 1970, U. of New Hampshire; Ph.D. 1972, U. of Massachusetts, Amherst

*Associate Professor*

†**Vernon Reichenbecher, Jr.**, B.S. 1970, West Virginia; Ph.D. 1976, Duke

*Assistant Professor*

**Beverly Delidow**, B.S. 1980, M.S. 1981, U. of Michigan; Ph.D. 1988, U. of California, Berkeley

## BIOLOGICAL SCIENCES

*Professor*

**James Brumfield**, B.S. 1961, M.S. 1964, Marshall; Ph.D. 1990, Union Institute

**Wayne Elmore**, B.A. 1969, Western Kentucky; Ph.D. 1973, Vanderbilt

**Dan Evans**, B.S. 1956, Murray State; M.S. 1972, Ph.D. 1976, Southern Illinois

**Frank Gilliam**, B.S. 1976, Vanderbilt; M.F. 1978, Ph.D. 1983, Duke

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## COMMUNICATION DISORDERS

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## HUMANITIES

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### *Professor*

- Robert P. Alexander**, B.A. 1957, M.A. 1960, Marshall; Ph.D. 1969, Ohio
- W. Blaker Bolling**, B.S.I.E. 1964, M.S.I.E. 1969, Virginia Polytechnic Institute; D.B.A. 1979, Virginia
- Bob S. Brown**, B.S.B.A. 1966, M.B.A. 1968, WVU; Ph.D. 1977, American U.
- Earl Damewood**, B.S. 1964, Concord; M.S. 1973, Ph.D. 1981, West Virginia
- Suzanne B. Desai**, B.A. 1969, Cleveland State; M.S.S.A. 1971, Case Western Reserve; M.B.A. 1979, Cleveland State; Ph.D. 1988, Kent State
- Chong W. Kim** (div. head), B.A. 1966, Yon Sei; M.B.A. 1971, Miami; Ph.D. 1976, Ohio State
- Marjorie McInerney**, B.S.B.A. 1975, Akron; M.B.A. 1977, Marshall; Ph.D. 1983, Ohio State
- Phil Rutsohn**, A.A.S. 1964, SUNY Farmingdale; B.A. 1967, New Mexico Highlands; M.S. 1968, Oklahoma State; Dr. P.H. 1976, The U. of Texas Health Sciences Center
- Andrew Sikula, Sr.** (Associate Dean, Director of Graduate Studies, Richard Miller Distinguished Professor of Management). B.A. 1966, Hiram; M.B.A. 1967, Ph.D. 1970, Michigan State
- John B. Wallace**, B.S. 1964, U. of Louisville; M.A. 1996, Ph.D. 1968, U. of Florida

### *Associate Professor*

- Joe Abramson**, B.S. 1968, LA. State; M.B.A. 1970, Michigan State; Ph.D. 1977, American U.
- Charles Braun**, B.E.S. 1980, St. Cloud State U.; M.A. 1986, Minnesota; Ph.D. 1994, Kentucky
- D. Stephen Cupps**, B.A. 1963, Duke; Ph.D. 1970, Princeton
- Dennis C. Emmett**, B.A. 1972, Thiel College; M.B.A. 1974, D.B.A. 1978, Kent State
- Dae Sung Ha**, B.S. 1975, Seoul National; M.B.A. 1980, Seoul; M.S. 1984, Ph.D. 1991, Penn State
- Deanna Mader**, M.B.A. 1975, M.A. 1987, Western Kentucky; Ph.D. 1974, Georgia
- Frederick Mader**, B.S. 1975, M.S. 1978, Western Kentucky; M.B.A. 1981, Ph.D. 1988, Georgia
- Kurt E. Olmosk**, B.S. 1964, Case Institute of Technology; Ph.D. 1970, Case Western Reserve University

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*Assistant Professor*

- Juett R. Cooper**, B.A. 1988, Ottawa U.; M.B.A. 1990, James Madison; Ph.D. 1995, Kentucky  
**Rick Weible**, B.B.A. 1977, M.B.A. 1984, Marshall; Ph.D. 1993, Mississippi State

## MATHEMATICS AND APPLIED SCIENCES

*Professor*

- David A. Cusick**, B.A. 1966, M.A. 1968, Ph.D. 1971, Indiana  
**John Drost**, B.S. 1978, Florida International; Ph.D. 1983, Miami  
**John S. Lancaster**, B.A. 1966, M.A. 1969, Ph.D. 1972, Indiana  
**Evelyn Pupplo-Cody**, B.S. 1973, San Joseph College; M.A. 1977, SUNY; Ph.D. 1972, Kentucky  
**Gerald E. Rubin**, B.S. 1964, Penn State; M.S. 1966, State NY; Ph.D. 1977, George Washington  
**Judith Silver (interim chair)**, B.S. 1969, Walla Walla; M.A.T. 1971, Washington, Seattle; Ph.D. 1988, Kentucky

*Associate Professor*

- Laura Adkins**, B.A. 1981, M.A. 1982, Marshall; M.S. 1990, Ph.D. 1996, Ohio State  
**Ariyadasa Aluthge**, B.S. 1981, Kelaniya, Sri Lanka; M.S. 1985, Ottawa; Ph.D., 1990, Vanderbilt  
**Hamid Chahryar**, B.E. 1975, Engineering U., Tehran; M.S. 1977, Claude Bernard U., France; Ph.D. 1980, U. of Paris

## MEDICINE

*Professor*

- Bruce Chertow**, M.D. 1965, U. of Illinois, Chicago  
**Henry K. Driscoll**, B.S. 1975, M.S. 1976, M.I.T.; M.D. 1981, U. of Massachusetts, Worcester  
**John W. Leidy**, Sc.B. 1972, Brown; Ph.D. 1979, M.D. 1979, Washington

