

The 1999-2001 Undergraduate Catalog

The 1999-01 Undergraduate Catalog "*The Bulletin*" has been designed to provide current and prospective students, faculty, and staff with a comprehensive description of the university and its academic programs, regulations, services and activities. Any recommendations concerning "*The Bulletin*", should be addressed to the Director of Curriculum Planning in the Department of Academic Affairs.

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To view course descriptions, click on the link below that contains the first letter of the subject.

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[Last Updated: 6/12/15](#)

USING THE CATALOG FOR DEGREE PROGRAM PLANNING

Each student is responsible for fulfilling all of the requirements for the degree program being pursued and for following the procedures and regulations as stated in the Catalog in effect when entering college. The Catalog is valid for seven years. Students should keep a copy of the Catalog they enter under until they graduate. Assistance from an advisor is helpful in planning the program of studies and in selecting the specific courses to be taken for each semester.

The Graduation from the University section of the Catalog outlines the minimum **university level** degree requirements. Some colleges specify the exact manner in which the university level requirements must be met. In addition to these, the student must fulfill the **college level** requirements for the degree and the major requirements. If the admission and/or retention standards for a particular college or department differ from the university requirements, they will be listed in the college degree program description. If they do not, the university requirements apply. The guidelines below will be helpful in planning which program to follow.

1. Read the Catalog to investigate what options are available;
2. consult with an academic advisor in the Academic Counseling Unit and/or the colleges which offer majors which are of interest to you;
3. talk with the departmental faculty in these areas of interest;
4. take advantage of the counseling offerings of the Center for Student Development (Testing, Career Counseling, Academic Counseling, Personal/Psychological Counseling, and the Educational Support Program);
5. become familiar with the Academic Regulations section of the Catalog; determine the grades which are needed to insure retention and graduation as well as honors classifications in the university and in individual programs;
6. if you are undecided about a major area, begin your program of studies with those courses required for all degrees.

After a major has been chosen:

1. Consult with your advisor to determine what procedures are necessary to declare a major;
2. read the entire section of the Catalog which relates to the degree and major selected: note all degree requirements listed for the college such as the number of hours required within the college and outside the college and the number of upper division hours required; list all the general education courses required for the college or obtain a degree sheet from the college advisor; note the major requirements (when choices are allowed, be sure to consult with your major advisor);
3. plan your coursework semester by semester; try to complete all of your lower division courses (1000-2000) during your first two years; be sure to check for prerequisites before enrolling in any courses, especially upper division courses; take the courses in the proper sequence.

To complete a 132 semester hour degree program in four years, you need to take 33 hours per year. The maximum allowed per semester (fall/spring) is 18 hours. Special permission must be received in order to carry more than 18 hours. Physical activity courses are not included in the 18-hour maximum.

1. Description of the University

The University of Memphis Statement of Mission

◆ The University of Memphis is a member of the State University and Community College System of Tennessee and is governed by the Tennessee Board of Regents. As an urban university, The University of Memphis provides a stimulating academic environment for its students, including an innovative undergraduate education and excellence in selected research areas and graduate programs. The academic environment extends beyond the campus boundaries to encompass the entire community.

Education is enhanced through exposure to diversity in composition of the student body, faculty, staff, and administrators; including women, minorities, individuals with disabilities, and various age groups and religions. The University has responded to the challenging responsibility of being located in a culturally diverse region by developing a unique blend of teaching, research, and service that contributes to the growth of the Mid-South region.

Teaching brings the benefits of scholarship and research to students and through them to the people of the area. The University of Memphis asserts that excellence in teaching traditional and non-traditional students is its central responsibility. A comprehensive undergraduate education, grounded in the arts and sciences, develops intellectual, cultural, and ethical qualities in its students. The innovative General Education Program challenges students to develop the analytical and critical skills necessary for life-long learning. The University of Memphis offers master◆s and doctoral degrees in selected graduate programs as well as degrees in the major professional areas. Through learning begun at The University of Memphis, graduates compete in the global intellectual community in which they live.

As a research university, The University of Memphis develops, integrates, disseminates, and applies knowledge. Faculty maintain on-going programs of basic and applied research or creative activities appropriate to their disciplines. The University◆s urban environment provides a rich opportunity for research and creative scholarship, and for the use of that scholarship in the intellectual and cultural development of the region. The University◆s commitment to fostering a research and creative environment harmonizes with the other aspects of its mission.

The University of Memphis fulfills its outreach mission through its contributions to professional organizations and to the needs of the community. The University promotes intellectual, cultural, and community development of the region through, for example, its artistic programs, lecture series, technical assistance, continuing education, and intercollegiate athletic programs.

The University of Memphis, through its research, teaching, and outreach roles, responds to individual needs, such as the support of health care and preventive health services. The University addresses broader issues as well; for instance, K-12 education, economic development, environmental initiatives, international programs, computing, and telecommunications.

General Description

Description of the University

From the opening of its doors in 1912 as a normal school for training teachers to its present status as one of Tennessee◆s two comprehensive universities, The University of Memphis has been thrust forward by the growth of Memphis and the Mid-South. A town oriented to a rural economy and culture in 1900 grew into a large urban and commercial center mid-century, and the city◆s public institution of higher learning experienced comparable growth.

The metropolitan and regional requirements for more highly trained university graduates have, of necessity, caused the University to expand all its offerings in arts and sciences, business, the fine arts, education, engineering and technology, law, and several special professional fields. Degrees range from the baccalaureate through the doctorate. Approximately 80 percent of the full-time faculty have earned the highest possible degree in their fields. The University strives to optimize its resources in its quest for excellence through teaching, research and service.

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With an enrollment of over 20,000, The University of Memphis is committed to developing programs of the highest caliber, for only through such a commitment will it be a standard of quality in higher education for the citizens of our service area. As the comprehensive university of the State University and Community College System of Tennessee, The University of Memphis is striving to increase the ratio of doctoral programs it offers, which will also require an increased emphasis on research and scholarship activity. The University is committed to serving a diverse student body of all races, sexes and nationalities. Our students are expected, upon graduation, to be able to compete effectively with their counterparts from any other respected university in the nation.

History

The roots of The University of Memphis date back to September 12, 1912, with the establishment and beginning of classes at West Tennessee State Normal School, which provided for the training of primary and secondary education teachers. However, the seeds for the normal school's creation had been sown three years earlier when the Tennessee General Assembly passed a General Education law calling for establishment and maintenance of three normal schools, one school located in each of the three grand divisions of the state.

The eastern edge of Memphis became the site for West Tennessee State Normal School, which in 1929 became West Tennessee State Teachers College. In 1941, the college expanded its liberal arts curriculum, and the name was changed to Memphis State College, an institution serving three to four thousand students. The undergraduate program was reorganized into three schools and a graduate school was added in 1951.

Memphis State achieved university status in 1957, and on July 1, 1994, the name was officially changed to The University of Memphis.

Governing Body

The governance and control of The University of Memphis is vested in the Tennessee Board of Regents. The composition and powers of the Board are set forth in Tennessee Code Annotated 49-8-201 through 49-8-203. The Board consists of 18 members; 12 lay citizens appointed for six-year terms by the Governor from each congressional district and grand division of the State; one faculty member appointed for a one-year term; one student appointed for a one-year term by the Governor from among the System institution; and four ex-officio members- the Governor, the Commissioner of Education, Commissioner of Agriculture, and Executive Director of the Tennessee Higher Education Commission, who is a non-voting member.

Organization

The schools and colleges that make up the University are the Graduate School, the Cecil C. Humphreys School of Law, the University College, the Loewenberg School of Nursing, the School of Audiology and Speech-Language Pathology, and five colleges offering graduate and undergraduate programs: the College of Arts and Sciences, the Fogelman College of Business and Economics, the College of Communication and Fine Arts, the College of Education, and the Herff College of Engineering. The institution also offers a University Honors Program for highly motivated students seeking exceptional and challenging programs of study in a variety of disciplines. The colleges, departments, and the undergraduate degree programs they offer are described in more detail in the *Colleges and Degree Programs* section of this catalog.

The Memphis Community

Memphis, with a metropolitan area population of just over one million, is one of the South's largest and most attractive cities. As a primary medical, educational, communication, distribution and transportation center, Memphis offers a rich and full range of research opportunities and cultural experiences. The city, known worldwide for its musical heritage, has many fine restaurants, museums, and theaters, as well as one of the nation's largest urban park systems. Annual events include the St. Jude Liberty Bowl Football Classic, the Memphis in May International Festival, the Federal Express St. Jude Golf Classic, the Great River Carnival and the Mid-South Fair. The medical complex in Memphis is the South's largest and one of the nation's foremost centers of medical research. A public transportation system provides easy travel between the University and other parts of the city.

Built on bluffs overlooking the Mississippi River, Memphis is devoted to preserving its history while

vigorously building its future. Clusters of stately old homes dot the city; some are still inhabited, others preserve the past as museums, some have been restored and recast into commercial establishments; all are home to images from a long-ago time.

The University's modern and beautifully landscaped campus is centrally located in an attractive residential area of Memphis with shopping, recreation and entertainment centers nearby. In addition to the main campus facilities, the University has research and athletic training facilities and married student housing on the South Campus.

Academic Program Accreditation

The University of Memphis is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor's, first professional, master's, educational specialist's and doctoral degrees. The various colleges, schools and departments and/or the individual programs are accredited by the following appropriate accrediting agencies:

- Accreditation Board for Engineering and Technology
- Accrediting Commission on Education for Health Services Administration
- Accrediting Council on Education in Journalism and Mass Communication
- American Assembly of Collegiate Schools of Business
- American Bar Association
- American Chemical Society
- American Dietetic Association
- American Association of Family and Consumer Science
- American Psychological Association
- American Speech-Language-Hearing Association
- Council for Accreditation of Counseling and Related Education Programs
- Council on Rehabilitation Education
- Council on Social Work Education
- National Association of Schools of Art and Design
- National Association of Schools of Music
- National Association of Schools of Public Affairs and Administration
- National Association of Schools of Theatre
- National Council for Accreditation of Teacher Education
- National League for Nursing
- Planning Accreditation Board

Facilities, Research, and Services

Academic Common Market

Participation in the Academic Common Market allows qualified students from southern states to pay in-state tuition while pursuing certain degree programs at The University of Memphis. This arrangement is available only for students whose home states do not offer the designated program. The state in which the student resides determines which of the programs offered by The University of Memphis it will make available to its students.

The Academic Common Market is sponsored by the Southern Regional Education Board (SREB). Participating states are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia (Florida and Texas grant access for graduate level programs only). Current SREB common market guidelines and requirements may be found on the web at www.people.memphis.edu/~acadafflib/acm.html.

Students may request through their home state coordinators that additional programs be made accessible. A list of the state coordinators with their addresses and telephone numbers may be obtained from the Office of Curriculum Planning. (Graduate students should contact the Graduate Admissions Office.)

In addition to certification requirements which the student's state of residence may specify, the following pertain: (1) Students must be fully admitted to a degree program that has been approved as an Academic Common Market program (nondegree students are ineligible); (2) students must obtain a letter certifying residency term of entry and approval for the particular University of Memphis program from their state's

Academic Common Market coordinator.

NOTE: After enrollment, students remain eligible for in-state tuition only so long as they are continuously enrolled-consecutive fall and spring terms-in the *same* major for which they were originally certified. If students change major, they must process a *Change of Major* through their advisor and notify the Applicant Services Office to change the Academic Common Market residency code on their records. **Failure to process the Change of Major and to notify applicant services may subject the student to out-of-state fees for all subsequent terms of enrollment in classes for a major other than the one for which the student received ACM certification.** Missing a fall or spring term of enrollment or a change of major requires that the student be recertified through the ACM coordinator in the student's state of residence.

Library Facilities

The University of Memphis Libraries includes the Ned R. McWherter Library and five branch libraries-Audiology and Speech Pathology, Chemistry, Earth Sciences, Mathematics, and Music-contiguous to the appropriate university departments.

The McWherter Library offers many services through its Reference Department, including information retrieval from online databases, online databases, reference and referral, CD-ROM searching, indexing the local newspaper, and instruction in use of the library. The Government Publications Department is the Regional Federal Documents Depository for the State of Tennessee, and continues to serve as a depository for all State of Tennessee documents. The Special Collections Department's largest collection, consisting of unique and rare manuscript, cartographic, photographic, and printed materials-Mississippi Valley Collection-reflects the history and culture of the Mississippi River valley.

The University of Memphis Libraries' online catalog of its collections is available through terminals in the McWherter Library and the branch libraries. At these terminals users have access, not only to the library's own database of holdings, but to the campus network, the Internet, and to many other electronic resources. Dial-access to the catalog is also available from compatible personal computers as is access from off-campus sites.

The University of Memphis Libraries maintains agreements with other local institutions for shared use of library collections by students, faculty, and staff. These institutions include Rhodes College, LeMoyne-Owen College, Mid-America Baptist Theological Seminary, Memphis Theological Seminary, Shelby State Community College, State Technical Institute at Memphis, the University of Mississippi, Christian Brothers University and Mid-South Community College.

For information, see the Library's website at: <http://lib.memphis.edu>.

Information Systems

The University of Memphis provides its students with access to the largest public computing resource in this area. Local area networks (LANS), microcomputers, and peripherals are connected to an optical fiber based, campus-wide network, and banks of dial-in connections provide limited off-campus modem access. Unblocked third party Internet access is available through the University's *DIALUM* program for a low monthly fee. Client Services (678-8888) can provide detailed information. Special purpose minicomputers and workstations operate in academic departments, and on-campus microcomputers connect the campus to the world via Internet. Currently, centralized computing consists of interconnected, mid-range, Digital Equipment Corporation (DEC) computers running the VMS or UNIX operating system plus a variety of other Digital and Third-party software.

INFORMATION SYSTEMS (IS) provides central computing support for The University of Memphis, its instructional program, and scholarly research. IS departments provide the infrastructure resources and support for the two main categories of computing at the University-academic and administrative support of students, faculty and staff on specific applications and work stations is provided by Local Support Providers (LSPs) with colleges and administrative units.

CLIENT SERVICES (CS), Room 134 of the Administration Building, is responsible for: the maintenance and staffing of Information Systems Help Desks; computer account services, software distribution and license management; maintenance and staffing of student labs; training; software and hardware consulting; and maintenance of software archives. In addition, CS coordinates support activities with LSPs in colleges and academic and administrative units of the University.

THE TRAINING CENTER, Room 414 of the Smith Chemistry Building, provides training on a wide range of computer applications for faculty, staff, students, and administrators. The unit offers microcomputer training on PC and Macintosh platforms as well as DEC mainframe utilities.

ACADEMIC SYSTEMS, Administration Building, Room 136, provides instructional and research computing support and facilitates innovative use of technology for instruction and research for the students, faculty, and staff at The U of M. This unit also provides a range of support for software and numerical databases used in instruction and research for students, faculty, and staff.

THE WEB GROUP serves as the central point for information pertaining to the presentation and dissemination of technology information, particularly as it applies to the World Wide Web.

ADMINISTRATIVE SYSTEMS supports the development and maintenance of the campus administrative systems.

THE OPERATIONS UNIT manages the University's central computing resources with the goal of providing the University's computing community with fast, stable, and up-to-date hardware and software that meet its information resource needs and to provide timely service to both the administrative and academic user communities.

NETWORK SERVICES provides infrastructure services to support use of telephones, computer networks, cable television, and distance education for the University community.

Fogelman Executive Center

The Fogelman Executive Center is a state-of-the-art conference and training facility designed to meet the needs of executives, managers, and professionals in all organizational areas. The center has fifty-one hotel rooms, fourteen conference and seminar rooms, and two dining rooms.

The staff of the Fogelman Executive Center provides coordination and planning services for all types of conferences and seminars. These services are available to professional level University groups and the Memphis business community.

Bureau of Business and Economic Research

The Bureau of Business and Economic Research is the organized research and public service unit of the Fogelman College of Business and Economics. The programs of the bureau include public service to government agencies (state and local) and the business community, continuing education, and applied general research.

Access Center for Technology (ACT)

ACT had assistive technology and augmentative and alternative communication devices for individuals with disabilities. These technologies allow all individuals access to the world. Services and information is provided to teachers and students regarding assess and assistive technological devices. This is a hands on environment which is set up for the purpose of hardware and software preview and evaluation.

Center for Earthquake Research and Information

The Center for Earthquake Research and Information was established in 1977 by the Tennessee State Legislature to provide the citizens of Tennessee, governmental agencies, and the news media such services as the following: (1) accurate, immediate reports and background information on the occurrence of regional earthquakes; (2) scientific research related to the causes and consequences of local earthquakes and to the possibility of earthquake prediction; (3) studies related to the desirability of earthquake resistant construction; (4) advice to the populace, business, government, and insurance groups on the methods, means, and feasibility of reducing earthquake damage. It operates as a research organization of The University of Memphis. It supports some undergraduate student research in seismology and geophysics and civil engineering and cooperates with the Department of Geological Sciences in offering an undergraduate degree concentration in geophysics.

Center for Electron Microscopy

The Integrated Microscopy Center provides facilities and expertise in the field of light, confocal and electron microscopy. Users of the center include researchers and graduate students in the biological and physical sciences.

Edward J. Meeman Biological Station

The Edward J. Meeman Biological Station was established in 1967 to encourage and foster scientific pursuits in natural history, ecology, and environmental biology. Located about 23 miles northwest of the main campus and adjacent to Meeman-Shelby Forest State Park in northwestern Shelby County, the 623 acre station (with laboratory, classroom, and small conference facilities) provides students and faculty from The University of Memphis, as well as visiting investigators, with a unique site for research, teaching, and service activities. The station is an integral part of the Department of Biology.

Ecological Research Center

The Ecological Research Center (ERC) of the Department of Biology is organized to conduct and coordinate research, teaching, and service activities in ecology and related areas. Major areas of research include: fish culture, water quality, wildlife biology, endangered and threatened species, systematics, and physiological responses of organisms to the environment. The teaching program of the ERC provides a training program for students interested in pursuing careers in various professional fields and affords an opportunity for students to participate in activities involving contemporary environmental problems. Public service activities are primarily directed toward promoting environmental awareness and providing information and consultation services to those concerned with environmental problems.

The Marcus W. Orr Center for the Humanities

The Center for the Humanities was founded in 1987 and renamed in 1991 in memory of Dr. Orr, Professor of History. Its purpose is to support teacher and course development, independent and collaborative research, and public programs that will foster an understanding of the importance of the humanities and establish a sense of intellectual community among humanities faculty at the University. The center sponsors visiting scholars, course development grants, lectures, and a Humanities Fellows Program that supports faculty scholarship.

Center for Manpower Studies

The Center for Manpower Studies, located in the Fogelman College of Business and Economics, conducts research on employment and training-related topics and provides technical assistance to federal, state, and local agencies. It also offers a variety of training programs for human resource development agencies throughout the southeast.

Center for Research on Women

Founded in 1982, the Center for Research on Women, located in the College of Arts and Sciences, has rapidly gained national recognition for its pioneering work on race, class, and gender. Its mission is to promote research in the field of women's studies with a focus on southern women and women of color in the United States. With funding from both foundation and government sources, Center-affiliated faculty conduct research on social issues affecting women and girls in Memphis, and on the broader dynamics of social inequality.

Center for the Study of Higher Education

The Center for the Study of Higher Education, located in the College of Education, conducts research and sponsors workshops and conferences in higher education.

Chucalissa Indian Village and Museum (C. H. Nash Museum)

This partly reconstructed prehistoric Indian village on its original site and the museum are operated by the Department of Anthropology as an educational and research facility. The indoor and outdoor exhibits are designed to reconstruct prehistoric Indian life in the Mid-South. Students are trained in the techniques of excavation, restoration and museum operations. The courses taught are listed in the Department of Anthropology offerings. Chucalissa is located 17 miles from the main campus.

The Institute of Egyptian Art and Archaeology

The Institute, founded in 1984 and designated a Tennessee Center of Excellence in 1985, is a component of the Department of Art at The University of Memphis. The Institute is dedicated to the study of the art and culture of ancient Egypt through teaching, research, exhibition, and excavation. It is staffed by egyptologists

and art historians associated with the department's art history program. Its research library consists of more than 6000 egyptological books and periodicals including precious and out-of-print volumes. Supporting the Institute's programs is the Art Museum at The University of Memphis, which houses the Institute's growing collection of Egyptian antiquities, the largest in the Mid-South. The Institute also sponsors an epigraphic project at The Great Hypostyle Hall of the Karnak Temple in Luxor, Egypt.

Institute for Intelligent Systems

The Institute is designed to bring together research and training in the broad areas of cognitive science, complex dynamical systems, artificial intelligence, and massively parallel computing (neural computing). Current research includes basic research supported by grants from funding agencies and applied research supported by industrial/governmental contracts. Ideas and techniques for research are gathered from the disciplines of cognitive psychology, computer science, philosophy of mind, neuroscience, linguistics, and mathematics. Training should include graduate courses, thesis and dissertation research, and industrial training in the form of workshops, seminars, and employee research participation.

Mid-South Educational Software Clearing House (MSESC)

The MSESC is a collection of educational software programs from all over the world. Special emphasis has been placed on software that is useful in teaching students with a variety of needs. The current collection is available to preservice and inservice teachers in the Mid-South region. MSESC's web site is: <http://www.people.memphis.edu/cjsiefel/links>

Regional Economic Development Center

The center represents the University in its outreach function in the field of economic development planning. In providing technical and management assistance to the public and private sectors, the center also serves as a laboratory for interdisciplinary research and service by faculty and graduate students in solving problems of urban and regional development. The center's professional planning staff have academic appointments and teach courses in urban and regional planning.

Speech and Hearing Center

Located at 807 Jefferson Avenue in the medical center of Memphis, this facility became affiliated with the University in 1967. An additional site is located on the South Campus in building #44. Both locations serve children and adults with communication disorders. Students at the University are seen at no charge, while faculty and staff are seen for 50% of normal charges. The University administers and operates the center in cooperation with the Board of Directors of the Memphis Speech and Hearing Center, Inc.

Other Research Units

In addition to the units described above, The University of Memphis also recognizes a wide array of other research oriented units:

- Anthropological Research Center
- Barbara K. Lipman Early Childhood School and Research Institute
- Bureau of Sport and Leisure Commerce
- Center for River Studies
- Center for Urban Research Extension
- Exercise and Sport Science Laboratories
- Federal Express Center for Cycle Time Research
- Groundwater Institute
- Highwater Recording Company
- Institute for Egyptian Art and Archaeology
- National Science Foundation Industry/University Cooperative Research Center for Bio-Surfaces Site
- Neuropsychology Research Laboratory
- Oral History Research Office
- Religious News Association Archives
- Robert Wang Center for International Business
- Southern Music Archive

Recognized Centers and Chairs of Excellence

The University of Memphis has been designated by the Tennessee Higher Education Commission as a location for centers and chairs of excellence. The units listed below receive special funding by the State in recognition of their status.

Centers of Excellence

Center for Applied Psychological Research
Center for Earthquake Research and Information
Center for Research Initiatives and Strategies for the Communicatively Impaired
Center for Research in Educational Policy
Center of Excellence in Egyptian Art and Archaeology

Chairs of Excellence

Accounting (2)
Art History
Biomedical Engineering (2)
Combinatoric Mathematics
Economics and Managerial Journalism
English
Finance
Free Enterprise Management
International Business
International Economics
Judaic Studies
Law
Management Information Systems
Molecular Biology
Nursing
Philosophy
Real Estate
Sales
Urban Education

Evaluation Services

◆ Evaluation Services, which is located in the John Willard Brister Library building, conducts the University program for student evaluation of instruction, collecting, analyzing, and reporting student perceptions of classroom instruction. Each fall and spring semester, faculty are offered the opportunity to participate and to indicate classes to be surveyed. After the semester ends, the completed forms and a computer summary of student reactions are returned to the faculty. These documents, which form an important part of the dossier prepared for promotion and tenure, provide information useful to individual faculty in ongoing course development and improvement of instruction.

Jackson Center

◆ Located on the campus of Jackson State Community College, the Jackson Center offers a wide variety of undergraduate and graduate courses and degree programs to students living in the Jackson area. In addition, the Jackson Center houses the Office of Extended Programs, which coordinates course and program delivery at various locations in West Tennessee. The Jackson Center is administered through the Office of the Vice-Provost for Extended Programs.

Higher Education Alliance

◆ This alliance provides cooperative service through The University of Memphis, Jackson State Community College, and the State Area Vocational-Technical School at Crump. Reporting through the Office of the Vice-Provost for Extended Programs and located at the State Area Vocational-Technical School at Crump, it offers

an array of undergraduate and graduate courses to students in its service area.

Office of International Students

◆ The Office of International Students advises international students regarding immigration, health, housing, social, personal, and financial concerns. Besides advising individual students, the office advises the International Students Council. The council represents six national student associations: the African Student Association, the Chinese Student Association, the Indian Student Association, the Korean Student Association, the Malaysian Student Association, and the Muslim Student Association. The office also organizes a four-day orientation for new students each semester as well as social and cultural events that encourage international students' involvement in the campus community and help ease their transition into the American way of life. International Night, the biggest event of the year, provides an opportunity for the international students to share their traditional food and entertainment with the campus and the Memphis community.

Psychological Services Center

◆ The Psychological Services Center, located on the first floor of the Psychology Building, offers both psychological evaluations and therapeutic services to children and adults. For appointments or information, contact the center at 678-2147.

Alumni

◆ The University of Memphis Alumni Association has offices located in the Alumni Center on campus. The staff serves The University of Memphis Alumni Association and provides a communication linkage to the University for graduates and former students. The Alumni Association and staff also offer special services for current students and serve as the sponsors for the University's Student Ambassador Board.

Development

◆ The Office of Development serves as a procurer and coordinator for private charitable financial support of The University of Memphis academic programs. With approximately 46 percent of the University's annual operating budget provided by the state of Tennessee, other income must be generated by student tuition, other fees, and through annual and endowed gifts from individuals, corporations and foundations. Such income is used to initiate new academic programs and enrich existing ones.

The University of Memphis Foundation

◆ The University of Memphis Foundation, a 501(c)(3) organization, was established to support The University of Memphis' mission. The foundation is governed by a volunteer Board of Directors. Committees, including an Investment Committee, review the foundation's financial position quarterly. An outside consultant also advises the Investment Committee on portfolio management, the selection of investment managers and allocation issues pertaining to fixed income and equities.

◆ The University of Memphis Foundation is a major vehicle for developing and accepting private gifts to The University of Memphis. The University of Memphis desires that all private support be made payable to *The University of Memphis Foundation*. The foundation manages over 300 endowment accounts and distributes income to the University and its colleges, schools, departments, programs and projects to promote academic enrichment. Sources of funds to the foundation are contributed by alumni, friends, parents, corporations and foundations. Outright gifts, trusts and bequests are received by the foundation. General accounts, as well as named accounts, are established to provide: financial assistance to students, faculty support and just about every need The University of Memphis may have. All contributions should be made payable to *The University of Memphis Foundation*. Any particular fund or department designation can be noted on the memo line or on supporting correspondence.

Oak Ridge Associated Universities

Since 1971, students and faculty of The University of Memphis have benefited from the University's membership in Oak Ridge Associated Universities (ORAU) is a consortium of 87 colleges and universities and a management and operating contractor for the United States Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for

fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education, the DOE facility that ORAU manages, undergraduates, graduates, postgraduates, as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of under represented minority students pursuing degrees in science- and engineering-related disciplines.

A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the Resource Guide, which is available on the World-Wide Web at <http://www.ornl.gov/orise/resgd/htm>, or by calling either of the contacts below.

◆ ORAU◆s Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU◆s members. Private industry, and major federal facilities. Activities include faculty development programs, such as Junior Faculty Enhancement Awards and the Visiting Industrial Scientist Program, and various services to chief research officers.

◆ For more information about ORAU and its programs, contact Dr. Linda L. Brinkley, ORAU Council member, at 901-678-2590; contact Monnie E. Champion, ORAU Corporate Secretary, at 423-576-3306; or ORAU Home Page at <http://www.ornl.gov>.

Public Service

In recognition of the University◆s responsibility to serve the needs of a changing social and economic order, the Office of Public Service serves as a prime contact for individuals and organizations outside the University. Through this office, access may be gained to University facilities and resources. Public Service is administered through the Office of the Vice-Provost for Extended Programs.

Tennessee Small Business Development Center

The Tennessee Small Business Development Center is organized to provide business development services to new and existing small business firms throughout the state of Tennessee. These services are delivered through service centers located at various state universities, community colleges, and technical institutes. These services add to the economic development efforts of the local communities by adding and retaining employment. Special attention is given to women, minority, and veteran-owned businesses. This office functions as a department under the Vice-Provost for Extended Programs.

Continuing Education Short Course Program

The Continuing Education Short Course Program serves as an important link to the Memphis community, providing comprehensive, non-credit programs ranging from career development to personal enrichment. The program is designed to narrow the education gap left by the degree-awarding academic programs at The University of Memphis, thus complementing the University◆s mission of service to the community. The program is strongly service-oriented, providing general interest instruction to learners of all ages, regardless of their educational background. The Short Course Continuing Education product is high quality, affordable, and requires no formal admission to the University. This office reports through the Office of the Vice-Provost for Extended Programs.

Clean Tennessee

The Clean Tennessee program, established in 1983, serves as the state Keep America Beautiful agency and state resource center for litter prevention and proper solid waste management education. Functioning as a department under the Vice-Provost for Extended Programs, Clean Tennessee is funded by Tennessee Department of Transportation.

The Graduate School

The Graduate School of The University of Memphis is the center of advanced study and research within the University. The basic objectives of the Graduate School are as follows:

1. to preserve and disseminate knowledge;

2. to extend knowledge through research; and

3. to prepare men and women to assume responsible and useful roles in a changing society.

The Doctor of Philosophy degree is awarded in audiology and speech-language pathology, biology, biomedical engineering, business administration, chemistry, communication arts, counseling psychology, engineering, geophysics, history, mathematics, music, philosophy, and psychology. The degrees of Doctor of Education and Doctor of Musical Arts are awarded by the College of Education and the College of Communication and Fine Arts, respectively. The College of Education also offers the degree of Education Specialist with a major in education. The Cecil C. Humphreys School of Law offers the Juris Doctor degree.

Master's degrees are offered in forty-four major areas through five colleges and one independent school. The degrees include Master of Science, Master of Arts, Master of Fine Arts, Master of Arts in Teaching, Master of Business Administration, Master of Music, Master of City and Regional Planning, Master of Health Administration, and Master of Public Administration.

Visit the Graduate School homepage on the web at <http://www.people.memphis.edu/~gradsch/>

Cecil C. Humphreys School of Law

PROGRAM: The Cecil C. Humphreys School of Law offers a program of instruction leading to the degree of Juris Doctor.

A student may enroll only in the fall semester and on a full-time or part-time basis. A student regularly employed more than 20 hours per week may not pursue the full-time program.

The successful completion of 90 semester hours of work, including all required courses, with the prescribed grade average is necessary for graduation. Unless an exception is granted, the last two regular semesters work must be taken in this school.

ADMISSION: Admission to the Cecil C. Humphreys School of Law is on a selective basis. To be eligible for admission, a student must have received a bachelor's degree from an accredited college or university and must have made a satisfactory score on the Law School Admission Test administered by the Law School Admissions Services, Box 2000, Newtown, PA 18940. Questions concerning additional admissions requirements should be directed to the Director of Law Admissions and Recruitment.

The regulations and policies of the School of Law are set out in greater detail in a separate issue of the *Law School Bulletin*. Additional information can be obtained by contacting Law Admissions, 3715 Central Avenue, Memphis, TN 38152.

Visit the Cecil C. Humphreys School of Law homepage on the web at <http://www.people.memphis.edu/~law/>

[Last Updated: 6/12/15](#)

COLLEGES AND DEGREE PROGRAMS

The following section contains the specific requirements for completing each degree, major, minor, and certificate offered by the university. It is organized by college and department. For a statement concerning how to use the catalog for [degree program planning click here](#). Students are urged to consult with an advisor for assistance in planning their degree programs and selecting appropriate courses.

1. [College of Arts & Sciences](#)

Anthropology, Biology, Chemistry, Criminology and Criminal Justice, English, Foreign Languages & Literatures, Geography and Planning, Geological Sciences, History, International Relations, Mathematical Sciences, Philosophy, Physics, Political Science, Psychology, Sociology & Social Work, ROTC Programs

2. [Fogelman College of Business and Economics](#)

School of Accountancy, Economics, Finance, Insurance, and Real Estate, International Business, Management, Management Information Systems and Decision Sciences, Marketing

3. [College of Communication and Fine Arts](#)

Art, Communication, Journalism, Music, Theatre and Dance

4. [College of Education](#)

Consumer Science and Education, Counseling, Educational Psychology & Research, Human Movement Sciences & Education, Instruction & Curriculum Leadership, Leadership

5. [Herff College of Engineering](#)

Civil Engineering, Electrical Engineering, Engineering Technology, Mechanical Engineering

6. [Loewenberg School of Nursing](#)

7. [University College](#)

8. [Independent Programs](#)

University Honors Program, School of Audiology & Speech-Language Pathology, Interdisciplinary Studies, The University of Memphis Libraries, Orientation Program, Remedial and Developmental Studies

7. Course Descriptions

(ACAD) ACADEMICS - ORIENTATION PROGRAM

SUSAN MAGUN-JACKSON, Ph.D., *Director*

Room 203, Administration Building

◆◆◆ The Orientation Program offers a 3-hour credit course for entering freshmen only. This course has been specially designed to assist freshmen in making the transition to higher education by introducing them to the expectations and opportunities provided by the University.

ACAD 1100. Introduction to the University. (3). History, philosophy, and principles of higher education, with emphasis on The University of Memphis. Special attention to developing student skills necessary to meet the intellectual expectations of the university. OPEN TO FRESHMEN ONLY.

(ACCT) ACCOUNTANCY

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*

CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*

Room 114, Fogelman College of Business and Economics Building

Students must have junior standing and have met specific course prerequisites with a grade of C (2.0) or better to be eligible for all 3000- and 4000-level courses. In addition to these requirements, students seeking a degree in the Fogelman College of Business and Economics must have (1) completed all required lower division business courses with a minimum grade of C (2.0) in each; (2) minimum of 2.25 GPA in all required lower division business courses and MATH 1312, and (3) 55 hours of course work including MATH 1312 and 9 hours of English (See B.B.A. Degree Requirements-General Requirements). In addition to specific prerequisites, junior standing or permission of the Faculty Director of Undergraduate Programs is a prerequisite for all 3000 and 4000 level courses in The Fogelman College of Business and Economics.

ACCT 2010. Fundamentals of Accounting I. (3). Introduction to measurement, realization, classification and disclosure concepts about businesses◆ financial statement; emphasis on how managers, creditors, and investors can analyze financial accounting information to make investment, financing, and operating decisions.

ACCT 2020. Fundamentals of Accounting II. (3). Introduction to measurement and disclosure concepts about cost and profit of products, services, and organizational units; emphasis on how managers can use internal and external information to make resource allocation decisions, to plan and to control investment and make operating decisions. PREREQUISITE: ACCT 2010.

ACCT 3010. Managerial Accounting. (3). Accounting as it relates to managerial control. Includes financial statement analysis including price level changes, cost controls, budgeting, quantitative accounting techniques for decision making in management. PREREQUISITE: ACCT 2020. This course is for non-accounting majors only.

ACCT 3110. Intermediate Accounting I. (3). Review of accounting process and financial statements; cash; receivables and short-term investments; inventories; investments in equity securities, income recognition; operational assets; intangibles. PREREQUISITES: ACCT 2020.

ACCT 3120. Intermediate Accounting II. (3). Long-term debt; corporations, formation and changes after formation; retained earnings; investments in debt instruments; statement of cash flows; pensions; leases; E.P.S.; deferred income taxes; accounting changes; financial reporting and changing prices. PREREQUISITE: ACCT 3110.

ACCT 3310. Cost Accounting. (3). Cost systems, including job order, process, and standard, as management information systems for planning and control. Allocation of indirect costs, preparation of variable budgets, and determination of standard cost variances and their meaning. PREREQUISITES: ACCT 2020.

ACCT 3510. Federal Income Tax I. (3). Introduction to the federal income taxation of individuals. PREREQUISITE: ACCT 2020.

ACCT 4020. Accounting Systems. (3). (4450). Accounting systems analysis and design emphasizing the accounting cycles approach; theory of systems control in an organizational setting; holistic approach of synthesizing the accounting, financing, operating, and production functions where applicable. On-site

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practicum with an actual company. PREREQUISITES: ACCT 3110.

ACCT 4210. Advanced Accounting. (3). Partnerships, statement of affairs, receiver's accounts, statement of realization and liquidation, business combinations and consolidated financial statements, fund accounting, international accounting. Enrollment restricted to students who are governed by catalogs prior to 1993-1994. PREREQUISITE: ACCT 3120.

ACCT 4240. Auditing. (3). Ethics in accounting practices, internal control, auditing standards and procedures, programs of audit of various accounts, reports to clients. PREREQUISITE: ACCT 3120, 4020.

ACCT 4241-6241. Advanced Auditing. (3). (0551). In-depth background in three technical areas of auditing: statistical plans, selection techniques, and statistical measurement. Analytical review techniques. EDP auditing. PREREQUISITE: ACCT 4240.

ACCT 4300. Financial Statement Analysis. (3). Comprehensive and up-to-date treatment of analysis of financial statements in assessing an organization's risk in decision making. PREREQUISITE: ACCT 2020.

ACCT 4310. Advanced Cost Accounting. (3). Budgets, determination of standards, variances and their functions, cost reports, profit projecting, direct costing, gross profit and break-even analysis, cost-profit-volume analysis, capital expenditure control, comparative cost analysis. Enrollment restricted to students who are governed by catalogs prior to 1993-1994. PREREQUISITE: ACCT 3310.

ACCT 4410. Advanced Computer Applications In Accounting. (3). Advanced techniques for the use of computer application packages and programming in such areas as financial modeling, financial analysis, productivity, and presentation as well as other applications of current and anticipated interest and benefit to the accounting profession. Enrollment restricted to students who are governed by catalogs prior to 1993-1994. PREREQUISITES: ISDS 2749 or equivalent.

ACCT 4520-6520. Federal Income Tax II. (3). Introduction to the federal income taxation of corporations, partnerships, estates and trusts. PREREQUISITE: ACCT 3510.

ACCT 4540. Governmental, Health Care/Not-for-Profit Accounting. (3). Basic accounting and reporting procedures for governmental units, universities and other not-for-profit entities. PREREQUISITE: ACCT 2010.

ACCT 4910. Problems in Accounting. (1-3). Students will conduct approved projects in major area under supervision of faculty. PREREQUISITE: Permission of Director of Undergraduate Programs.

ACCT 4911. Internship in Accounting. (1-6). Internship in business organization to gain on-the-job experience. Project to be approved, supervised by area faculty member. Credit allowed only after acceptance of report, varies with complexity of duties. PREREQUISITES: senior standing and a minimum GPA of 2.75.

ACCT 4920-29. Special Topics in Accounting. (3). Varied topics. May be repeated once with change in topic. PREREQUISITE: permission of Accounting Area Coordinator.

ACCT 4996. Senior Honors Thesis in Accountancy. (3). Independent research open only to those students enrolled in the honors program. Thesis supervised by faculty member; approved by the Director of the School. PREREQUISITES: senior standing and permission of the director of the college honors program.