*Adjunct Professor*

- \***Jack E. Terry**, M.S. 1975, O.D. 1975, Ohio State U.; Ph.D. 1995, Marshall

## MICROBIOLOGY, IMMUNOLOGY AND MOLECULAR BIOLOGY

*Professor*

- †**Terry W. Fenger**, B.A. 1970, Ph.D. 1976, Southern Illinois  
**Donald Primerano**, B.S. 1976, St. Vincent; Ph.D. 1982, Duke

*Associate Professor*

- †**Susan Jackman**, B.S. 1971, M.S. 1974, Marquette; Ph.D. 1984, Iowa

*Assistant Professor*

- Elizabeth Bryda**, B.S. 1985, Tufts; M.S. 1988, Ph.D. 1992, Rutgers and U. of Medicine and Dentistry of New Jersey  
**Suellen Ferraris**, B.A. 1965, Hope College; Ph.D. 1969, U. of Colorado  
**Jeffrey D. Wells**, B.A. 1982, U. of Washington; M.S. 1985, Washington State; Ph.D. 1992, U. of Illinois  
**Hongwei Yu**, B.S. 1983, Shandong College; M.S. 1990, U. of Alberta; Ph.D. 1993, U. of Calgary



## MODERN LANGUAGES

### *Professor*

**Maria-Carmen Riddel**, B.A. 1975, Marshall; M.A. 1977, Universidad De Salamanca (Spain); Ph.D. 1988, Ohio State

### *Assistant Professor*

**Maria Burgueno**, B.A. 1969, Instituto Alfredo Vázquez Acevedo; M.A. 1994, Ph.D. 1996, Ohio State

**Carlos M. Lopez**, M.A. 1976, Instituto Alfredo Vázquez Acevedo; Ph.D. 1995, Ohio State

## MUSIC

### *Professor*

**Paul Balshaw**, B.M. 1960, M.M. 1962, D.M.A. 1963, Eastman School of Music

**Edwin Bingham**, B.M. 1976, Tennessee; M.M. 1978, Juilliard; D.M.A. 1988, Kentucky

**David H. Castleberry**, B.M. 1978, Furman; M.M. 1980, D.M.A. 1992, U. of Texas at Austin

**W. Richard Lemke**, B.S. 1961, M.S. 1963, Indiana State; Ph.D. 1979, Iowa

**Ben F. Miller**, B.M.E. 1971, Indiana; M.A. 1973, D.M.A. 1988, Iowa

**Marshall Onofrio**, B.S. 1977, B.M. 1978, Connecticut; M.M. 1979, Illinois; M.M. 1982, Nebraska; D.M.A. 1987, Ohio State

**M. Leslie Petteys**, B.M. 1972, M.M. 1975, Colorado; D.M.A. 1987, Missouri-Kansas City

**Elizabeth Reed Smith**, B.M., 1979, Eastman School of Music; M.M. 1981, Yale; D.M.A. 1983, Eastman School of Music

**Larry Stickler**, B.M. 1969, M.M. 1973, D.M. 1988 (music education), Indiana

**Donald A. Williams**, B.S. 1959, Indiana State; M.M. 1960, Butler; D.M.A. 1975, Michigan

### *Associate Professor*

**James S. Hall**, B.M.E. 1981, M.M. 1982, Morehead State

**Joy Ratliff**, B.M. 1968, SE Louisiana State; M.M. 1969, Northwestern U.; D.M.A. 1997, U. of Maryland

**Leo Welch**, B.M. 1984, Potsdam State U.; M.M. 1985, D.M.A. 1989, Florida State

### *Assistant Professor*

**Susan Tephly**, B.M. 1986, Eastman School of Music; M.M. 1989, D.M.A. 1995, Illinois

### *Adjunct Professor*

**Jane Daniel**, B.F.A. 1990, M.A. 1992, Marshall; Ph.D. 1997 Ohio University

## NURSING

### *Professor*

**Madonna Combs**, B.S.N. 1970, M.S.N. 1972, Kentucky; M.A.C.E. 1978, Morehead State; D.N.Sc. 1996, Rush

**Barbara Davis**, B.S.N. 1970, M.S.N. 1982, Kentucky; Ph.D. 1988, Texas Woman's

**Linda Scott**, B.A. 1980, Stephen's College; A.S. 1981, St. Petersburg Junior College; M.S.N. 1985, U. of Florida; Ph.D. 1994, U. of South Florida

**Karen Stanley**, B.S.N. 1984, West Virginia; M.S. 1986, Ohio State; D.N.Sc. 1996, Rush

**Diana P. Stotts**, B.S.N. 1974, Kentucky; M.S.N. 1981, U. of Texas Health Science Center at San Antonio; Ph.D. 1990, U. of Texas at Austin; CS-FNP

**Lynne Welch** (Dean), B.S. 1963, U. of Connecticut; M.S.N. 1968, Catholic U. of America; Ed.D. 1979, Teachers College, Columbia

### *Associate Professor*

**Rebecca Appleton**, B.S.N. 1983, M.S. 1987, Ohio State; Ph.D. 1995, U. of Utah

*(continued)*

\***Lou Ann Hartley**, B.S.N. 1980, M.S.N. 1987, West Virginia; C.N.A.A.