(AERO) AEROSPACE STUDIES

LIEUTENANT COLONEL ROBERT N. HUTCHINGS, JR. ♦ M.S. *Professor of Aerospace Studies*
Room 118, Hayden Hall

<http://www.people.memphis.edu/~AFROTC/>

AERO 1111. The Air Force Today. (1). Survey course designed to introduce students to the United States Air Force and Air Force ROTC. Topics include Air Force mission and organization, customs and courtesies, officer opportunities, problem solving, and communication skills. One class hour per week and one and one-half hours of Leadership Laboratory. * [G]

AERO 1112. The Air Force Today. (1). Continuation of AERO 1111. One class hour per week and one and one-half hours of Leadership Laboratory. * [G]

AERO 2211. The Air Force Way. (1). Survey course designed to facilitate the transition from AFROTC cadet to officer candidate. Topics include Air Force heritage and leaders, Quality Air Force, ethics and values, leadership, group problem solving, and communication skills. One class hour per week and one and one-half hours of Leadership Laboratory. * [G]

AERO 2212. The Air Force Way. (1). Continuation of AERO 2211. One class hour per week and one and one-half hours of Leadership Laboratory. * [G]

PROFESSIONAL OFFICER COURSE

AERO 3211. Aerospace Studies Four-Week Field Training. (4). Twenty-eight day course conducted during

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summer at active installation of USAF, consists of approximately 185 hours of instruction in Air Force base functions, leadership, physical training, Air Force environment, career orientation, and survival training. Students assigned to groups of twenty-five and individually counseled and evaluated on their performance. Emphasis on self-initiated leadership activities. PREREQUISITE: AERO 1111, 1112, 2211, 2212, or equivalent.

AERO 3212. Aerospace Studies Six Week Field Training. (6). Forty-two day course conducted during summer at active installation of USAF. Consists of approximately 258 hours of instruction on role of military forces, organization of Defense Department, instruments of national security, Air Force base functions, leadership, physical training and Air Force environment. Students are assigned to groups of approximately twenty-five and individually counseled and evaluated on their performance.

AERO 3311. Air Force Leadership and Management. (3). Study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to demonstrate and exercise practical application of concepts studied. Three class hours per week and one and one-half hours of Leadership Laboratory.*

AERO 3312. Air Force Leadership and Management. (3). Continuation of AERO 3311. Three class hours per week and one and one-half hours of Leadership Laboratory.*

AERO 4411. Preparation for Active Duty. (3). Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics include the military as a profession, officership, military justice, civilian control of the military, and preparation for active duty. Within this structure, continued emphasis is given to refining communication skills. Three class hours per week and one and one half hours of Leadership Laboratory.*

AERO 4412. Preparation for Active Duty. (3). Continuation of AERO 4411. Three class hours per week and one and one-half hours of Leadership Laboratory.*

***Leadership Laboratory.** Freshman-/Sophomore-level topics (supporting the General Military Course) include Air Force customs and courtesies, drill and ceremonies, issuing military commands, instructing, environment of the Air Force officer, and officer opportunities. Junior-/Senior-level topics (supporting the Professional Officer Course) include such advanced leadership experiences as planning and controlling cadet wing activities, preparing and presenting oral and written communication, and providing the guidance and information needed to train and motivate other cadets. One and one-half hours per week.

(ANTH) ANTHROPOLOGY

DAVID H. DYE, Ph.D., *Chair*

Room 316, Manning Hall

<http://www.people.memphis.edu/~anthropology/>

ANTH 1100. Human Origins and Variation. (3). Biocultural basis for understanding humans; emphasis on fossil record and origins and development of humans, human society and culture; primate models and human behavior; human variation. [G]

ANTH 1200. Cultural Anthropology. (3). Origin and development of human culture; social relations, language, government, religion and ritual, and problems of developing nations or minority groups in modern world. [G]

ANTH 3111. Human Paleontology. (3). Hominid fossil record starting with primate developments; human evolution; human osteology.

ANTH 3200. Peoples and Cultures of the World. (3). (Same as GEOG 3200). Major ethnographic areas and selected cultures of the world.

ANTH 3231. Native Peoples of North America. (3). Description and distribution of prehistoric remains; contemporary peoples and cultures of Central and South America; comparisons and interrelationships during pre- and post-contact periods.

ANTH 3232. Cultural Heritage of Latin America. (3). Description and distribution of prehistoric and contemporary peoples and cultures of South America and Mesoamerica; comparisons and interrelationships during pre- and post-contact periods.

ANTH 3242. Peoples of Africa. (3). Description and distribution of peoples and cultures of Africa; comparisons and inter-relationships during pre- and post-contact periods.

ANTH 3282. Cultural History of American Communities. (3). Cultural historic interpretation of formation, development and transformation of diverse community life-patterns in America; emphasis on analysis of community as it reflects change in settlement patterns, kinship networks, political, religious, economic and

7
value systems in American society. [G]

ANTH 3300. The Ascent to Civilization. (3). (Same as HIST 3300). Interdisciplinary integrative examination of nature of civilization through investigation of origins of civilization and comparative study of world's earliest civilizations. PREREQUISITE: 9 hours of anthropology and/or history including either ANTH 1100 or HIST 1301. [I]

ANTH 3351. Old World Archaeology. (3). Old World cultures from first humans to early civilizations.

ANTH 3511. Culture, Kin and Family. (3). Changing structure of family in Western and non-Western societies; cross-cultural approaches to mate selection, courtship rituals, kinship organization, institution of marriage, division of labor and authority in household, and childbearing; variation and flexibility in family structures as adaptive strategies for environmental, social and cultural change.

ANTH 3711. Culture and Technology. (3). Anthropological survey of development of technology and its impact on organization of industry and work from prehistoric through post-industrial societies; consideration of such current issues as public control of technology, labor market segmentation, and quality of working life, in context of comparative analysis of both pre-industrial and industrial societies.

ANTH 4010. Anthropological Methods of Field Research. (3-6). Various qualitative and quantitative methods of anthropological research; includes preparing for field research, collecting data, analyzing data and writing ethnographic descriptions of contemporary societies. [W]

ANTH 4020-6020. Visual Archiving in Anthropology. (3). Anthropological use of photography as a research tool; emphasis on anthropological field, museum, and laboratory photography. NOTE: Prospective students are advised to obtain a list of course expenses from the Anthropology Department before registering. PREREQUISITE: ART 2701 or permission of instructor.

ANTH 4051-6051. Anthropology and Education. (3). Advanced study of cultural transmission process with emphasis on identifying differing behavioral, cognitive and learning styles of various ethnic groups within American society and selected third world countries; encounters of U.S. subcultural groups with public education system. PREREQUISITE: permission of instructor.

ANTH 4065-6065. Contemporary Anthropological Theory. (3). Contemporary growth of theories and methods in anthropology.

ANTH 4111-6111. Human Adaptations. (3). Examines the physical and cultural adaptations of humans in an ecological context; information from primate studies, the archaeological record and studies of contemporary societies; ecological context of physical adaptations, cultural adaptations, language, social organization. PREREQUISITE: ANTH 1100, 1200 or permission of instructor.

ANTH 4120-6120. Africa's New World Communities. (3). Survey of African American cultures in the New World emanating from 17th and 18th centuries slave trade; focus on African Diaspora; Caribbean, Central America, South America and North America.

ANTH 4200-6200. Ecological Anthropology. (3). Critical examination of concepts for ecological analysis of formation, maintenance and change of human social groups; draws on the archaeological record and contemporary studies to examine interactions between cultures and environments; implications of the ecological approach for the study of human societies. PREREQUISITE: ANTH1100, 1200 or permission of instructor.

ANTH 4220-6220. Human Dimensions of Natural Resource Management. (3). Role of culture in the use and management of natural resources; discusses how societies construct knowledge about nature and attribute value to it; examines how indigenous knowledge, alternative value systems and traditional management strategies influence policy decisions at the local, national, and international levels. PREREQUISITE: ANTH 4200 or permission of instructor.

ANTH 4251-6251. Psychological Anthropology. (3). Examines the relationship between culture and personality; cross-cultural comparison of perspectives on cognition, mental illness, ethnopsychiatry and ethnotherapies.

ANTH 4252-6252. Economic Anthropology. (3). Comparative analysis of economic systems and their functional relationships to other aspects of culture; cultural constructions of wealth, value, property.

ANTH 4253-6253. Anthropology of Religion. (3). Comparative analysis of religious systems and their functional relationships to other cultural institutions; interrelations of myth, magic, and ritual; types of religious institutions and religious practitioners.

ANTH 4255-6255. Applied Anthropology and Development. (3). Cross-cultural review of processes of change, grassroots development and planning in the industrialized world, models of change, specializations in

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applied anthropology, and development of public policy on international issues of housing, education, health and economic development.

ANTH 4301-6301. Archaeology of North America. (3). (3331). Description and distribution of prehistoric cultural remains in North America and MesoAmerica; major regional sequences, extending from the earliest evidences of human occupation until historic times.

ANTH 4325-6325. Archaeological Field Techniques. (3). Instruction in field excavation, specimen preparation, use of survey instruments and photography, map making, archaeological record keeping; may be repeated for a maximum of 6 hours credit. PREREQUISITE: permission of instructor.

ANTH 4326-6326. Archaeological Laboratory Techniques. (3). Methods and techniques in archaeological laboratory analysis; emphasis on organization and supervision of laboratory procedures. PREREQUISITE: permission of instructor.

ANTH 4333-6333. Archaeological Site Reconnaissance. (3). Field course to provide basic understanding of applied archaeology including governmental Phase I, Phase II research; site survey, site mapping, surface collections, site testing and rapid site assessment. PREREQUISITE: permission of instructor.

ANTH 4336-6336. Native Peoples of the Mid-South. (3). Archaeology and ethnology of Southeast; intensive study of various Native American cultures of Tennessee and bordering states. PREREQUISITE: ANTH 1100, 1200 or permission of instructor.

ANTH 4360-6360. Environmental Reconstruction. (3). Advanced study of cultural ecology in past environmental regimes; emphasis on interdisciplinary approach to extinct social systems and their relationship with the environment.

ANTH 4370-6370. Historic Archaeology. (3). Review of contributions of archaeologists to historical research; methods and techniques of archaeologists as required and modified by excavation and interpretation of historic materials; allied specialties unique to Historic Archaeology including documentary investigations and conservation and restoration of existing structures.

ANTH 4380-6380. Museums in Society. (3). (Same as ARTH 4380). History of museums and how they function in society; development of major collections and role of museums as centers of research and education and as interpreters of social values.

ANTH 4382-6382. Professional Practices In Museums. (3). (Same as ARTH 4382). Basic aspects of museum organization; roles of director and trustees; responsibilities of professional staff including registrars and curators; and scope of museum education programs; features presentations by museum professionals. [W]

ANTH 4390-6390. Archaeology. (3). Introduction to basic archaeological concepts; topics include history of archaeology; theory, methodology, techniques and research strategies.

ANTH 4411-6411. Urban Anthropology. (3). Anthropological studies of pre-industrial and industrial cities; urbanization, movements of social transformation and other processes of adjustment to urban milieu; urban slums, ethnic enclaves and housing developments in cross-cultural perspective; urban kinship and social organization; urban community development; urban research techniques.

ANTH 4412-6412. Neighborhood Development & Poverty. (3). Role of various institutions and their relationship to developmental needs of inner-city neighborhoods; evolution of American cities as context for understanding urban neighborhoods and poverty; role of government and foundations in shaping policy at local level; rise of neighborhood associations and non-profits as extensions of family values; contributing to better understanding of neighborhoods and various intervention strategies.

ANTH 4413-6413. Anthropology of Tourism. (3). Advanced study of developing field of tourism in anthropology; explores cultural dynamics and dilemmas of tourism and tourist development; different forms of tourism (mass, elite, eco, ethnic and heritage) assessed both in terms of impacts on host culture and its environment as well as tourists themselves; tourism assessed as a development alternative, a driver of cultural change, and a form of local, regional national, international and intercultural relations. PREREQUISITE: ANTH 1200.

ANTH 4414-6414. Comparative Work and Production Systems. (3). Advanced study of changes in work units and production systems beginning with early industrial capitalism, evolving through stages of integrated mass production, and finally the current restructuring of a global system; focus on flexible mass production, involvement of the periphery, workplace innovation, international labor migration and human resource development. PREREQUISITE: ANTH 1200 or ANTH 3282.

ANTH 4420-6420. American Folklore. (3). Selected genres of American folklore, including folk religion and belief, folk medicine, folksong and music, narrative and humor (jokes and riddles); comparisons to other

- cultures; emphasis on role of folklore in maintenance of tradition, in social change, and in concept of culture.
- ANTH 4511-6511. Medical Anthropology. (3).** Cross-cultural analysis of bio-behavioral components of infectious, nutritional, genetic, chronic and psychiatric diseases; individual and cultural reactions to medical care, professionals and health care delivery systems.
- ANTH 4531-6531. Alcohol, Culture, and Biology. (3).** Cross-cultural comparison of beliefs, rituals, meaning of alcohol consumption and alcoholism; examination of biological and cultural evidence for development of alcohol related problems. Implications for prevention, early intervention, and treatment.
- ANTH 4541-6541. Nutritional Anthropology. (3).** Cross-cultural comparison of human diet; assessment; cultural and health value of foods; hunger and malnutrition; acculturation and dietary change.
- ANTH 4551-6551. Culture and Childbirth. (3).** Review of biological, environmental, social and cultural factors influencing human reproduction; individual, community and clinical approaches to fertility, birth control, pregnancy, birth and post-partum care; alternative delivery systems.
- ANTH 4561-6561. Cultural Context of Deviant Behavior. (3).** Reviews perceptions of normality in different societies, cultural definitions of and responses to deviance, promotion and discouragement of inappropriate behavior; evaluates mental illness, violence, drug abuse, cannibalism, suicide, sexual practices and everyday behavior in relation to cultural definitions of normality.
- ANTH 4840-6840. Israel: Antiquity in Modernity. (3). (Same as JDST 4840-6840).** Interdisciplinary examination of relationship between ancient traditions and modern issues in Israel; emphasis on relationship between historical conditions, conflicts, and interconnections, and new choices facing Israel.
- ANTH 4841-6841. Biblical Archaeology. (3). (Same as JDST 4841-6841).** Relationship between historical texts in Hebrew Bible and historical evidence from archaeological research in Israel and surrounding area; emphasis on how archaeological evidence and biblical narratives illuminate each other.
- ANTH 4975. Directed Individual Readings. (1-3).** Intensive guided survey of anthropological and related literature; student selects a topic in consultation with a faculty member and chair.
- ANTH 4985. Directed Individual Research. (1-3).** Intensive guided research, data analysis and presentation; student selects a topic in consultation with a faculty supervisor and chair.
- ANTH 4990-99. Special Topics in Anthropology. (3).** May be taken for a maximum of 6 credit hours when topic varies.

(ARAB) ARABIC

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

Room 375, Dunn Hall

- ARAB 1101. Elementary Arabic. (3). (LALI 1701002).** Principles of pronunciation; everyday expressions; basic sentence patterns through oral practice, writing and reading.
- ARAB 1102. Elementary Arabic. (3). (LALI 1702002).** Continued study of sentence patterns through oral and written practice. PREREQUISITE: ARAB 1101 or equivalent.
- ARAB 2201. Intermediate Arabic. (3). (LALI 2701002).** Continued study of sentence patterns through oral and written practice. PREREQUISITE: ARAB 1102 or equivalent.
- ARAB 2202. Intermediate Arabic. (3). (LALI 2702002).** Continued study of sentence patterns through oral and written practice. PREREQUISITE: ARAB 2201 or equivalent.

(ARCH) ARCHITECTURAL TECHNOLOGY

Department of Engineering Technology

RONALD LEE DAY, M.A., *Chair*

Room 203, Engineering Technology Building

<http://www.people.memphis.edu/~engtech/home.html>

- ARCH 1555. History of Architecture. (3).** Major trends in architecture from prehistoric times to present; emphasis on impact of technological and social changes on prevailing architectural styles.
- ARCH 1561. Building Technology I. (3).** Building types and building systems; emphasis on the effect of scale, materials, assembly systems and detail methods upon architectural design; drafting of details included. *Two lecture hours, three studio hours per week.* PREREQUISITE: TECH 1521.
- ARCH 1562. Building Technology II. (3).** Advanced study of building types and building systems; material and their properties as related to architecture; drafting of details included. *Two lecture hours, three studio*

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hours per week. PREREQUISITE: ARCH 1561.

ARCH 2451. Introduction to Surveying. (3). (1451). Surveying practices, calculations, and use of topographical conventions. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: MATH 1213.

ARCH 2555. Architectural Design I Studio. (4). Architectural schematics and design; sketching, design studies, model building and freehand drawing; principles of graphic communication, including sketching, lettering, perspective, 3-dimensional forms employing light, shade and shadow. (F). PREREQUISITE: TECH 1521, ARCH 1561.

ARCH 2556. Site and Environmental Planning Studio. (4). Building sites; selection and utilization, including environmental influences; technical aspects such as zoning, contour lines, parking, ingress/egress, site drainage, building location and landscaping. *Three lecture hours, two studio hours per week.* PREREQUISITE: TECH 1521, ARCH 1562, 2555.

ARCH 2561. Computer Applications in Architecture. (3). (3561). Computer aided drafting and design applications to produce computer generated architectural design and working drawings. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: TECH 1521, ARCH 1561.

ARCH 3401. Strength of Materials. (3). ⚡ (Same as METH 3401). Force systems and their solution; that branch of mechanics dealing with forces and effects of forces acting upon rigid and deformable bodies at rest; analysis of structural materials. COREQUISITES: TECH 3044, PHYS 2001, 2110.

ARCH 3408. Industrial Materials (4). (Same as METH 3408). Material properties and the methods and standards used in testing these properties are introduced for metals, ceramics, polymers, and composites; emphasis is placed on their mechanical properties and reinforced by testing in the laboratory. *Three lecture hours, three laboratory hours per week.* PREREQUISITE or COREQUISITE: TECH 3401.

ARCH 3471. Structural Design I. (3). Fundamentals of structural design and analysis of steel and timber buildings and building components. PREREQUISITES: ARCH 3401, MATH 1321. [C]

ARCH 3472. Structural Design II. (3). Fundamentals of structural design and analysis of concrete buildings and building components. PREREQUISITES: ARCH 3401, MATH 1321.

ARCH 3520. Architectural Design II Studio. (4). Basic design concepts and methods as applied to building types, design, construction, and systems for residential architecture. *Three lecture hours, three laboratory hours per week.* PREREQUISITES: ARCH 1562, 2555, 2556.

ARCH 3531. Environmental Control Systems. (3). Studies in environmental technologies in architecture; mechanical systems, plumbing, electrical and energy conservation. PREREQUISITE: ARCH 1562, 2555.

ARCH 3562. Advanced Computer Applications in Design. (3). Advanced concepts of computer generated drawings including LISP programming, screen menu and keyboard macro modification, utilization of third party software for special applications, icon creation, 3-dimensional wire mesh, shading, slide presentation, and data exchange to other software. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: ARCH 2561 or equivalent.

ARCH 4515. Architectural Design III Studio. (4). Design synthesis. Integration of design determinants and development of macro and micro building concepts for commercial, institutional and residential architecture. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ARCH 3520, 4600.

ARCH 4535. Professional Practice. (3). Professional practice of architecture; case problems initiating and managing professional practice; exploration of essential elements of professional practice; administration and management, professional services of architect, contracts, codes, specifications and professional ethics. PREREQUISITE: ARCH 3520.

ARCH 4600. Contract and Construction Drawings. (4). Techniques and methods of portraying information needed to conform to document design decisions; development of building systems, structural and construction details required to communicate clearly and graphically a project's bidding, contracting, and construction requirements. *Three lecture hours, three laboratory hours per week.* PREREQUISITES: ARCH 3520, 3562 or equivalent.

ARCH 4615. Architectural Design IV Studio. (4). Design synthesis; integration of design determinants, structure, environmental controls, materials and construction; independent architecture studies combined with advanced design /research thesis. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ARCH 4515.

ARCH 4650. Parameters in Architecture Studio. (3). Comprehensive overview of differences and relationships of history, technology, and culture in terms of impact on architecture and urban design; concepts

of form generation and historic dimensions of architecture with respect to human settlement. PREREQUISITE: permission of instructor.

ARCH 4651. Urban Design Studio. (3). Comprehensive overview of significant issues of contemporary urban design; emphasis on experiential nature of cities, role of public policy, and genesis and development of urban building types. PREREQUISITE: permission of instructor.