\***Robin L. Walton**, B.S.N. 1987, Marshall; M.S.N. 1990, Bellarmine College; Ed.D. 1998, West Virginia

*Assistant Professor*

\***Nancy Fagan**, A.D.N. 1974, B.S.N. 1982, Ohio; M.S.N. 1994, Marshall; CS-FNP

*Adjunct Professor*

\***Robert Stanton**, B.S. 1979, West Virginia; M.B.A. 1985, U. of Wisconsin-Madison; Pharm.D. 1989, Kentucky

## **PATHOLOGY AND MICROBIOLOGY**

*Assistant Professor*

**Darshana Shah**, B.S. 1980, U. of Bombay; M.S. 1987, U. of Maryland; Ph.D. 1993, West Virginia

## **PHARMACOLOGY**

*Professor*

**Carl A. Gruetter**, B.S. 1972, Penn State; Ph.D. 1978, Tulane

**Gary O. Rankin** (chair), B.S. 1972, Arkansas-Little Rock; Ph.D. 1976, Mississippi

**Mark A. Simmons**, B.S. 1976, South Carolina; Ph.D. 1983, Loyola of Chicago

**John L. Szarek**, B.S. 1980, Illinois; Ph.D. 1984, Kentucky

**Monica A. Valentovic**, B.S. 1978, Michigan Tech.; M.S. 1980, Toledo; Ph.D. 1983, Kentucky

*Adjunct Professor*

\***James Krause** (Assoc. D.S.), B.S. 1974, Ph.D. 1980, U. of Wisconsin

\***Lawrence H. Lash**, B.A. 1980, Case Western Reserve; Ph.D. 1985, Emory

## **PHILOSOPHY**

*Professor*

**John N. Vielkind** (chair), B.A. 1967, St. Mary's; M.A. 1970, Ph.D. 1974, Duquesne

*Associate Professor*

**Jeremy Barris**, B.A. 1980, Rhodes U.; B.A. 1981, M.A. 1983, U. of Capetown; M.S. 1984, Pittsburg; Ph.D. 1990, SUNY, Stony Brook

**Jeffery Powell**, A.B. 1981, Ohio; M.A. 1984, Duquesne; M.A. 1989, Loyola; Ph.D. 1994, DePaul

## **PHYSICS AND PHYSICAL SCIENCE**

*Professor*

**R. Elwyn Bellis**, B.S. 1961, M.Sc. 1962, Ph.D. 1964, Wales

**Ralph E. Oberly**, B.S. 1963, Ph.D. 1970, Ohio State

\***Nicola Orsini** (chair), B.S. 1972, M.S. 1973, Western Michigan; Ph.D. 1977, Michigan

**Thomas E. Wilson**, B.A. 1974, U. of Evansville; M.S. 1976, U. of Hawaii; Ph.D. 1984, Indiana

## **PHYSIOLOGY**

*Professor*

**William McCumbee**, B.S. 1965, St. Edwards; M.A. 1965, Sam Houston State; Ph.D. 1977, Houston

†**Gary Wright**, B.S. 1968, Eastern Kentucky; M.S. 1970, New Mexico; Ph.D. 1974, Ohio State

*Associate Professor*

†**Todd Green**, B.S. 1978, Florida State; Ph.D. 1986, Virginia

†**Elsaines Mangiarua**, M.S. 1976, Ph.D. 1983, U. of Buenos Aires, Arg.

*Assistant Professor*

**Lawrence Grover**, B.S. 1982, South Sevanee; M.A. 1984, Ph.D. 1986, Princeton

## **POLITICAL SCIENCE**

*Professor*

**Clair W. Matz**, B.A. 1958, Albright College; M.A. 1966, Lehigh; Ph.D. 1970, U. of Virginia; M. Divi. 1961, United Theological Seminar

**Simon D. Perry**, A.B. 1954, Berea College; M.A. 1955, Tennessee; Ph.D. 1961, Michigan State

**Troy Stewart**, B.A. 1968, M.A. 1969, Marshall; Ph.D. 1973, West Virginia

*Associate Professor*

**W. Lynn Rigsbee**, B.S. 1981, Campbell; M.A. 1984, Ph.D. 1990, U. of Cincinnati

\***Robert Behrman**, B.A. 1967, DePauw; Ph.D. 1986, Indiana

*Assistant Professor*

\***Cheryl Brown**, B.S. 1987, M.P.H. 1990, Columbus College; Ph.D. 1997, Georgia State

**Christine Henderson**, A.B. 1989, Smith College; Ph.D. 1997, Boston College

## **PSYCHOLOGY**

*Professor*

**Marty J. Amerikaner** (chair), B.A. 1972, SUNY-Albany; M.A. 1975; Ph.D. 1978, Florida

**Elaine Baker**, B.A. 1967, Heidelberg; M.A. 1969, Ph.D. 1972, Miami

**Fred Krieg**, B.S. 1967, Boston University; M.A. 1968, U. of Massachusetts; M.S. 1971, O.D. 1972, Ph.D. 1973, Ohio State

**Marc A. Lindberg**, B.A. 1971, Minnesota; M.A. 1973, Ph.D. 1976, Ohio State

**Steven P. Mewaldt**, B.A. 1969, Cornell; M.A. 1972, Ph.D. 1975, Iowa

**Stephen L. O'Keefe**, B.S. 1965, M.A. 1967, Ohio State; Ph.D. 1973, Peabody College of Vanderbilt U.

**Robert A. Wilson**, B.A. 1966, College of Wooster; M.A. 1968, U. of Akron; Ph.D. 1971, U. of Houston

**Joseph Wyatt**, B.A. 1969, Morris Harvey; M.S. 1970, Miami; Ph.D. 1980, West Virginia

*Associate Professor*

**Mariana Footo-Linz**, B.A. 1983, M.A. 1986, Marshall; Ph.D. 1991, North Carolina

**Delbert A. Lawhon**, B.S. 1965, Kentucky Christian College; M.A. 1967, Marshall; Ed.D. 1972, West Virginia

**Christopher W. LeGrow**, B.S. 1987, Plymouth State College; M.S. 1989, Ph.D. 1992, Ohio

**James W. Moore, Jr.**, B.A. 1964, B.S. 1965, Texas A & I; Ph.D. 1977, Houston

**Pamela Mulder**, B.A. 1978, Whittier College; M.A. 1985, California State, Fresno; Ph.D. 1991, California School of Professional Psychology