ARCH 4655. Studio ♦ Study Abroad. (3-9). Comparative studies of European cultures; relationships of culture to physical environment, organization of cities; history and behavior of inhabitants; analysis and documentation of elements of physical environment and relationship between buildings and urban fabric. PREREQUISITE: permission of instructor.

ARCH 4944. Senior Thesis. (3).♦ (Same as♦ CETH 4944, EETH 4944, METH 4944). Study♦ and research in specific area culminating in an integrating experience through individual and/or group projects and technical reports. (A-F, IP). [W, I]

ARCH 4990-4998. Special Topics. (1-3). Varied topics announced in the Schedule of Classes. May be repeated by permission for a maximum of 6 hours. PREREQUISITE: permission of instructor.

(ARMY) MILITARY SCIENCE

MAJOR BOBBY PINKSTON, M.A. *Professor of Military Science*

Room 123A, Hayden Hall

<http://www.cbu.edu/~kroberts/Lcadre.html>

NOTE: Leadership laboratory provides the forum for the reinforcement of formal classroom instruction. Lab revolves around the practical application of the theories of leadership with a ♦hands-on♦ approach to learning. Provides opportunities for cadets to exercise leadership, planning, and management skills as well as covering independent topics including: rappelling, drill and ceremonies, basic rifle marksmanship, first aid, and orienteering.

ARMY 1100. Leadership Laboratory. (1). *Two laboratory hours per week.* COREQUISITE: ARMY 1110.

ARMY 1110. Introduction to Military Science. (1). Introduction to Army ROTC with hands-on approach through several basic military skills. Lectures and practical exercises in following areas: rappelling, communications, weapons, first aid, and land navigation. There is no military obligation. COREQUISITE: ARMY 1100.

ARMY 1115. Leadership Laboratory. (1). *Two laboratory hours per week.* COREQUISITE: ARMY 1120.

ARMY 1120. Leadership and Confidence Building. (2). Basic military first aid skills; lectures and practical exercises in basic emergency treatment for fractures, lacerations, heat and cold injuries; cardiopulmonary resuscitation. THIS COURSE DOES NOT PROVIDE RED CROSS OR ANY OTHER CERTIFICATION. COREQUISITE: ARMY 1115.

ARMY 2100. Leadership Laboratory. (1). *Two laboratory hours per week.* COREQUISITE: ARMY 2105.

ARMY 2105. American Military History. (3). Developments since colonial period; emphasis on background and growth of national military and naval establishments, military and naval thought, difficulties accompanying modernization and assumption of global responsibilities, and problem of relationship between civilian and military-naval sectors in democracy. COREQUISITE: ARMY 2100.

ARMY 2115. Leadership Laboratory. (1). (2110 lab). *Two laboratory hours per week.* COREQUISITE: ARMY 2120. [G]

ARMY 2120. Fundamental Survival Skills. (1).(2110). Basic Military Skills including map reading, military first aid skills and small unit leadership. *One hour weekly classroom instruction.* COREQUISITE: ARMY 2115. [G]

ARMY 2140. Small Unit Tactics I. (2). Emphasis on preparation of the individual for combat. Preparation of potential leaders in combat through study of the knowledge and skills needed by an individual soldier. Skill developed in planning and organizing by combat patrols. Course includes a series of field practicums.

ARMY 2145. Small Unit Tactics II. (2). Advanced concepts in reconnaissance, raid, and ambush patrolling techniques, extended patrolling operations, and application techniques for specialized equipment; leadership skills through student-led patrols. Includes series of field practicums. Expands material taught in ARMY 2140 but may be taken independently of 2140.

ARMY 2190. Basic Camp Practicum. (1-6). Six-week training normally taken during the summer between the second and third years by those students who have not taken previous ROTC training, or who have not

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completed the required basic military science courses for advanced course enrollment. Training conducted at designated U.S. Army installation and includes practical experience in leadership, small unit tactics, weapons drill, and communications under field conditions. After completion of camp, student required to complete satisfactorily an examination administered by Military Science Department. Student must register for this course following successful camp completion to receive appropriate credit. Students receive approximately \$670.00 pay, room and board, and travel expenses. No military obligation is incurred. **PREREQUISITE:** Permission of Professor of Military Science

ARMY 3100. Leadership Laboratory. (1). *Two laboratory hours per week.* **COREQUISITE:** ARMY 3111.

ARMY 3111. Applied Leadership I. (3). (3110, 3190). Presentation, discussion, practical exercise, and field training on fundamentals of map reading and land navigation; development of skills in individual and small unit tactical planning and operations; and professional subjects in leadership, leadership assessment, and principles of war. *Three lecture hours per week, three hours physical training per week, and field training exercises on two weekends during semester.* **CO-REQUISITE:** ARMY 3100. **PREREQUISITE:** permission of the Professor of Military Science.

ARMY 3115. Leadership Laboratory. (1). *Two laboratory hours per week.* **COREQUISITE:** ARMY 3121.

ARMY 3121. Applied Leadership II. (3). (3120). Continuation of first year advanced course. **COREQUISITE:** ARMY 3115. **PREREQUISITE:** permission of the Professor of Military Science.

ARMY 3190. Advanced Camp Practicum. (6). Six weeks of training at an Army post, normally taken between the 1st and 2nd years of Advanced Course; practical experience in leadership, small unit tactics, U.S. Army weapon systems and equipment, and patrolling operation; examination administered by the Department of Military Science required to receive academic credit. Students must register for course following successful camp completion to receive credit. **PREREQUISITE:** permission of Professor of Military Science.

ARMY 4100. Leadership Laboratory. (1). *Two laboratory hours per week.* **COREQUISITE:** ARMY 4111.

ARMY 4111. Seminar in Leadership and Planning. (3). (4110). Leadership and management skill development in specific areas of oral and written communications, training management, personnel evaluation and counseling, personnel management systems of Army, U.S. Army logistic systems, military justice, and familiarization with ethics of military professional. This course, in conjunction with 4121, completes the cadet's preparation for commissioning as a Second Lieutenant in the Army Reserve or National Guard. *Three lecture hours every week, three hours physical training each week, and field training exercises on two weekends during semester.* **COREQUISITE:** ARMY 4100. **PREREQUISITE:** permission of the Professor of Military Science.

ARMY 4115. Leadership Laboratory. (1). *Two laboratory hours per week.* **COREQUISITE:** ARMY 4121.

ARMY 4121. Seminar in Organizational Leadership. (3). (4120). Continuation of second year of advanced course. **COREQUISITE:** ARMY 4115. **PREREQUISITE:** permission of the Professor of Military Science.

(ART) ART

JED JACKSON, M.F.A., *Chair*

Room 201, Jones Hall

<http://www.people.memphis.edu/~artdept/artdept.html>

Transfer students seeking advanced standing in art are required to submit a portfolio.

In addition to specific prerequisites, junior standing or permission of the instructor is a prerequisite for all 3000 and 4000 level courses in the Department of Art.

ART 1101. Introduction to Art. (3). Fundamental principles of artistic expression as basis for understanding Western and non-Western traditions in the visual arts. [G]

ART 1201. Basic Design. (3). Basic design factors of line, value, texture, form, and space in problem solving approach to stimulate student's visual perception and to encourage inventive manipulation of tools, materials, and techniques. Development of vocabulary for professional practice encouraged through lectures, discussions, and class critique.

ART 1204. Color Fundamentals. (3). Light and color in relation to form. Mixing of colors and notation of hue, value, chroma relationships. Interaction of color; color harmony, psychology, and symbolism in a variety of mediums. **PREREQUISITE:** ART 1201.

ART 1210. Two-Dimensional Design. (3). Elements and principles of visual design studies through a problem-solving approach. Encourages perceptual growth through the use of varied tools, materials, and techniques. **NOTE:** Students may not receive credit for both ART 1210 and 2201.

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ART 1215. Three-Dimensional Design. (3). Exploration of design elements and principles as applied to development of three-dimensional construction. Imaginative and fundamental use of materials in visual problem solving. **NOTE:** ART 1215 may be used for the purpose of improving a grade in ART 2202. **PREREQUISITE:** ART 1210.

ART 1233. Introduction to Interior Design. (3). Processes of interior design and various aspects and considerations involved in practice of both residential and commercial design.

ART 1234. Interior Drafting Practices. (3). (2231 and 2233). Introduction to equipment, standards and requirements of interior design drafting practices through lecture and space planning and production of working drawings.

ART 1235. Interior Color and Composition. (3). (2232 and 2234). Application of color theory and design-composition to specific requirements of interior design practice, through lectures and studio assignments. **PREREQUISITES:** ART 1810 or permission of instructor.

ART 1311. Beginning Drawing. (3). Introduction to materials and techniques of basic drawing; study of still life and nature to develop perception of line, value, space, and volume; use of contour and gesture.

ART 1314. Figure Structure. (3). Use of basic drawing materials and techniques; analysis and rendering of the human form, including work from skeleton and from female or male models; study of anatomy and proportion; emphasis on contour, gesture, value, and volume. **PREREQUISITE:** ART 1311.

ART 2201. Design. (3). Continued study of the elements of design, using variety of materials and methods. **NOTE:** Students may not receive credit for both ART 2201 and 1210. **PREREQUISITES:** ART 1201 and 1204, or permission of instructor.

ART 2213. Typographic Design I. (3). Terminology, technology, and design aspects of typography for effective communication. **PREREQUISITE:** ART 1210 and Acceptable Incoming Evaluation for Graphic Design.

ART 2219. Visual Thinking. (3). Fundamental methods in generating ideas for effective visual communication. **PREREQUISITE:** ART 1210, 1311, and Acceptable Incoming Evaluation for Graphic Design.

ART 2223. Computer Assisted Graphic Design. (3). Introduction to computer graphic design; overview of technical and aesthetic issues relevant to graphic design profession.

ART 2235. Interior Construction Drafting. (3). (3237 and 4551). Principles of building construction and their application through development of working drawings for both residential and commercial projects; building methods and materials studied through lectures and studio assignments. **PREREQUISITE:** ART 1234, or permission of instructor.

ART 2236. Components of Interiors. (3) (3231). Technical aspects of surface and structural materials of interior design in relation to building codes and public health, safety and welfare. **PREREQUISITE:** ART 1233 or permission of instructor.

ART 2237. Interior/Perspective Drawing. (3). (3312). Various perspectives systems applied to one- and two-point drawing techniques for interior design. **PREREQUISITE:** ART 1234.

ART 2238. CADD for Interior Design. (3). Introduction to use of microcomputer software in production of interior design drawings and documents; exploration of computer applications in design development and presentation. **PREREQUISITE:** ART 1234, 1311.

ART 2301. Introduction to Digital Art. (3). Introduction to computer graphics and its application in field of Art; use of standard hardware and software to solve creative problems; exploration of current issues and computer history. **PREREQUISITES:** ART 1210, 1311; or permission of instructor.

ART 2313. Drawing and Composition. (3). Problems in visual communication; emphasis on compositional and technical considerations; analytical and objective investigations of organizational problems; ♦ use of varied graphic media and methods. **PREREQUISITES:** ART 1311 and 1314, or permission of instructor.

ART 2314. Drawing and Concept. (3). Problems in visual communication; emphasis on personal expression; ♦ conceptual and subjective investigation of individual problem-solving strategies; use of varied graphic media and methods. **PREREQUISITE:** ART 2313 or permission of instructor.

ART 2331. Painting I. (3). (3331). Preliminary course in theory and practice of oil painting. **PREREQUISITE:** ART 1210, 1311, or permission of instructor.

ART 2351. Introduction to Printmaking. (3). Printmaking processes: relief, intaglio, planography, and stencil, focusing on relief and screen printing. . **PREREQUISITE:** ART 1210, 1311, or permission of instructor.

ART 2352. Introduction to Intaglio and Lithography. (3). Monochrome metal plate intaglio and stone lithography. Intaglio includes etching, engraving, and aquatint; lithography includes crayon, wash, and

transfer; emphasis on personal expression. ♦ PREREQUISITE: ART 1210, 1311, or permission of instructor.

ART 2414. Primary School Art Practicum. (1). Observation and art teaching in a local K-4 classroom; campus-based seminars. PREREQUISITE: Art major and permission of instructor. (S/U).

ART 2511. Sculpture I. (3). Introduction to basic materials and techniques of sculpture. PREREQUISITE: ART 1215 or permission of instructor.

ART 2523. Ceramics I. (3). (3523). Introduction to clay and ceramic process; emphasis on thoughtful, purposeful exploration of medium, regarding both pottery vessel and nonvessel object.

ART 2701. Photography I. (3). (3224). Basic techniques and processes of black and white still photography; history and aesthetics of photography as fine art; emphasis on personalized perception and seeing photographically. **NOTE:** Prospective students are advised to obtain a list of course expenses from the Art Department before registering.

ART 2702. Photography II. (3). (4224). Exploration of black and white still photography as means to personal expressive statement and self-discovery; assignments emphasize a broad range of contemporary photographic practice. PREREQUISITE: ART 2701 or permission of instructor.

ART 3103. History of Furniture and Interiors I. (3). (3101). Emphasis on Renaissance, Baroque, Rococo and Neo-Classical periods.

ART 3104. History of Furniture and Interiors II. (3). (3102). 19th and 20th century survey; emphasis on development of period revivals, Art Nouveau, Art Deco, International Style and other innovations in Europe and America.

ART 3204. Residential Kitchen Planning. (3). (HMEC 4203, 3204). (Same as CSED 3204). Socioeconomics and design aspects of housing; kitchen planning principles: selection, use, and care of household equipment. PREREQUISITE: CSED 2104.

ART 3213. Typographic Design II. (3). Advanced problems involving visual organization and typography as an expressive design element. PREREQUISITE: Admission to Graphic Design concentration.

ART 3219. Image Design. (3). Strategies, processes ♦ and techniques for integrating verbal and visual messages in graphic communications; illustration and computer imaging. PREREQUISITE: Admission Graphic Design concentration.

ART 3222. Graphic Design Methodology. (3). Emphasis on intellectual processes underlying applied design. PREREQUISITE: Admission to Graphic Design concentration.

ART 3225. Computer Graphics. (3). Hands-on training in use of graphics hardware and software in design and production of commercial graphics, illustrations and animation.

ART 3227. Electronic Pre-Press Production. (3). Methods of preparing art for reproduction. PREREQUISITE: ART 3222.

ART 3234. Interior Design Studio I. (3). (3232). Application of material covered in basic interior design courses to theoretical designs for complete environments; design development, production of working and presentation drawings and specifications studied through lectures and studio projects. PREREQUISITES: ART 2235, 2236, 3235, 3236, or permission of instructor.

ART 3235. Commercial Lighting Design. (3). (4234). Comprehensive study of lighting sources and principles, color and applications, including circuiting, switching, dimming systems, task-ambient lighting and industry resources. Zonal cavity method and point source calculations applied through lectures and studio assignments. PREREQUISITES: ART 1234, 1235, 2820 and 1 required math course or permission of instructor. [C]

ART 3236. Rendering for Interiors. (3). (4233). Comparative application of variety of techniques using black-white and color mediums for interior perspective illustration; lectures and studio assignments in line, texture, shade-shadow, volume, color and free-hand drawing. PREREQUISITES: ART 1234, 1235, 2237 or permission of instructor.

ART 3238. Interior Detail Drawing. (3). (4552). Design and drawing of interior millwork and casework; production and specification for construction studied through lectures and studio assignments. PREREQUISITE: ART 2235 or permission of instructor.

ART 3250. Interior Design Studio II. (3). (4231). Comprehensive assignment in commercial design including design development, space planning, building code requirements, and construction and specification documentation for barrier-free design studied through lectures and design assignments. PREREQUISITES: ART 3234 or permission of instructor.

ART 3332. Painting II. (3). Continuation of ART 2331; still-life, landscape, and portrait painting.

ART 3351. Intaglio Printmaking. (3). In-depth study of metal plate intaglio printmaking processes: engraving, drypoint, etching, aquatint, and color intaglio; mixed media; emphasizes personal expression. PREREQUISITE: ART 2352 or permission of instructor.

ART 3352. Lithography (3). In-depth study of lithography in monochrome and color from stone and aluminum plates; mixed media color printing; emphasizes personal expression. PREREQUISITE: ART 2352 or permission of instructor.

ART 3411. Art for Children. (3). Introduction to skills and methods for instructional art programs in studio and art appreciation activities; emphasis on materials and ideas for children's art expression and development.

ART 3416. Middle School Art Practicum. (1). Observation and art teaching in a local 5-8 classroom; campus-based seminars. PREREQUISITE: Art major and permission of instructor. (S/U).

ART 3423. Art For Secondary Schools. (3). Studio activities and related art education issues relevant to the artistic development of adolescents; emphasizes multicultural concerns and art evaluation systems. PREREQUISITES: ART 3411; ARTH 2101, 2102, or permission of instructor.

ART 3431. Multicultural Art and Design. (3). Studio activities combining visual art traditions of world cultures with innovative expression; emphasis on non-European sources for contemporary art works. PREREQUISITES: ART 2313; ARTH 2101, 2102 or permission of instructor.

ART 3511. Sculpture II. (3). Problems of sculptural form as expressed in metal, wood, and related materials.

ART 3512. Sculpture III. (3). Continuation of ART 3511; emphasis on techniques.

ART 3522. Kilns, Glazes and Technical Skills. (3). Further development and experimentation with technical skills; firing kilns, glaze preparation, technical and visual research. PREREQUISITES: ART 1210, 1311, and 2523.

ART 3524. Ceramics II. (3). Some consideration to fundamental historical and aesthetic aspects peculiar to ceramics as a studio medium. PREREQUISITE: ART 3522 or permission of instructor.

ART 3701. Photography III. (3). Continuation of ART 2702. Closer examination of several key photographers' work as point of departure for student work; how student work relates to traditions. PREREQUISITE: ART 2702 or permission of instructor.

ART 4010-19-6010-19. Special Topics in Studio Art. (1-3). Topics are varied and announced in Schedule of Classes. May be repeated to a maximum of 9 hours when topic varies.

ART 4020-29-6020-29. Special Topics In Art Education. (1-3). Topics are varied and announced in Schedule of Classes. May be repeated to a maximum of 9 hours when topic varies.

ART 4211-6211. Writing and the Design Process. (3). (3211). Synthesis of verbal and visual problem-solving methods and the use of writing as integral phase of design process. PREREQUISITE: ART 3213, 3222 or permission of instructor. [W]

ART 4221-6221. Graphic Design for Print Communications. (3). Practical problems in areas of publication, information, corporate and promotional design. PREREQUISITES: ART 3213, 3222 or permission of instructor.

ART 4222-6222. Interactive Multimedia for Graphic Design. (3). Introduction to time-based, electronic media in graphic design, impact of electronic interface on visual communication; emphasis on visual design of narrative, commercial and/or educational multimedia presentations on computer. PREREQUISITE: ART 2223 and admission to Graphic Design concentration.

ART 4223-6223. Specialized Studies In Graphic Design. (3-12). Advanced instruction in either electronic imaging, typography and publication design, 3-dimensional design, corporate and promotional design, or information graphic design. May be repeated to a maximum of 12 hours when topic varies. PREREQUISITE: ART 3213, 3222; or permission of instructor.

ART 4224-6224. History of Graphic Design. (3). Cultural, theoretical, and stylistic aspects of major movements in the field of graphic design in Europe and America from Industrial Revolution to present. PREREQUISITE: Admission to Graphic Design concentration or permission of instructor.

ART 4230. Graphic Design Internship. (3). Practical experience in visual communication within approved professional work environment. PREREQUISITE: ART 4221 and recommendation from advisor.

ART 4232-6232. Visual Design Business Practices. (3). Application of principles, procedures, and business practices of visual design. PREREQUISITE: junior standing or permission of instructor.

ART 4233-6233. Design Practice Studio. (3). Work under faculty supervision on projects for institutional and corporate clients; assist in developing publications, exhibits, signage and other graphics, and participate in professional design process from project inception to completion. May be repeated to a maximum of 12 hours

with approval of advisor, but not for the purpose of improving a grade previously earned. PREREQUISITE: senior standing. Admission by portfolio review only.