*Assistant Professor*

**Elizabeth R. Boyles**, B.A. 1984, North Carolina at Chapel Hill; M.S. 1987, S.S.P. 1988, Winthrop College; Ph.D. 1999, North Carolina at Chapel Hill

**Grace Davis**, B.A. 1979, National Taiwan Normal U.; M.A. 1990, Springfield College; Ph.D. 1999, Southern Mississippi

**Tony Goudy**, B.A. 1985, West Virginia; Ph.D. 1994, Penn State.

*(continued)*

*Adjunct Professor*

- \***Thomas Bell**, B.A. 1976, West Virginia; M.A. 1980, Ph.D. 1987, Western Michigan
- \***Karen Binkley**, B.S. 1971, M.A. 1976, Ed.D. 1997, Indiana U. of Pa.
- \***Dennis Kojza**, B.A. 1970, M.A. 1975, Indiana U. of Pa.; Ph.D. 1981, University State International U.
- \***Janice Lawrence**, B.A. 1951, M.A. 1957, Marshall; Ed.D.
- \***Michael Marshall**, B.A. 1976, M.A. 1980, California State; Ph.D. 1987, Claremont
- \***Roger P. Mooney**, B.A. 1969, Concord College; M.A. 1970, Radford; Ed.D. 1989, The U. of Sarasota
- \***James Phifer**, B.A. 1981, Wheaton College; M.A. 1985, Ph.D. 1991, Louisville
- \***Timothy Saar**, B.A. 1985, U. of Southern California; M.A. 1988, Loyola Marymont
- \***John Todd**, B.S. 1980, College of Charleston, SC; M.S. 1983, Ph.D., North Texas

**READING EDUCATION**

*Professors*

- E. Noel Bowling**, B.A. 1969, M.A.T. 1970, Lynchburg College; Ed.D. 1975, U. of Virginia; Post Doctorate 1990, Ohio State
- Susan T. Ferrell**, B.A. 1971, M.A. 1974, Marshall; Ed.D. 1980, Kentucky
- Arthur S. Maynard, Jr.**, B.S. 1964, Virginia Polytechnic Institute; M.S. 1966, North Carolina; M.A. 1977, Marshall; Ph.D. 1978, Ohio

*Associate Professor*

- Thomas A. Caron**, B.A. 1970, Carleton; M.Ed., 1985, Western Washington; Ph.D. 1989, U. of Victoria

*Assistant Professor*

- Barbara O'Byrne**, Certificate in Secondary Education, 1979, McGill; M.A. 1981, Concordia College; Ph.D. 1995, U. of Toronto

*Adjunct Professor*

- \***Madonna Blyler**, B.A. 1972, West Virginia; M.A. 1983, West Virginia College of Graduate Studies
- \***Judy Chandler**, B.S. 1973, Concord College; MA. 1984, WV College of Graduate Studies
- \***Bonita Curry**, B.S. 1973, Fairmont State College; M.A. 1982, WV College of Graduate Studies
- \***Sharon Diaz**, B.A. 1969, Fairmont State College; M.A. 1977, West Virginia
- \***Myra Pat East**, B.A. 1971, Eastern Nazarene College; M.A. 1981, WV College of Graduate Studies; Ed.S., 1995, West Virginia Graduate College
- \***Janet Eggleston**, B.A. 1965, Concord College; B.A. 1975, University of Central Florida; M.S. 1983, Radford U.; Ed.S. 1996, West Virginia Graduate College
- \***Patricia Knowles**, B.S. 1974, Florida International; M.A. 1978, WV College of Graduate Studies
- \***Franklin R. Mace**, B.A. 1975, Morris Harvey College; M.A. 1982, WV College of Graduate Studies
- \***Patricia Serles**, B.S. 1972, West Virginia State College; M.A. 1990, Ed.S. 1992, West Virginia Graduate College
- \***Ray Singleton**, B.A. 1979, U. of Charleston; M.A. 1997, West Virginia Graduate College
- \***Sue Talbott**, B.S. 1973, Davis & Elkins College; M.A. 1977, U. of North Florida
- \***Anna Denise White**, B.A. 1972, WV Institute of Technology; M.A. 1983, WV Graduate College
- \***Pam Yearego**, B.S. 1976, West Virginia State College; M.A. 1986, West Virginia College of Graduate Studies; M.A. 1997, Marshall Graduate College



\***Gregory Zickafoose**, B.A. 1981, WV Institute of Technology; M.A. 1988, WV College of Graduate Studies; M.A. 1995, West Virginia Graduate College

## **SOCIOLOGY AND ANTHROPOLOGY**

### *Professor*

**Lynda A. Ewen**, B.A. 1965, Hartwick College; M.A. 1967, Ph.D. 1970, U. of Wisconsin  
**Nicholas P. Freidin**, A.B. 1973, Georgetown; D.E.A. 1975, Oxford; D. Phil. 1981, Oxford

### *Associate Professor*

**Richard Garnett**, B.A. 1980, U. of Vermont; M.A. 1987, Ph.D. 1993, North Carolina  
\***Gary A. Jarrett**, B.A. 1973, M.A. 1975, Marshall  
**Karen L. Simpkins**, B.A. 1966, Beruit; M.A. 1969, North Carolina; Ph.D. 1976, Edinburgh

### *Adjunct Professor*

\***Robert F. Maslowski**, B.A. 1968 Holy Cross College; Ph.D. 1978, U. of Pittsburgh

## **SPECIAL EDUCATION**

### *Professor*

**Robert S. Angel**, B.A. 1969, Queen; M.S. 1972, Long Island; Ph.D. 1977, Arizona  
**Robert J. Evans**, B.S. 1970, M.Ed. 1973, Miami at Coral Gables; Ed.D. 1980, Virginia  
**Barbara P. Guyer**, B.S. 1956, William & Mary; M.A. 1960, Ohio State; Ed.D. 1977, Virginia  
**Victor S. Lombardo**, B.A. 1965, M.A. 1966, Newark State College; Ed.D. 1975, U. of Missouri-Columbia; Post Doctorate 1984, Harvard University  
**Joyce A. Meikamp**, B.S. 1975, M.A. 1980, Ed.D. 1984, Ball State University  
**Edwina D. Pendarvis**, B.A. 1967, M.A. 1971, South Florida; Ed.D. 1983, Kentucky  
**Michael E. Sullivan**, B.S. 1971, West Virginia State College; M.A. 1973, M.A. 1982, West Virginia Graduate College; Ed.D., West Virginia  
**Ronald K. Wolf**, B.A., 1970, Indiana U. of Pennsylvania; M.Ed. 1977, Shippensburg U. of Pennsylvania; Ph.D. 1983, U. of Kansas

### *Assistant Professor*

\***Melissa A. Reed**, B.A. 1986, M.A. 1995, Marshall  
**Christine A. Roman** (Director, Visually Impaired Project), B.S. 1973, Michigan State; M.Ed. 1990, Ph.D. 1996, Pittsburgh

### *Adjunct Professor*

\***Barbara Becker-Cottrill**, B.A. 1980, State U. of N.Y. at Stony Brook; M.A. 1983, M.E.D. 1984, Ed.D. 1989, Teacher's College, Columbia University  
\***Nancy G. Burton**, B.A. 1979, Bluefield College; M.A. 1996, West Virginia Graduate College  
\***Edith Foran Lombardo**, B.S.Ed. 1973, Southwest Missouri State; M.A. 1981, WV College of Graduate Studies; Ed.D. 1983, West Virginia  
\***Jennifer McFarland-Whisman**, B.A. 1985, Colorado College; M.A. 1988, Ph.D. 1990, West Virginia  
\***Carmelita Peters**, B.A. 1964, U. of Pittsburgh; M.A. 1982, College of Graduate Studies; C.A.G.S. 1987, Virginia Tech  
\***Victoria Ann Smolsky**, B.A. 1971, Morris Harvey College; M.A. 1977, WV College of Graduate Studies  
\***Frederick Wolfersheim**, B.S. 1975, U. of Pittsburgh; M.A. 1979, C.A.G.S. 1979, Catholic U. of America; Ph.D. 1994, West Virginia



# Calendar

## Marshall University Academic Calendar for 2000-2001

### FIRST SEMESTER 2000-2001

August 14, Monday - August 18, Friday .....	Registration/Schedule Adjustment
August 19, Saturday, 9 a.m .....	Residence Halls Open
August 21, Monday, 8 a.m .....	First Day of Classes
August 21, Monday - August 25, Friday .....	Late Registration and Schedule Adjustment
August 28, Monday .....	"W" Withdrawal Period Begins
September 2 - September 4 .....	University Computer Services Unavailable
September 4, Monday .....	Labor Day Holiday - University Closed
September 15, Friday .....	Application for December Graduation Due in Academic Dean's Office
September 22, Friday .....	Last Day to Drop 1st 8 Weeks Courses
October 10, Tuesday .....	Mid-Semester, 1st 8 Weeks Courses End
October 11, Wednesday .....	2nd 8 Weeks Courses Begin
October 16, Monday .....	Deadline for Submitting Freshmen Mid Term Grades
October 27, Friday .....	Last Day to Drop a Full Semester Individual Course
(October 30 - December 5) .....	Complete Withdrawals Only
November 6 - November 17 .....	Advance Registration for Spring Semester for Currently Enrolled Students
November 17, Friday .....	Last Day to Drop 2nd 8 Weeks Courses
November 17, Friday, 6 p.m. ....	Residence Halls Close
November 20 - December 8 .....	Advance Registration for Spring Semester Open to All Admitted/Re-Admitted Students
November 20, Monday - November 25, Saturday .....	Fall Break - Classes Dismissed
November 23 - November 26 .....	University Computer Services Unavailable
November 23, Thursday .....	Thanksgiving Holiday - University Closed
November 24, Friday .....	University Holiday - University Closed
November 26, Sunday, Noon .....	Residence Halls Open
November 27, Monday .....	Classes Resume
November 29, Wednesday - December 5, Tuesday .....	"Dead Week"
December 5, Tuesday .....	Last Class Day and Last Day to Completely Withdraw for Fall Semester
December 6, Wednesday ....	Study Day - Exams for Wednesday Classes 3 p.m. and After Will be Held
December 7, Thursday .....	Exam Day
December 8, Friday .....	Exam Day
December 9, Saturday .....	Exam Day for Saturday Classes
December 10 - December 26 .....	Advance Registration/Schedule Adjustment for Spring Semester is Suspended
December 11, Monday .....	Exam Day
December 12, Tuesday Exam Day - Fall Semester Closes - Official Graduation Date for Fall Semester	
December 13, Wednesday, Noon .....	Residence Halls Close
December 14, Thursday .....	Deadline for Submitting Final Set of Grades
December 22, Friday - January 1, 2001, Monday .....	University Offices Closed
December 27, Wednesday - December 29, Friday .....	MILO Registration Resumes
January 2, Tuesday .....	University Offices Open