ART 4235. Graphic Design Portfolio Seminar. (3). Methodology and techniques in graphic design applied to an extended visual communication project; written proposal, preparation of comprehensive layouts and oral/visual presentation of project. PREREQUISITES: art major with concentration in graphic design and senior status. [I]

ART 4238-6238. Interior Design Studio III. (3). (4232). Further advanced studio assignments in commercial interior design studied through lectures and design projects. PREREQUISITES: ART 3235, 3250 or permission of instructor.

ART 4239-6239. Interior Design Business Practices. (3). (4235). History and organization of interior design profession; study of business methods and practices; formulation of resume and design portfolio. PREREQUISITE: ART 3234 or permission of instructor.

ART 4240-6240. Interior Design Internship. (3). (4236). Supervised apprenticeship in interior design industry. Placement requires approval of Interior Design faculty. PREREQUISITES: ART 3234 and permission of instructor.

ART 4241-6241. Nineteenth Century Furniture Analysis. (3). Identification of antique American furniture by period and style. Research involves actual furniture in a house museum collection.

ART 4251. Interior Design Senior Project. (3). Addresses creative, professional, technical, and historical issues involved in problem chosen and defined by student. Culminates in formal presentation of unique solution to problem. PREREQUISITE: ART 4820 or permission of instruction. [I]

ART 4321-6321. Drawing and Painting I. (3). Advanced drawing and painting methods; emphasis on transparent watercolor. PREREQUISITE: ART 2313 or permission of instructor.

ART 4322-6322. Drawing and Painting II. (3). Continuation of ART 4321; attention to various mixed media. PREREQUISITES: ART 2313, 4321; or permission of instructor.

ART 4331-6331. Painting III. (3). Advanced problems in oil painting, presupposing that student has mastered basic techniques and is ready for a more experimental approach to subject. PREREQUISITES: ART 2331, 3332; or permission of instructor.

ART 4332-6332. Painting IV. (3). Continuation of ART 4331; emphasis on development of personal style. PREREQUISITES: ART 2331, 3332, 4331; or permission of instructor.

ART 4351-6351. Advanced Printmaking I. (3). Specialization in one or two printmaking media with emphasis on development of personal imagery and technical skills. PREREQUISITES: ART 2351, 3351 or 3352; or permission of instructor.

ART 4352-6352. Advanced Printmaking II. (3). Advanced work in one or two printmaking media with continued development of personal imagery and advanced technical skills. PREREQUISITES: ART 2351, 3351 or 3352, and 4351; or permission of instructor.

ART 4353-6353. Computer Imaging in Printmaking/Photography I. (3). Use of digital imaging in one of several output options including: lithography, screenprinting, etching, silver and non-silver photographic processes; emphasis on personal expression PREREQUISITES: A computer course and either of the following: ART 2701, 2351; or permission of instructor.

ART 4354-6354. Computer Imaging in Printmaking/Photography II. (1-3). Advanced project using digital imaging. Proposal for study to be approved in advance; emphasis on personal expression. PREREQUISITE: ♦ ART 4353 or 6353; or permission of instructor. May be repeated to a maximum of 6 hours.

ART 4410-6410. Art Education Independent Study. (1-3). Theoretical and pragmatic ideas relevant to teaching of art. May be repeated to a maximum of 6 hours. PREREQUISITES: ART 3411, 3423; or permission of instructor.

ART 4418. High School Art Practicum. (1). Observation and art teaching in a local 9-12 classroom; campus-based seminars. PREREQUISITE: Art major and permission of instructor. (S/U).

ART 4427. Methods and Materials for Art Instruction. (3). Curriculum planning, resources, and standards for art program goals, budget, and facilities; current art education philosophy and research. PREREQUISITES: ART 2414, 3416, 3423; or permission of instructor.

ART 4511-6511. Sculpture IV. (3). Advanced work in various sculptural media. PREREQUISITES: ART 2511, 3511, 3512; or permission of instructor.

ART 4512-6512. Sculpture V. (3). Continuation of 4511; emphasis on personal expression. PREREQUISITE: ART 4511 or permission of instructor.

- ART 4521-6521. Ceramics III. (3).** Advanced studies in ceramic process and technique; concentration on development of personal attitudes toward work. PREREQUISITE: ART 3524 or permission of instructor.
- ART 4522-6522. Ceramics IV. (3).** Technical competence and the production of ceramic objects reflective of genuinely personal involvement. PREREQUISITE: ART 4521 or permission of instructor.
- ART 4610. Senior Studio. (3).** Studio production and associated research that interrelates historical, technical, and aesthetic components of visual art; contract for study project to be approved by instructor and faculty committee in semester prior to registration. PREREQUISITES: Art major, senior status with concentration in Art Education; Ceramics/Painting/Printmaking/Sculpture; or Photography. [I]
- ART 4611. Senior Problems. (3).** Original research in student's area of concentration, extent of the project to be approved by art faculty.
- ART 4621-6621. Workshop In Art I. (1-3).** Specific art problems as they apply to individual student; emphasis on basic art concepts and creative experience. PREREQUISITE: permission of instructor.
- ART 4622-6622. Workshop in Art II. (1-3).** Continuation of ART 4621, providing study of problems appropriate to need of individual student. PREREQUISITE: permission of instructor.
- ART 4641-6641. Study and Travel In Art. (3 or 6).** Travel to important art areas of world and specialized study under direction of faculty member of Department of Art.
- ART 4650-6650. Professional Art Practices. (3).** Development of skills needed for success as practicing professional artist; portfolio preparation and presentation, marketing, contracts, copyrights, and alternative art careers.
- ART 4701-6701. Color Photography. (3).** Exploration of photographic perception in color; survey of history and aesthetics of color photography; techniques of color photography; emphasis on color printing. PREREQUISITE: ART 3701, junior standing, or permission of instructor.
- ART 4702-6702. Photographic Materials and Processes. (3).** Advanced technical course exploring creative potential in various contemporary photography materials, processes and techniques; emphasis on aesthetic application of those materials and techniques. PREREQUISITE: ART 3701 or permission of instructor.
- ART 4703-6703. Alternative Photographic Processes. (3). (3702).** Exploration of creative potential of archaic and non-traditional photographic processes such as Cyanotype, Gum Bichromate and Kwik-Print. PREREQUISITE: ART 3701 or permission of instructor.
- ART 4704-6704. Photographic Lighting. (3).** Advanced theory, technique, and equipment used by professional photographers for black and white and color; emphasis on aesthetic application in actual practice. PREREQUISITE: ART 3701 or permission of instructor.
- ART 4711. Advanced Photography Seminar. (1-3).** Creation of a unified body of photographic work based on subject matter or formal problem. Contract for study project to be approved by instructor in semester prior to registration. May be repeated to a maximum of 6 hours. PREREQUISITE: ART 3701 or permission of instructor.
- ART 4712. Photography Portfolio Seminar. (1-3).** Creation and production of bound book or portfolio containing student's photographs and written introduction. Contract for study project to be approved by instructor in semester prior to registration. May be repeated 6 hours. PREREQUISITE: ART 4711 or permission of instructor.

(ARTH) ART HISTORY

Department of Art

JED JACKSON, M.F.A., *Chair*

Room 201, Jones Hall

◆ <http://www.people.memphis.edu/~artdept/artdept.html>

- ARTH 2101. World Art I. (3).** Development of visual arts from prehistoric times through medieval period, their use by man as social, cultural, and educational force; brief survey of art of Far East.
- ARTH 2102. World Art II. (3).** Continues (but does not pre-suppose) World Art I; development of visual arts from medieval period through Renaissance to present.
- ARTH 4030-39-6030-39. Special Topics in Art History. (1-3).** Topics are varied and announced in Schedule of Classes. May be repeated to a maximum of 9 hours when topic varies.
- ARTH 4111-6111. Art and Archaeology of Egypt. (3).** Predynastic to Late Period. PREREQUISITE: ARTH 2101 or permission of instructor. [W]
- ARTH 4112-6112. Egyptian Art and Archaeology in the Old and Middle Kingdom. (3).** Art, architecture,

and archaeology, 3000-1500 B.C. PREREQUISITE: ARTH 2101 or permission of instructor.

ARTH 4113-6113. Egyptian Art and Archaeology in the New Kingdom and Late Period. (3). Art, architecture, and archaeology, 1500 B.C.-642 A.D. PREREQUISITE: ARTH 2101 or permission of instructor.

ARTH 4121-6121. Ancient Art of the Near East. (3). Architecture, sculpture, painting, and the minor arts in Mesopotamia, Anatolia, and Syria-Palestine. PREREQUISITE: ARTH 2101 or permission of instructor.

ARTH 4123-6123. Greek Art. (3). Architecture, sculpture and painting from the Bronze Age to the end of the Hellenistic period.

ARTH 4124-6124. Roman Art. (3). Architecture, sculpture and painting from Etruscan Rome to the fall of the Empire.

ARTH 4125-6125. Art and Archaeology of Pompeii. (3). Pompeii's excavations, art, artifacts and architecture in reconstructing ancient Roman daily life. [W]

ARTH 4129-6129. Studies In Ancient and Medieval Architecture. (3). Selected topics comparing the architecture of ancient Egypt, the Classical world, and Medieval Europe. PREREQUISITE: ARTH 2101. [C]

ARTH 4130-6130. Art of the Medieval World. (3). Architecture, sculpture, and painting, including manuscript illumination of the middle ages; Western European and Byzantine traditions. PREREQUISITE: ARTH 2101 or permission of instructor. [W]

ARTH 4131-6131. Art of the Early Middle Ages. (3). Advanced study of architecture, sculpture and painting of the early medieval period. PREREQUISITE: ARTH 2101 or permission of instructor.

ARTH 4134-6134. Art of High Middle Ages (3). Advanced study of architecture, sculpture and painting, including manuscript illumination, ivories and stained glass in the Romanesque and Gothic periods. PREREQUISITE: ARTH 2101 or permission of instructor.

ARTH 4141-6141. Art of the Early Renaissance in Italy. (3). Architecture, sculpture and painting of Italy, 1300-1510. PREREQUISITE: ARTH 2101 or permission of instructor.

ARTH 4142-6142. Northern Renaissance Art. (3). Fifteenth Century Art in Northern Europe; emphasis on panel painting, manuscript illumination and printmaking. PREREQUISITE: ARTH 2101 or permission of instructor.

ARTH 4143-6143. Art of the High Renaissance in Italy. (3). Sixteenth Century Art in Italy; highlights works of Michelangelo, Raphael, Titian, and the Mannerists. PREREQUISITE: ARTH 2102 or permission of instructor. [W]

ARTH 4146-6146. Baroque Art. (3). Architecture, sculpture, and painting produced in Europe during Seventeenth Century. PREREQUISITE: ARTH 2102 or permission of instructor.

ARTH 4148-6148. Neo-Classicism and Romanticism. (3). Western European art, ca. 1760-1850 emphasizing painting, sculpture, and art theory. PREREQUISITE: ARTH 2102 or permission of instructor.

ARTH 4149-6149. Realism and Impressionism. (3). Western European art, ca. 1850-1880, emphasizing painting, sculpture and art theory. PREREQUISITE: ARTH 2102 or permission of instructor.

ARTH 4152-6152. Early Modern Art. (3). Movements in Western art and art theory, 1880-1905 which are the foundation of 20th century modernism, Symbolism and Post-Impressionism. PREREQUISITE: ARTH 2102 or permission of instructor.

ARTH 4153-6153. Cubism through Surrealism. (3). History of avant-garde art before World War II. PREREQUISITE: ARTH 2102 or permission of instructor.

ARTH 4155-6155. High Modern Art. (3). American and European art and art theory 1940-1968, emphasizing the development of modernism. PREREQUISITE: ARTH 2102 or permission of instructor.

ARTH 4157-6157. Contemporary Art. (3). Historical movements in art, 1968 to present. PREREQUISITE ARTH 2102 or permission of instructor.

ARTH 4158-6158. Modern Architecture. (3). Survey of 19th century styles, 20th century masters, and contemporary developments in architecture; historic preservation.

ARTH 4160-6160. Architecture and Nature. (3). Survey and analysis of spaces in a variety of cultures from world history where the relationship between the natural and the built environment is healthy.

ARTH 4162-6162. Latin American Art. (3). Hispanic arts of the Americas from 1500 to the present in relation to Iberian and Indian traditions.

ARTH 4163-6163. Pre-Columbian Art. (3). Ancient art of Mexico, Central America and South America from about 1000 B. C. to European contact.

ARTH 4166-6166. Art of the United States. (3). (4167, 4168). Survey of American painting, sculpture and art theory from colonial period to 1945. PREREQUISITE: ARTH 2102 or permission of instructor.

ARTH 4181-6181. Traditional Arts of Africa, Oceania and North America. (3). Survey of the arts created by native Americans of U.S. and Canada, peoples of sub-Saharan Africa and Pacific islands, examined in relation to their cultural context and heritage.

ARTH 4195. Proseminar In Art History. (3). Investigation of selected topics in art history with emphasis on development of research techniques and methodologies. Oral presentation and writing of thesis paper. **PREREQUISITE:** senior status with 18 semester hours in art history [I]

ARTH 4380-6380. Museums in Society. (3). (Same as ANTH 4380). History of museums and how they function in society. Development of major collections and role of museums as centers of research and education and interpreters of social values.

ARTH 4381-6381. Art Curatorial Techniques. (3). Curatorial responsibilities and functions: receiving and shipping methods, registration, physical and environmental security, research, conservation, and study of art market and publications.

ARTH 4382-6382. Professional Practices in Museums. (3). (Same as ANTH 4382). Basic aspects of museum organization; examines roles of directors and trustees, responsibilities of professional staff including registrars and curators, and scope of museum education programs. Features presentations by museum professionals. [W]

ARTH 4384-6384. Museum Internship. (3-6). Approved internship with cooperating museum or gallery, emphasizing curatorial, program and/or operational duties. **PREREQUISITES:** permission of the instructor and one of the following or the equivalent: ARTH 4380, 4381 or 4382.

ARTH 4721-6721. History of Photography I. (3). Historical and critical issues from photography's prehistory to World War I.

ARTH 4722-6722. History of Photography II. (3). Historical and critical issues in photography from World War I to the present.

◆(BA) BUSINESS ADMINISTRATION

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*
CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*
Room 114, Fogelman College of Business and Economics Building

Students must have junior standing and have met specific course prerequisites with a grade of C (2.0) or better to be eligible for all 3000- and 4000-level courses. In addition to these requirements, students seeking a degree in the Fogelman College of Business and Economics must have (1) completed all required lower division business courses with a minimum grade of C (2.0) in each; (2) minimum of 2.25 GPA in all required lower division business courses and MATH 1312, and (3) 55 hours of course work including MATH 1312 and 9 hours of English (See B.B.A. Degree Requirements-General Requirements).

BA 4900. Practicum In Research. (1-3). Actual problem-solving research activities in business and economics. Student assigned to project either being conducted currently by faculty member or one developed under supervision of faculty member. Whenever possible, project within student's major field of study. **PREREQUISITE:** senior status.

BA 4911. Internship In International Business. (1-6). (4000). Practical operations of international business. Students placed for 1-8 month period with cooperating business firm operating in fields of international banking and finance, transportation, management, marketing or accounting. Academic credit granted upon certification of satisfactory performance by cooperating business firm and upon acceptance by faculty of written research report by student.

(BIOL) BIOLOGY

JERRY O. WOLFF, Ph.D., *Chair*
Room 103, Ellington Building
<http://www.people.memphis.edu/~biology>

◆ Effective Fall 1996, the Biology Department was reorganized into two departments: (1) Biology and (2) Microbiology and Molecular Cell Sciences (MMCS). Additional biological science courses are listed under the Microbiology and Molecular Cell Sciences (MMCS) departmental heading.

BIOL 1071. Introduction to Biology I. (3). (1061). General overview of cellular structure and function, genes and biodiversity. **NOTE:** Credit will not apply toward a major or minor in the sciences, nor will it satisfy any part of science requirements for pre-professional curricula. *Three lecture hours per week.* [G]

BIOL 1072. Introduction to Biology I Laboratory. (1) (1062). Laboratory observations, demonstrations and

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experiments designed to apply scientific methods to lecture subjects. *Two laboratory hours per week.*
PREREQUISITE OR COREQUISITE: BIOL 1071. [G]

BIOL 1081. Introduction to Biology II. (3) (1051). Continuation of general overview of life; emphasis on structure and function of organisms and biosphere. NOTE: Credit will not apply toward a major or minor in the sciences, nor will it satisfy any part of science requirements for pre-professional curricula. *Three lecture hours per week.* [G]

BIOL 1082. Introduction to Biology II Laboratory. (1) (1052). Laboratory observations, demonstrations and experiments designed to apply scientific methods to lecture subjects. *Two laboratory hours per week.*
PREREQUISITE OR COREQUISITE: BIOL 1081. [G]

BIOL 1151. General Biology I. (3). (1111). Unifying principles of biology with emphasis on cell structure cell function, heredity, development and evolution. *Three lecture hours per week.* [G]

BIOL 1152. General Biology Laboratory I. (1). (1111 lab). Laboratory observations, demonstrations and experiments designed to apply scientific methods to lecture subjects. *Two laboratory hours per week.*
PREREQUISITE OR COREQUISITE: BIOL 1151. [G]

BIOL 1161. General Biology II. (3). (1112). Continuation of BIOL 1151 with emphasis on origin and diversity of life; structure, functions, and ecology of organisms. *Three lecture hours per week.* [G]

BIOL 1162. General Biology Laboratory II. (1). (1112 lab). Laboratory observations, demonstrations and experiments designed to apply scientific methods to lecture subjects. *Two laboratory hours per week.*
PREREQUISITE OR COREQUISITE: BIOL 1161. [G]

BIOL 1751. Anatomy and Physiology I. (3). (1731). Detailed study of structure and functions of human organism; credit not acceptable for Biology major or minor. *Three lecture hours per week.*

BIOL 1752. Anatomy and Physiology Laboratory I. (1). (1731 lab). Laboratory observations, demonstrations and experiments designed to apply scientific methods to lecture subjects. *Two laboratory hours per week.* PREREQUISITE OR COREQUISITE: BIOL 1751.

BIOL 1761. Anatomy and Physiology II. (3). (1732). Continuation of BIOL 1751; credit not acceptable for Biology major or minor. *Three lecture hours per week.*

BIOL 1762. Anatomy and Physiology Laboratory II. (1). (1732 lab). Laboratory observations, demonstrations and experiments designed to apply scientific methods to lecture subjects. *Two laboratory hours per week.* PREREQUISITE OR COREQUISITE: BIOL 1761.

Students must complete BIOL 1151, 1152, 1161 and 1162 before enrolling in any upper division course that is accepted as credit toward a biology major or minor.

BIOL 3030. Principles of Animal Physiology. (4). Basic concepts of animal function, including study of many invertebrate phyla and most classes of vertebrate organisms. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: 8 hours of animal biology or equivalent and COREQUISITE: CHEM 3311.

BIOL 3050. General Ecology. (4). Relationships between organisms and their environment; emphasis on fundamental principles; topics include: nutrient cycles limiting factors, population dynamics, community succession and structure, species interactions, and human ecology. *Two lecture hours, four laboratory hours per week.* [W,C]

BIOL 3071. Human Genetics. (3). Genetic principles as they apply to humans, including pedigree analysis, genetic counseling, genetic engineering, and eugenics. *Three lecture hours per week.* PREREQUISITE: BIOL 3072.

BIOL 3072. Genetics. (3). (3070). Principles of heredity, including classical, microbial, molecular, and population genetics; three lecture hours per week; credit for both 3072 and 3073 must be earned to improve grade in 3070. PREREQUISITE: 16 hours in the biological sciences (BIOL and MMCS), including MMCS 3130 or 3500. [I,C]

BIOL 3073. Genetics Laboratory. (1). (3070 lab). Laboratory experiments in classical, microbial, molecular, and population genetics designed to illustrate principles of heredity; three laboratory hours per week; credit for both 3072 and 3073 must be earned to improve grade in 3070. PREREQUISITE OR COREQUISITE: BIOL 3072 or equivalent.