## SECOND SEMESTER 2000-2001

January 2, Tuesday .....	University Offices Open
January 2, Tuesday - January 5, Friday .....	Registration/Schedule Adjustment
January 7, Sunday, 9 a.m. ....	Residence Halls Open
January 8, Monday .....	First Day of Classes
January 8, Monday - January 12, Friday .....	Late Registration/Schedule Adjustment
January 15, Monday .....	Martin Luther King, Jr. Holiday - University Closed
January 16, Tuesday .....	"W" Withdrawal Period Begins
January 19, Friday .....	Application for May Graduation Due in Academic Dean's Office
February 9, Friday .....	Last Day to Drop 1st 8 Week Courses
February 28, Wednesday .....	Mid-Semester, 1st 8 Weeks Courses End
March 1, Thursday .....	2nd 8 Weeks Courses Begin
March 5, Monday .....	Deadline for Submitting Freshmen Mid Term Grades
March 16, Friday .....	Last Day to Drop a Full Semester Individual Course (March 19 - April 27) .....
March 17, Saturday, Noon .....	Complete Withdrawals Only
March 18, Sunday - March 25, Sunday .....	Residence Halls Close
March 25, Sunday, Noon .....	Spring Break - Classes Dismissed
March 26, Monday .....	Residence Halls Open
March 26, Monday - March 30, Friday .....	Classes Resume
April 2 - June 2 .....	Advance Registration for Summer Session for Currently Enrolled Students
April 6, Friday .....	Advance Registration for Summer Session Open to ALL Admitted/Re-Admitted Students
April 13, Friday .....	Last Day to Drop 2nd 8 Weeks Courses
April 16 - April 27 .....	April Break, No Classes
April 23, Monday - April 27, Friday .....	Advance Registration Fall Semester for Currently Enrolled Students
April 27, Friday .....	"Dead Week"
April 28, Saturday .....	Last Class Day and Last Day to Completely Withdraw for Spring Semester
April 30 - May 4 .....	Exam Day for Saturday Classes
April 30, Monday .....	Advance Registration for Fall Semester Open to All Admitted/Re-Admitted Students
May 1, Tuesday .....	Exam Day
May 2, Wednesday .....	Study Day - Exams for Wednesday Classes 3 p.m. and After Will Be Held
May 3, Thursday .....	Exam Day
May 4, Friday .....	Exam Day
May 4, Friday, 6 p.m. ....	Residence Halls Close (except for graduating students)
May 5, Saturday .....	164th Commencement Exercises
May 7, Monday .....	Deadline for Submitting Final Set of Grades
May 7, Monday .....	Summer Session A Begins
May 7 - May 13 .....	Advance Registration/Schedule Adjustment for Fall Semester is Suspended
May 14, Monday .....	Registration/Schedule Adjustment Resumes for Fall Semester for All Students Except First Time Fall Undergraduates
May 26 - May 28 .....	University Computer Services Unavailable
May 28, Monday .....	Memorial Day Holiday - University Closed

## SUMMER SESSIONS 2001

### Session A

May 4, Friday, 8 a.m.-4 p.m. ....	Session A - Regular Registration
May 7, Monday .....	Session A - First Day of Classes
May 7, Monday 8 a.m.-4 p.m. ....	Late Registration and Schedule Adjustment Closes for Session A
May 25, Friday .....	Last Day to Drop an Individual Course (May 29 - May 31) .....
May 26 - May 28 .....	Complete Withdrawals Only
May 26 - May 28 .....	University Computer Services Unavailable
May 28, Monday .....	Memorial Day Holiday - University Closed
May 31, Thursday .....	Last Class Day - Last Day to Withdraw for Session A
June 1, Friday .....	Final Examination Day - Session A Ends
June 4, Monday .....	Deadline for Submitting Final Grades for Session A

### Session B

May 11, Friday, 8 a.m.-4 p.m. ....	Session B - Regular Registration
May 14, Monday .....	Session B - First Day of Classes
May 14, Monday, 8 a.m.-4 p.m. ....	Late Registration and Schedule Adjustment Closes for Session B
May 26 - May 28 .....	University Computer Services Unavailable
May 28, Monday .....	Memorial Day Holiday - University Closed
June 15, Friday .....	Last Day to Drop an Individual Course
(June 18 - July 16) .....	Complete Withdrawals Only
July 4, Wednesday .....	Independence Day Holiday - University Closed
July 5, Thursday .....	Last Class Day - Last Day to Withdraw for Session B
July 6, Friday .....	Final Examination Day - Session B Ends
July 9, Monday .....	Deadline for Submitting Final Grades for Session B

### Session C

June 1, Friday, 8 a.m.-4 p.m. ....	Session C - Regular Registration
June 3, Sunday, 9 a.m. ....	Residence Halls Open
June 4, Monday .....	Session C - First Day of Classes
June 4, Monday, 8 a.m.-4 p.m. ....	Late Registration and Schedule Adjustment Closes for Session C
June 8, Friday .....	Application for July Graduation Due in Academic Dean's Office
June 22, Friday .....	Last Day to Drop an Individual Course
(June 25 - July 5) .....	Complete Withdrawals Only
July 4, Wednesday .....	Independence Day Holiday - University Closed
July 5, Thursday .....	Last Class Day - Last Day to Withdraw for Session C
July 6, Friday .....	Final Examination Day - Session C Ends - Official Graduation Date for Session C
July 9, Monday .....	Deadline for Submitting Final Grades for Session C

### Session D

July 9, Monday, 8 a.m.-4 p.m. ....	Session D - Regular Registration
July 10, Tuesday .....	Session D - First Day of Classes
July 10, Tuesday, 8 a.m.-4 p.m. ....	Late Registration and Schedule Adjustment Closes for Session D
July 13, Friday .....	Application for August Graduation Due in Academic Dean's Office
July 27, Friday .....	Last Day to Drop an Individual Course
(July 30 - August 9) .....	Complete Withdrawal Only
August 9, Thursday .....	Last Class Day - Last Day to Withdraw for Session D
August 10, Friday .....	Final Examination Day - Session D Ends - Official Graduation Date for Session D
August 10, Friday, 6 p.m. ....	Residence Halls Close
August 13, Monday .....	Deadline for Submitting Final Grades for Session D

Please note: The calendar for the year 2001-2002 was not available at catalog press time. It is expected to be released in the fall of 2000.





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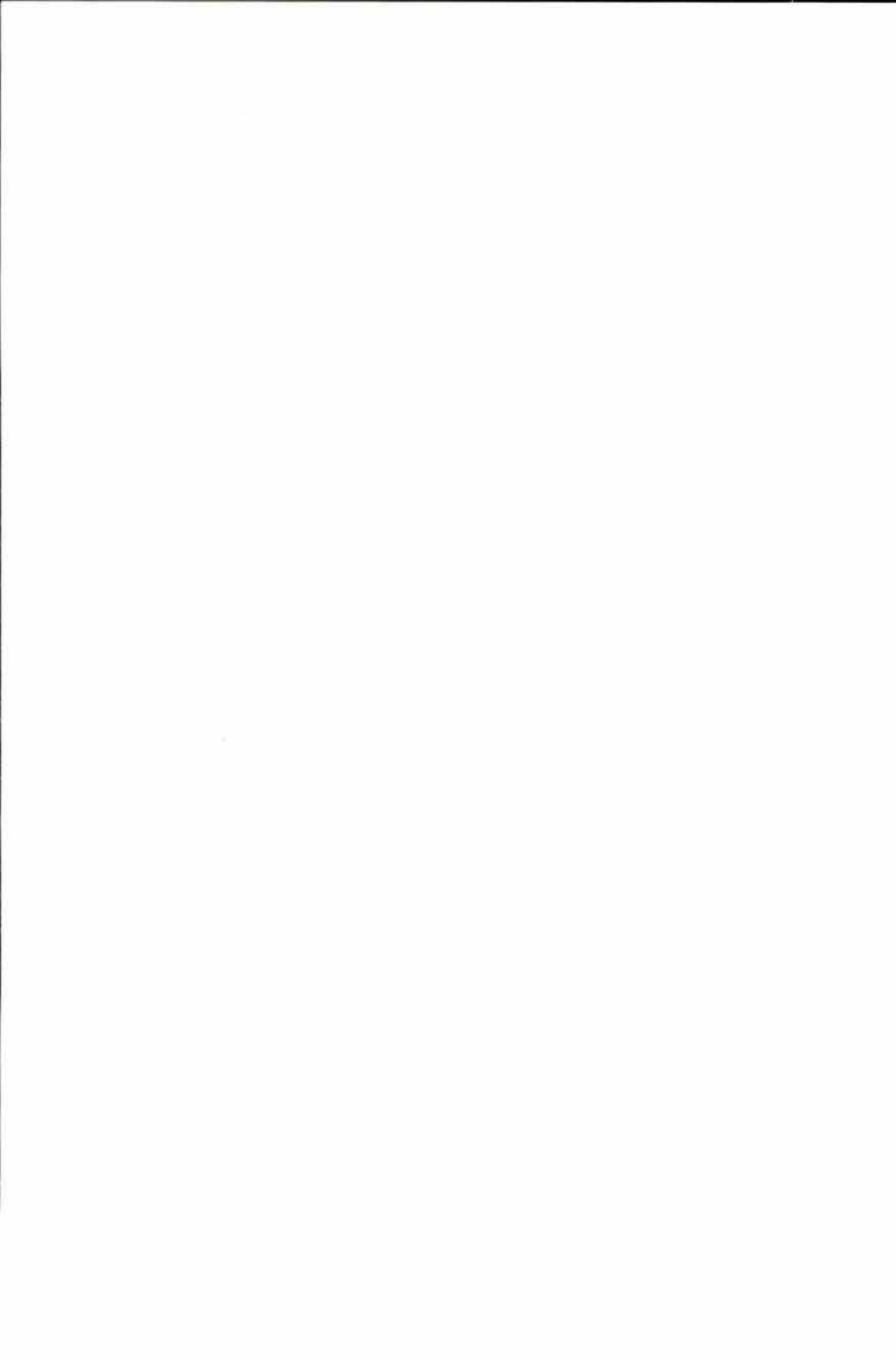
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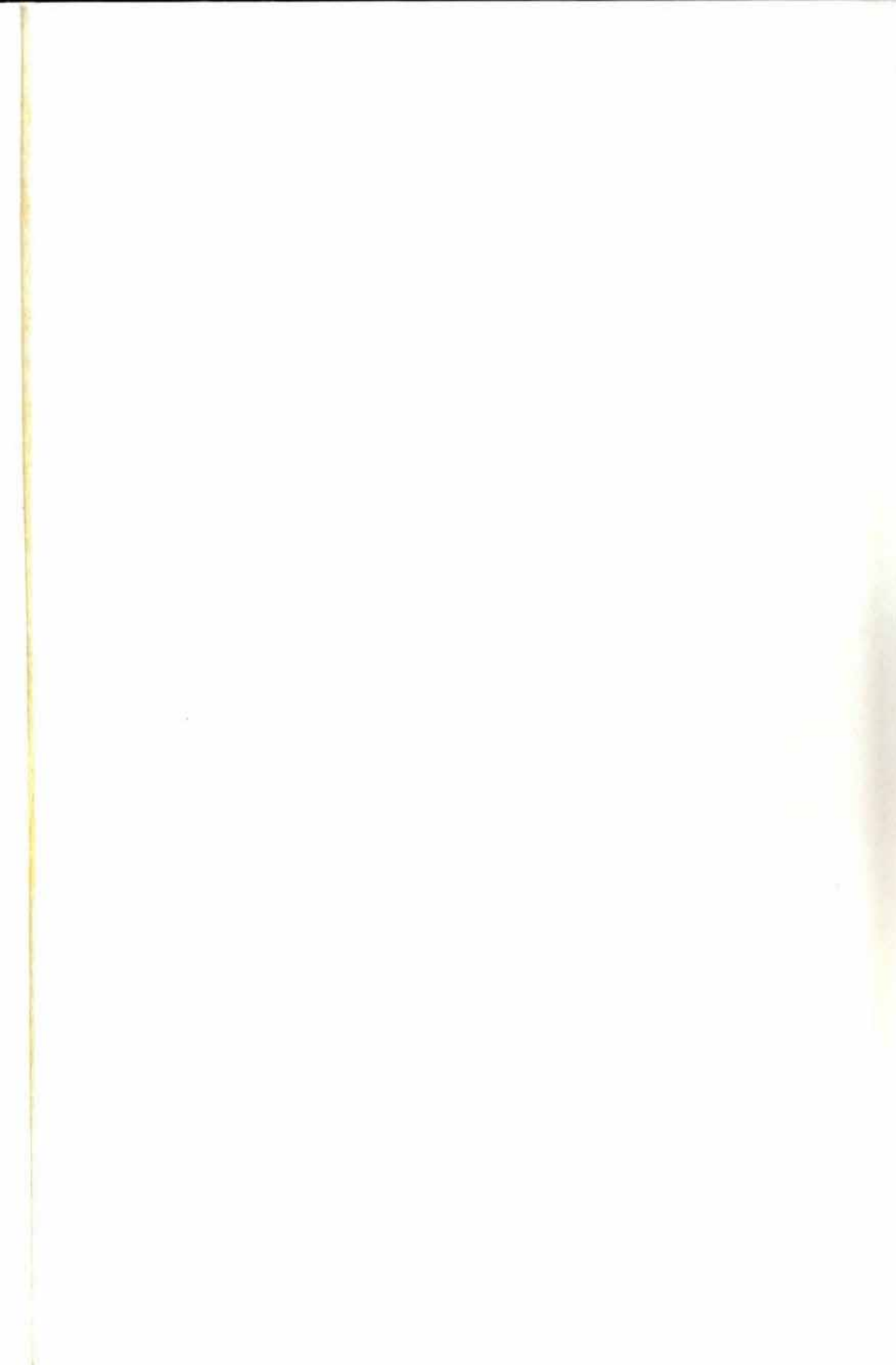