BIOL 3110. Introduction to Toxicology. (2). (1110). Survey of field of toxicology; examination of multidisciplinary aspects of toxicology. *Two lecture hours per week.* PREREQUISITE: CHEM 1132.

BIOL 3170. Heredity. (3). Principles of heredity with applications to human problems, for non-science majors and recommended for students who desire a better understanding of heredity and eugenics; not acceptable as credit toward biology major or minor.

BIOL 3200. General Botany. (4). Structure, function and diversity of plants. *Two lecture hours, four laboratory hours per week.*

BIOL 3220. General Plant Anatomy. (4). Comparative development and structure of roots, stems, and leaves in flowering plants. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: BIOL 3200 or consent of instructor.

BIOL 3230. Plant Physiology. (4). (4232). Principles of physiology and application to living organisms; emphasis on higher plants. *Three lecture hours, three laboratory hours per week.*

BIOL 3610. Vertebrate Embryology. (4). Development of selected vertebrate embryos from fertilized egg cell. *Two lecture, four laboratory hours per week.*

BIOL 3620. Comparative Anatomy of Vertebrates. (5). Origin, development, structure, and functions of organs and systems of selected forms of vertebrates. *Two lecture hours, six laboratory hours per week.*

BIOL 3730. Vertebrate Physiology. (4). Normal function of the organ systems of vertebrates, with an emphasis on mammals. *Three lecture hours, two laboratory hours per week.*

BIOL 3751. Vertebrate Zoology. (2). (3700). Life histories, adaptations, ecology, distribution, behavior, and classification of vertebrates. *Two lecture hours per week.*

BIOL 3752. Vertebrate Zoology Laboratory. (2). (3700 lab). Laboratory observations, demonstrations, and experiments designed to apply scientific methods to lecture subjects. *Four laboratory hours per week.* PREREQUISITE OR COREQUISITE: BIOL 3751.

BIOL 3800. Parasitology. (4). Distribution, morphology, life history, economic importance, and control of some of parasites of man and domestic animals; protozoa through helminths. *Two lecture hours, four laboratory hours per week.*

BIOL 3960. Medical Entomology. (4). Distribution, morphology, life history, medical importance, and control of insects and other arthropods that serve as vectors for disease-producing organisms. *Two lecture hours, four laboratory hours per week.*

BIOL 4000. Research. (1-4). Consultation, reading, and laboratory or field work to investigate selected area of biology under supervision of faculty member; formal paper is required; may be repeated for maximum credit of 4 hours. (S/U).

BIOL 4002-6002. Toxicology. (3). Effects of foreign substances on biological mechanisms; absorption, excretion, metabolism, and biotransformation of potentially harmful substances. *Three lecture hours per week.* PREREQUISITES: A course in physiology and CHEM 3312.

BIOL 4050-6050. Field Technique In Ecology. (4). Field techniques of applied ecology covering practical training in forest, field, aquatic, and atmospheric sampling and analysis; extended field trips. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: consent of instructor.

BIOL 4053-6053. Plant Ecology. (4). Relationships of plants and environmental factors at physiological, population, and community scales; study of ecosystem dynamics at local and landscape scales; emphasis on field techniques. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: BIOL 3050.

BIOL 4054-6054. Wetland Ecology. (4). Study of wetlands and wetland resources; attributes of hydrology, biogeochemistry and wetland plants with emphasis on bottomland hardwood forests. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: BIOL3050 and consent of instructor.

BIOL 4055-6055. Ecological and Environmental Issues. (3). Ecological perspective on current environmental issues such as conservation and biodiversity, global climatic change, regulation of chemicals in environment. *Three lecture hours per week.* PREREQUISITE: BIOL 3050 or consent of instructor.

BIOL 4060-6060. Limnology. (4). Physical and chemical attributes of lakes, ponds, and streams; organisms of fresh water, problems of production, practical training in limnological methods and identification of organisms. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: one year of chemistry.

BIOL 4090-99. Special Topics in Biology. (1-3). Topics are varied and announced in Schedule of Classes; may be repeated with different topics for maximum of 4 hours. PREREQUISITE: junior standing and permission of instructor.

BIOL 4100-6100. Evolution. (3). Synthesis of principles and concepts of modern evolutionary theory; topics include geologic evolution, biological evaluation, and evolution of societies; emphasis on recent development and current controversies. *Three lecture hours per week.*

BIOL 4570. Practicum In Biology. (1-4). Directed extradepartmental studies in special areas of biology; a maximum of four hours credit may be applied toward degree requirements. PREREQUISITE: BIOL 3050 and permission of department chair. (S/U).

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BIOL 4604-6604. Ethology. (4). Animal behavior, primarily from ecological, physiological, developmental and evolutionary perspective. *Two lecture hours, two laboratory hours per week.*

BIOL 4620-6620. Vertebrate Histology. (4). Microscopic study of normal tissues and organs of vertebrate body. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: BIOL 3610 or 3620 or permission of instructor.

BIOL 4630-6630. General Endocrinology. (3). Anatomy and physiology of the organs of internal secretion; role of hormones in metabolism and development. PREREQUISITE: An upper division physiology course.

BIOL 4640-6640. Ornithology. (4). Biology of birds, with emphasis on avian anatomy, physiology, behavior, and reproductive biology. Field trips emphasize identification of local species and techniques of field study. *Two lecture hours, four field/laboratory hours per week.*

BIOL 4644-6644. Ichthyology. (4). Collection, preservation, identification, life histories, management, and economic importance of fishes. *Two lecture hours, four laboratory hours per week.*

BIOL 4651-6651. Field Techniques of Vertebrate Zoology. (4-6). Techniques in field study of vertebrates. Extended field studies outside local area.

BIOL 4740-6740. Mammalogy. (4). Classification, distribution, life histories. economic importance, techniques of field study, methods of collection and preservation of mammals. *Two lecture hours, four laboratory hours per week.*

BIOL 4744-6744. Herpetology. (4). Classification, distribution, life histories, techniques of collection and preservation, and natural habitats of North American reptiles and amphibians. *Two lecture hours, four laboratory hours per week.*

BIOL 4820-6820. Protozoology. (4). Free living and parasitic protozoa; consideration to structure, function, taxonomy, habitat, and life history. *Two lecture hours, four laboratory hours per week.*

BIOL 4840-6840. Invertebrate Zoology. (4). (3840). Invertebrate phyla with emphasis on phylogeny, embryology, and ecology of selected groups; extended field trip. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: Permission of instructor.

BIOL 4900-6900. Entomology. (4). (3900). Morphology, physiology, behavior and ecology of insects. *Three lecture hours, two laboratory hours per week.*

BIOL 4930-6930. Insect Physiology. (4). Physiology as applied to life processes of insects. *Two lecture hours, four laboratory hours per week.*

The following courses are taught only at the Gulf Coast Research Lab, Ocean Springs, Mississippi. The University of Memphis residence credit is given through affiliation with the laboratory.

BIOL 4010-6010. Aquaculture. (6). Review of technology, principles, and problems relating to the science of aquaculture with emphasis on culture of marine species. PREREQUISITES: 16 hours of zoology including invertebrate and vertebrate zoology or ichthyology.

BIOL 4020-6020. Comparative Histology of Marine Organisms. (1-6). Histological organization of representative marine organisms. Fixation, processing, and study of tissues using light microscopy, transmission and scanning electron microscopy. Structural changes and physiological changes during life cycle of organism including histopathology. PREREQUISITE: consent of instructor.

BIOL 4051-6051. Marine Ecology. (5). Relationship of marine organisms to environment includes effects of temperature, salinity, light, nutrient concentration, currents, food, predation and competition on the abundance and distribution of marine organisms. PREREQUISITES: 16 hours of biology including general zoology, general botany, and invertebrate zoology.

BIOL 4052-6052. Salt Marsh Plant Ecology. (4). Emphasis on botanical aspects of local marshes; includes plant identification, composition, structure, distribution and development of coastal marshes. Biological and physical interrelationships. Primary productivity and relation of marshes to estuaries and associated fauna. PREREQUISITES: general botany, plant taxonomy, plant physiology, and general ecology or consent of instructor.

BIOL 4200-6200. Marine Botany. (4). Local examples of principal groups of marine algae and maritime flowering plants, treating structure, reproduction, distribution, identification and ecology. PREREQUISITES: ten hours of biology, including introductory botany.

BIOL 4300-6300. Coastal Vegetation. (3). General and specific aspects of coastal vegetation; emphasis on local examples. PREREQUISITES: 10 hours of biology including general botany.

BIOL 4500-6500. Marine Microbiology. (5). Role of microorganisms in overall ecology of oceans and estuaries. PREREQUISITES: general microbiology and environmental microbiology or consent of instructor.

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BIOL 4600-6600. Marine Vertebrate Zoology and Ichthyology. (6). Marine Chordata, including lower groups of mammals and birds; emphasis on fishes. **PREREQUISITES:** sixteen semester hours of zoology including comparative anatomy or consent of instructor.

BIOL 4610-6610. Early Life History of Marine Fishes. (4). Reproductive strategies and developmental processes of marine fishes. Temporal and spatial distribution patterns, population dynamics, and ecological interactions of fish eggs and larvae; methods of sampling and identifying eggs and larvae. **PREREQUISITES:** ichthyology, fisheries, biology, ecology, and/or consent of instructor.

BIOL 4646-6646. Marine Fisheries Management. (4). Overview of practical marine fishery management problems. **PREREQUISITE:** consent of instructor.

BIOL 4700-6700. Behavior and Neurobiology of Marine Animals. (4). Behavior, neuroanatomy, and neurophysiology of marine animals with emphasis on neural mechanisms underlying behavior of selected invertebrates, fishes, birds and mammals. **PREREQUISITES:** 16 hours of zoology and/or psychology or consent of instructor.

BIOL 4800-6800. Marine Invertebrate Zoology. (6). Important free-living, marine estuarine invertebrates of the Mississippi Sound and adjacent continental shelf of the northeastern Gulf of Mexico, emphasis on structure, classification, phylogenic relationships, larval development and functional processes. **PREREQUISITES:** 16 hours of zoology including introductory invertebrate zoology.

BIOL 4844-6844. Parasites of Marine Animals. (6). Parasites of marine animals; emphasis on morphology, taxonomy, life histories and host-parasite relationships. Lecture, laboratory and field work included. **PREREQUISITES:** general parasitology or consent of instructor.

BIOL 4850-6850. Fauna and Faunistic Ecology of Tidal Marshes. (4). Survey and discussion of taxonomy, distribution, trophic relationships, reproductive strategies and adaptation of tidal marsh animals; emphasis on those occurring in northern Gulf marshes. **PREREQUISITES:** 16 hours of biology and junior standing or consent of instructor.

(BIOM) BIOMEDICAL ENGINEERING

VINCENT TURITTO, Sc.D., *Chair*

Room 330, Engineering Technology

<http://mecca.mecca.org/BME/bme-home.html>

The Department of Biomedical Engineering at The University of Memphis and the School of Biomedical Engineering at The University of Tennessee, Memphis participate in the Joint Program in Biomedical Engineering. The Joint Program offers graduate degrees leading to a Master of Science and a Doctor of Philosophy in Biomedical Engineering.

BIOM 4702. The Tools of Biomedical Engineering Research. (3). Lectures and laboratory work covering basic biochemical and biophysical measurement techniques used by biomedical engineers; topics include light spectroscopy, gel exclusion and affinity chromatography, electrophoresis, and immunoblotting, and radioisotopic methods. **PREREQUISITE:** Permission of instructor.

BIOM 4900-19-6900-19. Special Topics in Biomedical Engineering. (1-3). Topics are varied and announced in the Schedule of Classes.

(CCFA) COMMUNICATION and FINE ARTS

RICHARD RANTA, Ph.D., *Dean*

Room 234, Communication and Fine Arts Building

CCFA 3001. Arts in Education. (3). Integrates art, music, and drama with other subject areas to stimulate creativity and build positive attitudes.

Students who wish to apply for credit for experiential learning may obtain guidelines from the Dean of the College of Communication and Fine Arts. Fees for this credit are listed in Fees and Charges.

CCFA 1900. Introductory Level Experiential Learning in (descriptive title).

CCFA 2900. Intermediate Level Experiential Learning in (descriptive title).

CCFA 3900. Advanced Level Experiential Learning in (descriptive title).

CCFA 4001-6001. Arts in the Schools Institute. (1). Provides West Tennessee educators the opportunity to discover and explore the impact of aesthetic education; students will view performances and exhibits and

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experience in-depth, hands-on exploratory workshops led by teaching artists.

(CETH) COMPUTER ENGINEERING TECHNOLOGY

Department of Engineering Technology

RONALD LEE DAY, M.A., *Chair*

Room 203, Engineering Technology Building

<http://www.people.memphis.edu/~engtech/home.html>

CETH 1211. Computer Programming. (3). Computer usage in engineering technology; emphasis on use of computer programming in solving technical problems using C. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: TECH 1010 and MATH 1213.

CETH 2230. Pulse and Digital Circuits. (4). Analysis and design of pulse and digital electronic circuits using discrete transistors. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 2821.

CETH 2251. Advanced Programming Techniques. (4). Principles of computer programming applicable to engineering technology using C++; algorithmic problem solving, coding in a structured high level language, subprograms and parameters, control structures, I/O, complex arithmetic, and double precision operations emphasized. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 1211. COREQUISITE: TECH 3044.

CETH 2261. Data Structures. (4). (4251, 3251). Application of high speed digital computer to problems associated with storage and retrieval of numeric and non-numeric data in engineering systems. Includes representation and organization for storing of data, searching and sorting techniques, decision tables, and file maintenance techniques. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 2251.

CETH 3232. Digital Technology. (4). Numbering systems and codes, logic gates, Boolean algebra, Combinational logic, TTL circuits, and memory devices. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 2230.

CETH 3233. Microprocessor Technology. (4). Computer history and architecture; microprocessor and microcomputer operation; fetching and executing instructions; microcode; microprocessor registers; memory addressing modes; assembly-language instructions; assembler operation. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 3232.

CETH 3241. Internet Technology. (4). Internet servers and protocols; e-mail using Simple Mail Transfer Protocol (SMTP), World Wide Web (WWW), Transmission Control Protocol/Internet Protocol (TCP/IP), Telnet Protocol, Hypertext Transport Protocol (HTTP), Hypertext Markup Language (HTML), File Transfer Protocol (FTP), and Uniform Resource Locator (URL). PREREQUISITE: CETH 2251. *Three lecture hours, three laboratory hours per week.*

CETH 3251. Assembly Language Programming. (4). (4251). Microcomputer programming using assembly language instructions, DOS function calls, and BIOS functions. Microprocessor architecture. Using an assembler to create executable files from assembly language programs. Text and graphic displays using assembly language programs. Application programs for input-output devices. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 3233.

CETH 3281. Computer Aided Circuit Design. (4). Utilization of commercially available software for electronic circuit documentation, analysis and design. Emphasis on schematic capture, printed-circuit board design, and circuit simulation. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 2831.

CETH 4234. Microprocessor Interfacing Technology. (4). Analysis and design of microprocessor based hardware and software. Interfacing microprocessors to volatile and non-volatile memory devices and to parallel and serial input/output devices using digital logic devices. Assembly language programs are used to verify operation of the hardware. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 3233.

CETH 4235. Microcomputer Systems. (4). Design and construction of complete microcomputer system including microprocessor, RAM, EPROM, input-output devices, and assembly language operating system. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 4234. [I]

CETH 4262. Modern programming. (4). Application of  Java and Java Script programming languages to problems from selected area of engineering technology; data collecting, modeling techniques, constraints, program development and validation, and interfacing with peripherals and machine language. *Three lecture*

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hours, three laboratory hours per week. PREREQUISITES: CETH 2261 and 3233.

CETH 4272-6272. Operating Systems and Data Communications. (4). Memory management, processor management, device management, and file management; MS-DOS operating system, Windows NT, UNIX operating system, VAX/VMS operating system. *Three lecture hours, three laboratory hours per week.* PREREQUISITES: CETH 3233 and 3251 or permission of instructor.

CETH 4281-6281. Computer Network Technology. (4). Local-area networks; interconnecting computers and peripherals; installation of network hardware and software; data communications between computers; sharing peripherals. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 4234.

CETH 4944. Senior Thesis. (3). (Same as ARCH 4944, EETH 4944, METH 4944). Study and research in specific area culminating in an integrating experience through individual and/or group projects and technical reports. (A-F, IP). [W, I]

(CHEM) CHEMISTRY

PETER K. BRIDSON, Ph.D., *Chair*

Room 210, Smith Chemistry Building

<http://www.chem.memphis.edu/umchem.html>

CHEM 1100. Introduction to Chemistry. (3). For students whose curriculum requires CHEM 1131, but who feel their background is inadequate; emphasis on scientific calculations and properties of matter; three lecture hours per week; not credited toward major in chemistry, physics or engineering, nor does it satisfy any part of science requirement for any degree; not applicable toward fulfilling 132-hour minimum for degrees in The College of Arts and Sciences. COREQUISITE: MATH 1211 or 1212 recommended.

CHEM 1101. College Chemistry I. (4). (1051). Fundamental laws of chemistry and impact of chemistry on modern society; prior knowledge of algebra. *Three lecture hours, two laboratory hours per week.* Not credited toward major in chemistry or physics. [G]

CHEM 1102. College Chemistry II. (4). (1052). Emphasis on elementary organic and biochemistry; three lecture, two laboratory hours per week; not credited toward major in chemistry or physics. PREREQUISITE: CHEM 1101. [G]

CHEM 1121. Principles of Chemistry Laboratory. (1). (1111 lab). Experiments and experimental techniques in general chemistry; three laboratory hours per week. PREREQUISITE or COREQUISITE: CHEM 1131. [G]

CHEM 1122. Principles of Chemistry Laboratory. (1). (1112 lab). Continuation of CHEM 1121. *Three laboratory hours per week.* PREREQUISITE or COREQUISITE: CHEM 1132. [G]

CHEM 1131. Principles of Chemistry. (3). (1111). For students who are majoring in one of the physical sciences, biology, mathematics or engineering, or who are following a pre-professional program requiring additional chemistry. *Three lecture hours per week.* COREQUISITES: MATH 1211, 1212 or 1321; CHEM 1121 recommended. [G]

CHEM 1132. Principles of Chemistry. (3). (1112). Continuation of CHEM 1131. *Three lecture hours per week.* PREREQUISITE: CHEM 1131. COREQUISITE: 1122 recommended. [G]

CHEM 3201. Quantitative Chemical Analysis Laboratory. (2). (3404). Application of the techniques of quantitative analysis in areas described in CHEM 3211. *Six laboratory hours per week.* PREREQUISITE or COREQUISITE: CHEM 3211. [C] Note: Both CHEM 3201 and CHEM 3211 must be completed in order to satisfy the computation intensive requirement.

CHEM 3211. Quantitative Chemical Analysis. (2) (3400). Theory and practice of modern chemical analysis. Includes: acid-base, redox, and complex ion equilibria, separation methods, absorptiometry, flame spectroscopy, and electroanalytical methods. *Two lecture hours per week.* PREREQUISITE: CHEM 1122, 1132. COREQUISITE: CHEM 3201 recommended. [C] Note: Both CHEM 3201 and CHEM 3211 must be completed in order to satisfy the computation intensive requirement.

CHEM 3301. General Organic Chemistry Laboratory. (1). Emphasis on laboratory techniques as applied to synthesis and class reactions. *Three laboratory hours per week.* PREREQUISITE: CHEM 1122, 1132. PREREQUISITE or COREQUISITE: CHEM 3311.

CHEM 3302. General Organic Chemistry Laboratory. (1). Continuation of CHEM 3301; emphasis on correlation of chemical behavior with structure. *Three laboratory hours per week.* PREREQUISITES: CHEM 3311 and 3301 COREQUISITE or PREREQUISITE: CHEM 3312.