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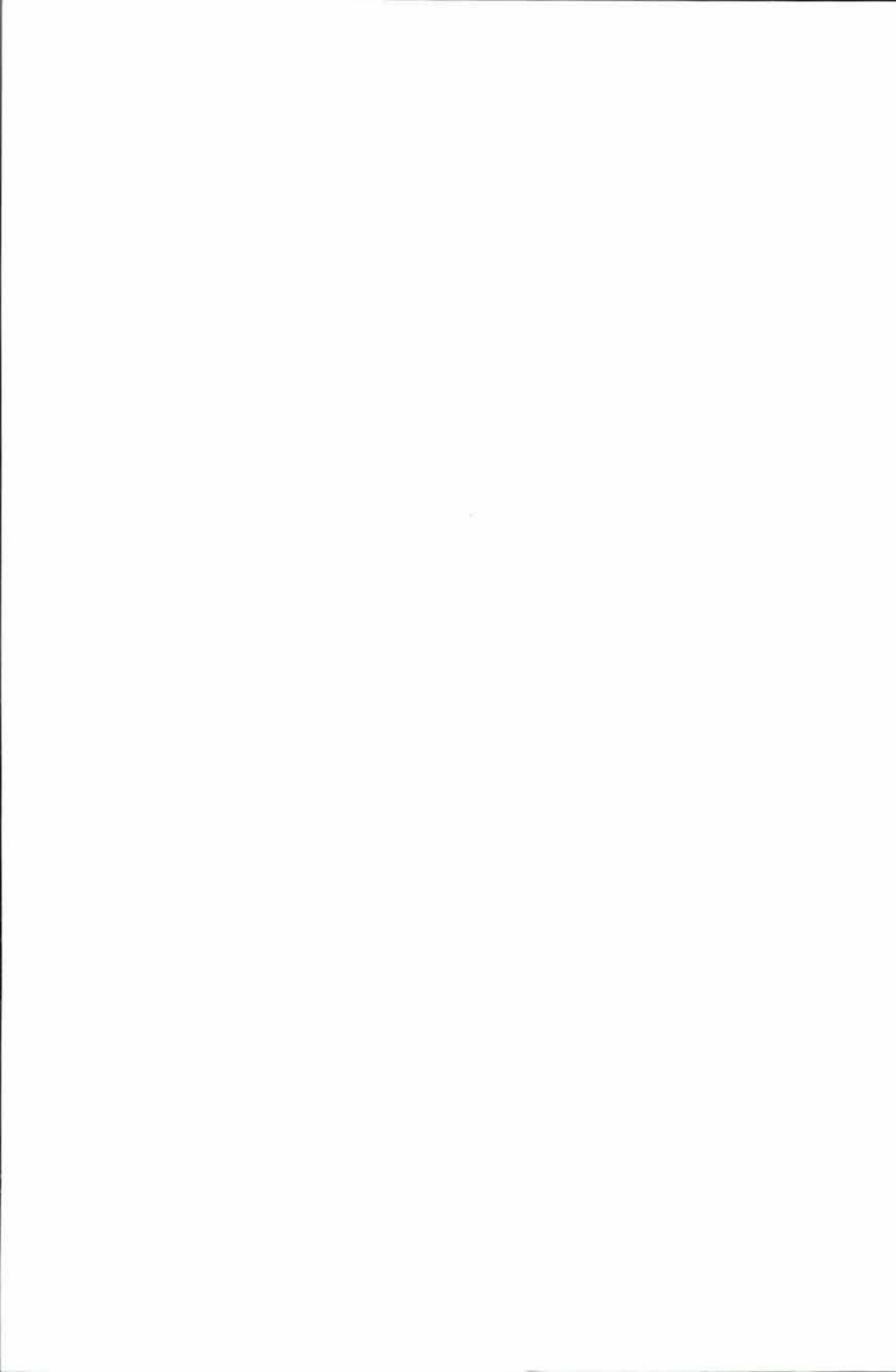
















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