CHEM 3311. General Organic Chemistry. (3). Systematic study of preparations and properties of organic

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compounds, including interpretations based on modern theories of organic chemistry; emphasis on aliphatic and aromatic hydrocarbons, their halogen derivatives, and alcohols. *Three lecture hours per week.* PREREQUISITE: CHEM 1132.

CHEM 3312. General Organic Chemistry. (3). Continuation of CHEM 3311; emphasis on more important functional derivatives of aliphatic and aromatic hydrocarbons and natural products important in biochemistry. PREREQUISITE: CHEM 3311.

CHEM 3401. Elementary Physical Chemistry. (3). Abbreviated course in physical chemistry; includes elementary thermodynamics, phase transitions, solution chemistry, electrochemistry, kinetics, colloidal and surface chemistry, and molecular polarity; credit may be obtained either in this course or in 3411, but not both. *Three lecture hours per week.* PREREQUISITES: CHEM 3211 or 3311, PHYS 2002/2120 or 2004/2520.

CHEM 3402. Physical Chemistry Laboratory. (2). Measurements of physical properties, reaction rates, and equilibria. application of electrochemistry and calorimetry. *Six laboratory hours per week.* PREREQUISITE: CHEM 3411. COREQUISITE or PREREQUISITE: CHEM 3412.

CHEM 3411. Physical Chemistry. (3). Thermochemical foundations of physical chemistry applied to open and closed systems, kinetic theory of gases, and surface chemistry. *Three lecture hours per week.* PREREQUISITES: PHYS 2002/2120 or 2004/2520; MATH 2321.

CHEM 3412. Physical Chemistry. (3). Continuation of CHEM 3411 emphasizing kinetics of chemical reactions, quantum chemistry, chemical bonding, statistical mechanics, spectroscopy, and other methods of structure determination. *Three lecture hours per week.* PREREQUISITE: CHEM 3411.

CHEM 4001-6001. Environmental Chemistry. (3). Chemical phenomena occurring in soil, atmospheric and aquatic environments; consideration of natural resources and energy. *Three lecture hours per week.* PREREQUISITE: CHEM 3311.

CHEM 4101-6101. Inorganic Chemistry Laboratory. (1). Experimental techniques of inorganic synthesis and physical methods for characterization of inorganic and organometallic compounds. *Three laboratory hours per week.* PREREQUISITE or COREQUISITE: CHEM 4111-6111.

CHEM 4111-6111. Inorganic Chemistry. (3). (CHEM 4210). Theoretical and applied inorganic chemistry; stress on relationship of structure and bonding to properties of elements and compounds. Includes introductory molecular orbital theory, coordination compounds and organometallics, ligand field theory, nonaqueous solvent systems, and reaction mechanisms. *Three lecture hours per week.* PREREQUISITE: CHEM 3412 or permission of the instructor. COREQUISITE: CHEM 4101 recommended.

CHEM 4180-99-6180-99. Special Topics In Inorganic Chemistry. (1-3). Topics in inorganic chemistry that are of current interest; topics are varied and announced in Schedule of Classes. PREREQUISITE: CHEM 3312 and permission of instructor.

CHEM 4201-6201. Instrumentation Laboratory. (2). (4220 lab.) Laboratory exercises that apply topics that are introduced in CHEM 4211; these include: measurement signals, enhancement of signal-to-noise, fundamentals of electronics, applications of solid-state electronic devices, and the role of computers in data acquisition. *Six laboratory hours per week.* COREQUISITE: CHEM 4211.

CHEM 4211-6211. Advanced Instrumental Analysis. (3) (4220). Topics in analytical instrumental analysis, including atomic spectroscopy, x-ray spectroscopy, mass spectroscopy, UV-visible spectroscopy, luminescence, infrared, Raman, and nuclear magnetic resonance spectroscopy. *Three lecture hours per week.* PREREQUISITE: CHEM 3211 and 3412.

CHEM 4280-99-6260-99. Special Topics In Analytical Chemistry. (1-3). Topics of current interest in analytical chemistry; topics are varied and announced in Schedule of Classes. PREREQUISITE: CHEM 3412 and permission of instructor.

CHEM 4311-6311. Intermediate Organic Chemistry. (3). Further study of physical organic chemistry, spectrometric methods of identification of organic compounds, modern organic synthesis, and natural products chemistry. *Three lecture hours per week.* PREREQUISITE: CHEM 3312.

CHEM 4315-6315. Organic Medicinal Chemistry. (3). Introduction to principles of medicinal chemistry; structure, synthesis, and biochemical mechanism of action of major drug classes. *Three lecture hours per week.* PREREQUISITE: CHEM 3312.

CHEM 4380-99-6380-99. Special Topics In Organic Chemistry. (1-3). Topics of current interest in organic chemistry; topics are varied and announced in Schedule of Classes. PREREQUISITE: CHEM 3312 and permission of instructor.

CHEM 4411-6411. Advanced Physical Chemistry. (3). Advanced topics in physical chemistry including

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statistical mechanics and statistical thermodynamics plus selected topics in the areas of kinetic theory of gases, condensed phases, and nonequilibrium processes. PREREQUISITE: CHEM 3412 or permission of instructor.

CHEM 4415-6415. Computational Chemistry. (3). Application of computers to address problems in organic and inorganic chemistry; emphasis is on use of quantum chemistry codes to solve problems related to electronic, molecular, and vibrational structure problems. PREREQUISITE: CHEM 3412 and permission of instructor.

CHEM 4480-99-6480-99. Special Topics in Physical Chemistry. (1-3). Topics of current interest in physical chemistry; topics are varied and announced in Schedule of Classes. PREREQUISITE: CHEM 3412 and permission of instructor.

CHEM 4501-6501. Biochemistry Laboratory I. (2). (Same as MMCS 4503-6503). Survey of common biochemical techniques and the properties of biological molecules; emphasis on purification and assay of enzymes and on enzyme kinetics. *Six laboratory hours per week.* PREREQUISITES: CHEM 3302, or CHEM 3201 and 3301. PREREQUISITE or COREQUISITE: MMCS 4511 or CHEM 4511.

CHEM 4502-6502. Biochemistry Laboratory II. (2). (Same as MMCS 4504-6504). Biochemical laboratory techniques, emphasis on nucleic acids and recombinant DNA techniques. *Six laboratory hours per week.* PREREQUISITES: MMCS 4511 or CHEM 4511, MMCS 4325 or 4470, or consent of instructor.

CHEM 4511-6511. Biochemistry I. (3). (Same as MMCS 4511-6511). Chemistry of amino acids and proteins related to their properties in biochemical systems; enzymology, including kinetics and conformation studies; coenzymes and their functions; importance of pH; bioenergetics; chemistry of carbohydrates, lipids, and nucleotides. *Three lecture hours per week.* PREREQUISITE: CHEM 3312.

CHEM 4512-6512. Biochemistry II. (3). (Same as MMCS 4512-6512). Continuation of CHEM 4511; metabolism of carbohydrates, amino acids and nucleotides; biochemistry of DNA and RNA, including their relationship to biosynthesis of proteins; DNA and RNA. *Three lecture hours per week.* PREREQUISITE: MMCS 4511 OR CHEM 4511.

CHEM 4580-99-6560-99. Special Topics in Biochemistry. (1-3). (Same as MMCS 4580-99-6580-99). Topics of current interest in biochemistry; topics are varied and announced in Schedule of Classes. PREREQUISITE: CHEM 4512 and permission of instructor.

CHEM 4601-6601. Chemical Demonstrations. (3). Preparing and presenting demonstrations and activities to illustrate chemical principles, processes, and properties for secondary and post-secondary classes. *One lecture hours, four laboratory hours per week.* PREREQUISITE: CHEM 3302, CHEM 3312 or permission of instructor.

CHEM 4602-6602. Teaching High School Chemistry Laboratory. (3). Instruction in selection, modification, evaluation, and teaching instructional chemistry experiments in high schools; planning pedagogical goals, laboratory organization and safety, purchasing supplies, and student evaluation. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: CHEM 3302, CHEM 3312 or permission of instructor.

CHEM 4604-6604. Instrumental Methods. (3). (3604). Analytical instrumental techniques including molecular spectroscopy, chromatography, atomic spectroscopy, and electrochemical analysis. *One lecture hour, six laboratory hours per week.* PREREQUISITES: CHEM 3201, 3211, 3312, or permission of instructor. [I]

CHEM 4911-6911. Chemical Literature and Seminar. (1). Use of chemical literature, writing of technical reports, and oral presentation of investigative reports. *One lecture hour per week.* PREREQUISITE: permission of instructor.

CHEM 4991. Chemical Research. (1). (See description under CHEM 4993.)

CHEM 4992. Chemical Research. (2). (See description under CHEM 4993.)

CHEM 4993. Chemical Research. (3). Introduction to basic research; Student collaborates with a faculty sponsor on problem of mutual interest selected from fields of analytical, computational, inorganic, organic, and physical chemistry, and biochemistry; experience gained in effective laboratory techniques, critical experiment design, and preparing a formal scientific paper; to receive credit toward a major in chemistry, student must complete three semester hours in these research courses. *Three to nine laboratory hours per week.* PREREQUISITE: CHEM 3312 and permission of instructor; complete prospectus in consultation with a faculty sponsor before registering for this course. [W]

RALPH ALBBNESE, Ph.D., *Chair*
Room 375, Dunn Hall

- CHIN 1101. Elementary Chinese. (3) (LALI 1701003).** Principles of pronunciation; everyday expressions; basic sentence patterns through oral practice, writing and reading.
- CHIN 1102. Elementary Chinese. (3). (LALI 1702003).** Continued study of sentence patterns through oral and written practice. PREREQUISITE: CHIN 1101 or equivalent.
- CHIN 2201. Intermediate Chinese. (3). (LALI 2701003).** Continued study of sentence patterns through oral and written practice. PREREQUISITE: CHIN 1102 or equivalent.
- CHIN 2202. Intermediate Chinese. (3). (LALI 2702003).** Continued study of sentence patterns through oral and written practice. PREREQUISITE: CHIN 2201 or equivalent.
- CHIN 3301. Conversation and Composition. (3).** Conversational practice dealing with various topics on social life, traveling, business; fundamental Chinese grammar for reading and writing. PREREQUISITE: CHIN 2202 or equivalent.
- CHIN 3302. Conversation and Composition. (3).** Conversational practice dealing with various topics on Chinese culture, life style, business, education, history, current ; grammar and slang for conversation and composition. PREREQUISITE: CHIN 3301 or equivalent.
- CHIN 4301. Modern Chinese Fiction. (3).** Reading in twentieth-century Chinese fiction; themes of modernity, nationalism, class, gender and self. PREREQUISITE: CHIN 3301, 3302 or permission of instructor.
- CHIN 4780. Individual Studies in Chinese. (1-3).** Directed individual study in selected areas of Chinese chosen in consultation with instructor. May be repeated for a maximum of 6 hours credit. PREREQUISITE: permission of the instructor.

(CIVL) CIVIL ENGINEERING
MARTIN E. LIPINSKI, P.E., *Chair*
Room 104A, Engineering Building
<http://www.ce.memphis.edu/>

- CIVL 1101. Civil Engineering Measurements. (3). (2111).** Theory of measurements, linear measurements, angles, topographic surveys, and mapping with applications in Civil Engineering; emphasis on individual and group problem solving, techniques of data collection and analysis, and project documentation. *Two lecture hours, three laboratory hours per week.*
- CIVL 1112. Civil Engineering Analysis. (3). (2112).** Microcomputer applications for data analysis, presentation, documentation; emphasis on algorithm design and logic; fundamental numerical analysis; elementary programming. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: CIVL 1101. PREREQUISITE or COREQUISITE: MATH 1321.
- CIVL 2107. Civil Engineering Computation. (3). (1107).** Logical analysis of problems; development and implementation of computer programs in support of civil engineering analysis and design. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: CIVL 1112; PREREQUISITE or COREQUISITE: MATH 2321.
- CIVL 2131. Statics. (3).** Analysis of two and three dimensional force systems; centroids and moments of inertia; friction. *Three lecture hours per week.* PREREQUISITES: MATH 2321, PHYS 2510, 2003.
- CIVL 3101. Computer Methods In Civil Engineering. (3).** Civil engineering applications of fundamental methods of numerical analysis; advanced programming techniques. *Three lecture hours per week.* PREREQUISITE: CIVL 2107. PREREQUISITE or COREQUISITE: MATH 3391.
- CIVL 3113. Stochastic Systems Engineering. (3). (4113).** Development and use of probabilistic techniques in civil engineering. Emphasis on applications; simulation, decision making under uncertainty, and queueing problems. *Three lecture hours per week.* PREREQUISITE: MATH 2322.
- CIVL 3121. Structural Analysis I. (3).** Analysis of statically determinate structures; reactions, shear, and moment; truss analysis; deflections; influence lines and moving loads. *Three lecture hours per week.* PREREQUISITE: CIVL 2107, 2131. PREREQUISITE or COREQUISITE: CIVL 3322. [C]
- CIVL 3131. Design of Steel Structures. (3).** Current design concepts for structural steel members and their connections. *Three lecture hours per week.* PREREQUISITES: CIVL 3121, 3322.
- CIVL 3137. Civil Engineering Materials. (3). (3135).** Properties of aggregates, mix design and use of Portland cement concrete, masonry products and construction, use of wood and timber products in

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construction, bituminous materials and mixtures and other engineering materials. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: CIVL 3322, 3325.

CIVL 3140. Environmental Systems Engineering. (4). Fundamentals of environmental engineering systems with emphasis on the integration of the concepts of chemistry, hydraulics, economics, English, and social sciences as they can be applied to benefit mankind. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CIVL 3180.

CIVL 3161. Transportation Systems Engineering. (3). (4161). Development and function of transportation systems; operational control and characteristics; system coordination, traffic flow and patterns. *Three lecture hours per week.* PREREQUISITE OR COREQUISITE: CIVL 3113; PREREQUISITES: CIVL 2107, MECH 2332, MATH 2322.

CIVL 3180. Civil Engineering Hydraulics. (3). Basic principles of incompressible fluid mechanics with emphasis on hydrostatics, conservation of energy and momentum with application on engineering analysis of pipe networks, pumps, and open channel systems. *Three lecture hours per week.* PREREQUISITE: CIVL 2107; MECH 2332.

CIVL 3181. Hydrology and Hydraulics. (3). (4148). Quantification of precipitation and runoff, reservoir and channel routing, groundwater, and design of drainage systems and open channels. *Three lecture hours per week.* PREREQUISITE: CIVL 3180.

CIVL 3182. Hydrology and Hydraulics Laboratory. (1). Principles of fluid mechanics, open channel hydraulics, and collection of hydrologic data; fluid instrumentation, measurement techniques, data collection methods, and organization of written reports of experimental investigations. *Two laboratory hours per week.* PREREQUISITE: CIVL 3180.

CIVL 3322. Mechanics of Materials. (3). (Same as MECH 3322). Analysis of components subjected to tension, compression, bending moment, torque; combined loading; Mohr's stress circle; deflection of beams; simple treatment of column buckling. *Three lecture hours per week.* PREREQUISITE: CIVL 2131.

CIVL 3325. Mechanics of Materials Laboratory. (1). Materials testing and evaluation. *Three laboratory hours per week.* COREQUISITE or PREREQUISITE: CIVL 3322.

CIVL 4111. Engineering Economics. (3). (3141). Application of economics and decision theory to engineering alternatives in planning, developing, constructing, and managing engineering projects. *Three lecture hours per week.*

CIVL 4112-6112. Deterministic Systems Engineering. (3). Employment of optimization techniques to well-defined civil engineering problems; emphasis on development and applications of mathematical models; transportation and resource allocation problems. *Three lecture hours per week.* PREREQUISITE: CIVL 3101.

CIVL 4122-6122. Structural Analysis II. (3). (3122). Analytical and numerical solutions for statically indeterminate structures. *Three lecture hours per week.* PREREQUISITES: CIVL 3121, 3322.

CIVL 4131-6131. Intermediate Steel Design. (3). Design of plate girders and composite beams; moment connections; current code provisions. *Three lecture hours per week.* PREREQUISITES: CIVL 3131.

CIVL 4135. Reinforced Concrete Design. (3). Strength analysis and design of reinforced concrete members; floor systems; current code provisions. *Three lecture hours per week.* PREREQUISITES: CIVL 3121, 3322.

CIVL 4136-6136. Intermediate Reinforced Concrete Design. (3). Design of two-way slab systems; column design including length effects; current code provisions. *Three lecture hours per week.* PREREQUISITES: CIVL 4135, PREREQUISITE OR COREQUISITE: CIVL 4122.

CIVL 4140-6140. Environmental Engineering Design. (3). Detailed design of one component of an environmental engineering system with appropriate consideration of the interactions with the other components; design standards, procedures, and legal constraints. *Three lecture hours per week.* PREREQUISITE: CIVL 3140.

CIVL 4143-6143. Physical/Chemical Treatment Systems. (3). Basic physical chemical treatment concepts for water and wastewater with laboratory demonstration of laboratory studies. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: CIVL 3140.

CIVL 4144-6144. Biological Wastewater Treatment Systems. (3). Basic biological treatment concepts for wastewater with laboratory demonstration of unit operations as well as derivation of design data through laboratory studies. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: CIVL 3140.

CIVL 4151. Soil Mechanics. (4). Properties of soil and rock, including identification and classification, hydraulic properties, consolidation characteristics, and stress deformation-strength relationships. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: CIVL 2107, 3137.

- CIVL 4152. Applied Soil Mechanics. (3).** Subsurface exploration, foundation types, foundation construction, selection of foundation type and basis of design, earth retaining structures, and slope stability. *Three lecture hours per week.* PREREQUISITE: CIVL 4151.
- CIVL 4162-6162. Traffic Engineering. (3).** Traits and behavior patterns of road users and their vehicles. Includes traffic signs and signals, pavement markings, hazard delineation, capacity, accidents and parking analysis. PREREQUISITE: CIVL 3161.
- CIVL 4163-6163. Airport Planning and Design. (3).** Aeronautical demand and air traffic control; airport and runway configuration; capacity and delay analysis, geometric design of runways and taxiways; airport access and parking; ground movements and baggage movements. *Three lecture hours per week.* PREREQUISITE: CIVL 3161.
- CIVL 4164-6164. Route Location and Design. (3).** Elements of route location and design; emphasis on horizontal and vertical alignment, curvature, gradient and sight distance. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: CIVL 1101, 3161.
- CIVL 4171. Construction Engineering I. (3).** Construction process and project management system; planning, cost estimating, bidding and scheduling construction projects; use of optimization techniques to control schedules and costs; computer applications. *Three lecture hours per week.* PREREQUISITE or COREQUISITE: CIVL 4111.
- CIVL 4172. Construction Engineering II. (3).** Application of construction engineering and management methods to estimate, bid, plan, and manage actual engineering construction project in safe, efficient manner. *Three lecture hours per week.* PREREQUISITE: CIVL 4171.
- CIVL 4173. Engineering Law. (3).** Sources of law; forms of engineering organizations such as corporations, partnerships, and agencies; principles of contract law; application of construction law to the owner-engineer-contractor relationship, bidding, contracting, construction process, risk, disputes, and dispute resolution. *Three lecture hours per week.*
- CIVL 4180-6180. Advanced Hydrology and Hydraulics. (3).** Current methods and techniques used in hydrologic and hydraulic analysis for the design of water resources projects; watershed hydrology, groundwater hydrology, flood frequency analysis, flood plain management, hydraulic structures, hydraulic machinery, and project feasibility. *Three lecture hours per week.* PREREQUISITE: CIVL 3181.
- CIVL 4190-6190. Water Resources Planning and Design. (3).** Application of engineering principles to planning and design of multipurpose water resources projects, various physical components and appurtenances of water resources projects and economic, financial, and social feasibility of various purposes. *Three lecture hours per week.* PREREQUISITES: CIVL 3181, 4111 or consent of instructor.
- CIVL 4191. Civil Engineering Projects. (1-3).** Independent investigation of a Civil Engineering problem in consultation with instructor. May be taken for a maximum of three hours credit toward graduation. PREREQUISITE: consent of instructor.
- CIVL 4193. Senior Seminar. (1).** Reports and discussion on engineering history, current developments, ethics, professionalism, registration, engineering organizations, publications, and activities. *One lecture hour per week.* PREREQUISITE: Senior standing in civil engineering. (S/U)
- CIVL 4199. Civil Engineering Design. (3).** Design of a civil engineering system. Establishment of design objectives and criteria; synthesis and computer assisted analysis of alternatives; selection of optimum system design; preparation of detailed system descriptions including design sketches and engineering drawings and reports. Must be taken in student's final semester. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: ENGL 3603. [W, I]
- 4900-10. Special Topics in Civil Engineering. (1-3).** Topics are varied and announced in the Schedule of Classes.
- 4999. Honors Thesis. (3).** Under the direction of a faculty member, the student writes and defends a thesis based upon background reading and research on a topic in civil engineering. PREREQUISITE: Approval by the Honors Committee of the Department of Civil Engineering.

CRIMINOLOGY AND CRIMINAL JUSTICE

RICHARD JANIKOWSKI, Ph.D., *Chair*
Room 405, Mitchell Hall

<http://www.people.memphis.edu/~cjustice/cjus.htm>

◆ CJUS 3129 is a prerequisite for all upper division courses except CJUS 3510 and 3521. CJUS 3130 is a

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prerequisite or corequisite for CJUS 3541. CJUS 1100, 3129, 3130, 3510, 3521, and 3541 are prerequisites for all upper division electives. The department chair may grant exceptions to these requirements for selected elective courses.

(CJUS) CRIMINOLOGY AND CRIMINAL JUSTICE

CJUS 1100. Introduction to Criminal Justice. (3). Introduction to American criminal justice system in its three dimensions: police, courts, and corrections, tracing its development from ancient and early English beginnings to present time. [G]

CJUS 2110. Comparative Justice Systems. (3). Overview of justice systems of various countries, focusing primarily on substantive and philosophical relationships between the subsystems and the society they serve. [G]

CJUS 2520. Street Law: A Course in Practical Law. (3). Practical application of law to everyday problems; legal processes and resources available to every citizen; case materials in criminal, consumer, environmental, and family law with reference to their relationship in criminal justice context. Credit earned does not apply toward major or minor in Criminology and Criminal Justice.

CJUS 3029. Statistical Methods Laboratory. (1). Computer assisted analyses of criminological data sets utilizing descriptive and inferential statistics. *Two laboratory hours per week.* Corequisite or instructor's permission: CJUS 3129.

CJUS 3129. Statistical Methods In Criminal Justice. (3). Statistical methods commonly utilized in criminal justice research; emphasis on descriptive and inferential statistics, measures of significance, and interpretation of results; introduction to micro-computers. PREREQUISITE: COMP 1200 or equivalent, and MATH 1211, 1312 or 1321. COREQUISITE or instructor's permission: CJUS 3029. [C]

CJUS 3130. Research Methods In Criminal Justice. (3). (3128). Techniques commonly utilized in criminal justice research, emphasis on research design, methods of data collection, measurement of variables, and threats to validity and reliability; use of microcomputers and statistical programs for data collection and analysis. PREREQUISITE: CJUS 3129.

CJUS 3152. Drug Addiction and Alcoholism. (3). Cultural and medical aspects of use of alcohol and various other drugs; consideration of roles of law enforcement and corrections in these areas.

CJUS 3226. Police In America. (3). (3526). Comparative analysis of problems, procedures, organization, and functions of effective police organization.

CJUS 3326. Courts in America. (3). Exploration and analysis of structure, process, personnel, policy, and legal theory in the American judicial system.

CJUS 3426. Corrections In America. (3). Concepts of organizational behavior applied to probation, parole, community-based corrections, prisons, and other detention facilities, with emphasis on their history and practice.

CJUS 3510. Law and Society. (3). Law as system of control and as mechanism for resolution of conflict; relationship of law to political, economic and social systems critically analyzed and development of legal profession studied.

CJUS 3521. Constitutional Criminal Procedure. (3). General application of U.S. constitution principles to investigative and prosecutorial process of the criminal justice system; emphasis on requirements of the 4th, 5th, 6th, 8th, and 14th Amendments as they relate to arrest, search, and seizure, interrogation and identification procedures, trial and appellate proceedings.

CJUS 3541. Criminology. (3). Nature and significance of criminality; etiology of illegal behavior; trends in social reactions to crime and criminals; evolution of biological, psychological, and sociological theories of criminal behavior.

CJUS 3542. Crime and Criminal Typologies. (3). (4120). Classification of crime and typical elements involved in each type of crime, classification of criminal offenders and salient career variables associated with each type of offender relative to background, crime, and career prognosis.

CJUS 4010-19-6010-19. Special Topics In Criminal Justice. (1-3). Topics are varied and announced in Schedule of Classes.

CJUS 4100. Individual Directed Study In Criminal Justice. (1-4). Individual directed reading and research in special areas of interest in field of criminal justice. PREREQUISITE: permission of department chair. NOTE: Course may be repeated for a maximum of 4 hours total credit.

CJUS 4110. Senior Seminar in Criminal Justice. (3). Analysis of criminal justice issues from a systems perspective; emphasis on active learning, gaining familiarity with criminal justice resources, and development of analytical and writing skills. PREREQUISITE: senior standing in Criminology and Criminal Justice and

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permission of department chair. [W, I]

CJUS 4126. Criminal Justice Administration and Management. (3). (3126). Management philosophies for administration of criminal justice agencies; focus on organizational behavior, theories of management, planning and budgeting, administrative legal issues, and administrative problems unique to the criminal justice system.

CJUS 4130. Ethical Dilemmas In Criminal Justice. (3). Legal, moral, and social implications of ethical dilemmas in criminal justice, including police use of deadly force, police discretion, victimless crimes, surveillance, enforcement of unpopular laws, use of informers, plea bargaining, judicial discretion, and capital punishment; ♦ subcultural norms and dilemmas they present to criminal justice practitioner.

CJUS 4150. Internship In Criminal Justice. (1-3). Experience in actual criminal justice setting; internship initiated by department in agency, and both department and agency supervise and direct student program. May be repeated for maximum of 6 hours. PREREQUISITE: senior standing and/or approval of instructor. (S/U)

CJUS 4160-6160. Forensic Sciences. (3). Forensic specialities in terms of their history, scientific rationale upon which each is based, and problems that may compromise accuracy or validity; introduction to field techniques and analysis of evidence.

CJUS 4170. Prevention and Deterrence to Crime. (3). Theoretical and practical strategies for crime prevention and deterrence. Social, environmental, and mechanical developments; ♦ police, courts, and correctional elements of criminal justice system analyzed in terms of current effectiveness and future potential for crime suppression.

CJUS 4180-6180. Corporate and White-Collar Crime. (3). Organizational and occupational crime compared to other types of criminality; emphasis on causes, frequency, control, and social impact.

CJUS 4190-6190. Terrorism: Social and Legal Perspective. (3). Theoretical and ideological aspects of practice of and response to international and domestic terrorism; terrorism as crime from political, social, economic, historical, and legal perspectives.

CJUS 4233. Organized Crime. (3). Nature, structure, characteristics, and investigation of syndicated crime; its impact on social and economic conditions in this country.

CJUS 4235. Private and Industrial Security. (3). Role and function of private police organizations and legal restrictions on private security personnel; facets of private security to include retail, industrial and corporate security.

CJUS 4520-6520. Substantive Criminal Law. (3). (3520). Substance of the crime, including common-law sources and basic principles, types of offenses, responsibility, justification and excuse, and related areas.

CJUS 4530. Principles of Evidence and Proof. (3). Rules of evidence and matters of proof affecting criminal investigation in investigatory and prosecutive stages of criminal justice; socio-legal aspect of basic rules of evidence, including hearsay rules, impeachment, materiality and relevancy, privilege, eyewitness identification.

CJUS 4531-6531. Issues in Constitutional Rights. (3). Issues in constitutional law related to criminal defendants and incarcerated; exclusionary rule and its alternatives, application of 1st Amendment to criminal law, legal status of confined persons (discipline, legal services, communications, medical aid), and liability of correctional and police officials; ♦ civil and criminal legal techniques for protecting and vindicating constitutional rights, such as habeas corpus and 42 USC 1983.

CJUS 4533-6533. Juvenile Delinquency: Theory and Process. (3). Theories of juvenile delinquency, gang activities, and status offenses; history, organization programs and procedures of agencies charged with control and prevention of juvenile delinquency including police, juvenile units, juvenile court, and juvenile correctional agencies.

(CLAS) CLASSICS

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

Room 375, Dunn Hall

CLAS 2481. Mythology. (3). Thematic study of classical myths and their function in ancient literature; emphasis on reading myths in ancient sources in translation. [G]

CLAS 3021. Scientific Terminology. (3). Origin and derivation of words used in medicine and the sciences; emphasis on building of scientific vocabulary.

CLAS 3412. Roman Culture. (3). Study based on literary sources, of public and private life including such topics as family life, slavery, religion, medicine, law, and technology.

CLAS 3413. Greek Literature in Translation. (3). Reading and analysis of masterpieces of Greek literature

in translation from Homer to Lucian; emphasis on development of literary types.

CLAS 3414. Roman Literature in Translation. (3). Reading and analysis of masterpieces of Roman literature in English translation from origins to close of Silver Age; emphasis on genres of Roman literature.

CLAS 4780. Individual Studies in Classics. (1-3). Directed individual study in selected areas of Classics chosen in consultation with instructor. Repeatable for a maximum of 6 semester hours credit by permission of chairman. PREREQUISITE: permission of instructor.

CLAS 4791. Special Studies in Classics. (1-3). Topics in classical literature and civilization. May be repeated for maximum of 6 hours credit. PREREQUISITE: permission of chair and instructor.

(CMUS) COMMERCIAL MUSIC

Department of Music

B. GLENN CHANDLER, Ph.D., *Chair*

Room 123 Music Building

 <http://www.people.memphis.edu/~cmusweb/>

CMUS 1001. Introduction to Music Technology. (1). Basic introduction to music technologies available to the musician; introduction to software, hardware, and basic tenets of MIDI sequencing, notation, composition, studio audio production CR ROM availability, CD/DVD technology. Corequisite: MUTC 1008.

CMUS 1116. Class Instruction in Piano: Jazz/Pop/Commercial. (2). Basic harmonic patterns, chord symbol realization, voicing, basic rhythmic patterns. PREREQUISITE: MUSE 1105 or equivalency exam.

CMUS 2101. Music Theory: Jazz/Pop/Commercial I. (3). Basic harmonic structures, chord symbol realization, melodic structures, notation, articulation, rhythmic patterns; analysis of written and recorded jazz and pop music; transcription of recorded materials. *Three lecture hours, one laboratory hour per week. (F).* PREREQUISITES: MUTC 1009, CMUS 1116.

CMUS 2102. Music Theory: Jazz/Pop/Commercial II. (3). Altered scales and modes, altered and extended chords, chromatic progressions, mediant relationships, poly-harmony and panchromaticism. *Three lecture hours, one laboratory hour per week. (SP).* PREREQUISITE: CMUS 2101.

CMUS 2501. Composition/Arranging: Jazz/Commercial I. (2). Emphasis on small instrumental and vocal works, basic style and form. May be repeated for a maximum of 6 hours credit. PREREQUISITE: MUTC 2501 or permission of instructor. **NOTE:** Composition is taught as applied music. Students receive the equivalent of one half-hour lesson per week. Fee for this instruction is \$30.00 per semester.

CMUS 2502. Composition/Arranging: Jazz/Commercial II. (2). Emphasis on stage and jazz band arranging techniques. May be repeated for a maximum of 6 hours credit. PREREQUISITE: CMUS 2501 or permission of instructor. **NOTE:** Composition is taught as applied music. Students receive the equivalent of one half-hour lesson per week. Fee for this instruction is \$30.00 per semester.

CMUS 3100. Artist Management. (3). Problems involved in developing and managing career of contemporary recording artist; attention to management agreements, personal appearance contracts, promotion, booking and agency, marketing, artist representation, public relations, merchandising and media production activity. A portfolio will be completed.

CMUS 3101. Music Media: Promotion, Sales, Distribution and Merchandising. (3). Current practices in exposing recording and other music media to public including business elements of music media distribution; emphasis on promotion and sale of recordings, radio station music formats, traditional and electronic methods of media delivery, and music merchandising; overview of manufacturing and duplication issues.

CMUS 3103. Contemporary Songwriting and Production Techniques. (3). Process of developing an idea into a commercially viable song and applying production techniques for maximum commercial potential. PREREQUISITES: CMUS 1116, 2101 or permission of instructor.

CMUS 3501. Composition/Arranging: Jazz/Commercial III. (2). Individual instruction for mixed ensembles and studio groups in various jazz and studio styles, standard and extended forms. Introduction to line writing. May be repeated for additional credit. PREREQUISITE: CMUS 2502 or permission of instructor. **NOTE:** Composition is taught as applied music. Students receive the equivalent of one hour lesson per week. Fee for this instruction is \$60.00 per semester.

CMUS 3800. Recording Studio Technology. (4). Detailed examination of basic theory, operational concepts and technologies upon which modern audio production is based. Exploration of creative production techniques used to enhance music recordings. PREREQUISITES: sophomore standing, completion of MATH 1312, TECH 1811, and permission of instructor.

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CMUS 3801. Computer-Based Audio Production. (2). Focus on needs of practicing audio engineer. Concepts and practices of using equipment commonly found in electronic music studios with emphasis on digital audio workstation. Topics include: sampling, synthesis, MIDI, patching, editing, synchronization, signal processing and creative commercial production techniques. **PREREQUISITES:** computer literacy, CMUS 3800 and permission of instructor. **NOTE:** Basic computer operations will not be covered. Students must be proficient with Macintosh or Windows environment including; basic system operations, data backup functions, file manipulation, data translation and common application programs.

CMUS 3802. Audio Production: Technology and Practice. (3). Promote basic understanding of equipment, techniques, musical production values and technology commonly used in modern audio production. Designed to give music business major an understanding of production process or to enhance studio musician's ability to provide creative services during recording sessions. **PREREQUISITES:** sophomore standing and permission of instructor.

CMUS 3825. Materials and Techniques of Improvisation I. (3). Development of improvisation skills on solo instruments or voice; basic chord patterns, scales, arpeggios; performance with rhythm section. **(F).** **PREREQUISITE:** CMUS 2102 or permission of instructor.

CMUS 3826. Materials and Techniques of Improvisation II. (3). Analysis of melodic structures; motivic fragmentation and sequencing; extended harmonic structures, performance in small combo settings. **(F).** **PREREQUISITE:** CMUS 3825 or permission of instructor.

CMUS 3827. Materials and Techniques of Improvisation III. (3). Analysis and performance of music in standard styles, including bebop, Latin, fusion, and jazz/rock; contemporary mainstream, pan-chromatic, and free-form improvisation; performance with combos and large jazz ensembles. **(F).** **PREREQUISITE:** CMUS 3826 or permission of instructor.

CMUS 3828. Aesthetics and Analysis of Jazz and Commercial Music Styles. (2). Fundamentals of form and style analysis; study of the artistic and commercial intentions and appropriateness of music from early popular styles to the present. **(SP).** **PREREQUISITE:** CMUS 2102 or permission of instructor.

CMUS 4102-6102. Composer's Workshop: Jazz/Commercial. (3). (MUTC 4102). Composition/Arranging for various sizes of instrumental and vocal groups with emphasis on commercial writing; projects in record copies, horn and string tracks, background vocals, instrumental accompaniment for vocal solos, jingles, and radio station IDs. *(SP-odd years).* **PREREQUISITES:** CMUS 2102, 2502, or permission of instructor.

CMUS 4103-6103. Jazz and Studio Ensemble Techniques. (3). (MUTC 4103). Jazz and studio performance styles and practices, emphasizing ensemble rehearsal and conducting techniques, articulation, phrasing, balance and blend, line dominance, and recording studio performance skills. **(F).** **PREREQUISITE:** CMUS 3828.

CMUS 4201. Studies in Commercial Music. (1-3). Class or supervised individual study of special problems in Commercial Music. May be repeated if course content differs.

CMUS 4260-69-6260-69. Special Topics in Commercial Music. (1-3). Topics are varied and announced in Schedule of Classes.

CMUS 4501. Composition/Arranging: Jazz/Commercial IV. (3). Individual instruction with emphasis on advanced line writing, fusion and contemporary mainstream styles, writing for full studio orchestra. May be repeated for additional credit. **PREREQUISITE:** CMUS 3501 or permission of instructor. **NOTE:** Composition is taught as applied music. Students receive the equivalent of one hour lesson per week. Fee for this instruction is \$60.00 per semester.

CMUS 4502-6502. Introduction to Film/Video Scoring. (3). Basic problems of writing music for film and video: commercial and industrial productions, shorts and full length features, selection of appropriate styles, creating a master music list, writing from a cue sheet; introduction to editing room equipment: conversion of film frames to video, use of SMPTE time code and synchronization equipment, MIDI sequencer scoring from a digital audio workstation; project assignments in film and video formats. *(alternate years).* **PREREQUISITES:** MUTC 2511, CMUS 3501, and either CMUS 3801 or MUTC 4511 or 4505, or by permission of instructor.

CMUS 4503. Concert Promotion, Tour Management and Artist Relations. (3). Current practices in tour promotion, tour management and artist relations from perspectives of promoter, artist, road manager and venue administrator.

CMUS 4504. Entertainment Complex Administration. (3). Fundamentals for managers of concert halls, theme parks, stadiums, nightclubs, and other venues; talent selection and contract negotiations, union considerations, publicity, security, cash management, budgets, selection of program material, presenting programs and performances. **(S/P).**

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CMUS 4602-6602. Music Industry Business Practice and Structure. (3). (MUHL 4602). Examination of organization, structure and business relationships upon which commercial music industry operates; industry structure, fundamental music business processes and activities, music as property, uses of music media, career options.

CMUS 4603-6603. Copyright and Licensing. (3). (MUHL 4603). Detailed examination of intellectual property rights as they relate to commercial music industry. PREREQUISITE: CMUS 4602.

CMUS 4800. Studio Recording. (4). Audio engineering on modern multi-channel recording equipment using commercial production techniques; emphasis on skills of console operation, microphone selection and placement, session set-up, preparing musical instruments for recording, editing, mixing and engineer's artistic involvement in project. (SP). PREREQUISITES: TECH 1811; CMUS 3800, and permission of instructor.

CMUS 4801. Problems in Commercial Music. (1-3). Supervised independent study. May be repeated to maximum of nine hours, but not for purpose of changing grade originally given. PREREQUISITE: permission of instructor.

CMUS 4802. Advanced Recording. (4). Advanced instruction in producing contemporary commercial recordings. Emphasis on application of production practice to recording assignments; advanced study of session technique, signal processing, mixing, editing, automation, synchronization, equipment and digital recording. PREREQUISITES: CMUS 3801, 4800 and permission of instructor.

CMUS 4803. Advanced Media Production and Technologies. (4). Comprehensive application of production techniques in audio recording, audio/video production and multimedia production; emphasis on artistic sensitivity, musicality and aural imagery. PREREQUISITES: CMUS 4802 and permission of instructor. PREREQUISITE or COREQUISITE: COMM 4825. Completion of JOUR 3900 and 4900 preferred.

CMUS 4804. Recording Studio Administration. (3). Managerial and financial aspects of operating a recording services business; facility design, scheduling, expansion, rate determination, billing, hiring, securing venture capital and risk management. PREREQUISITES: CMUS 3800 or 3802, junior standing and permission of instructor.

CMUS 4806. Fundamentals of Concert Sound Reinforcement. (3). Basic equipment and production techniques for providing live sound services; methods for handling various sized groups in diverse locations. PREREQUISITES: CMUS 4800 and permission of instructor.

CMUS 4810. Audio Production Practicum. (1-3). Supervised audio production activities. May be repeated up to nine hours credit but not for the purposes of changing the grade originally earned. PREREQUISITES: CMUS 4800 and permission of instructor.

CMUS 4811. Studio Maintenance Practicum. (1-3). Troubleshooting and maintenance activities under the supervision of studio staff. A minimum of 42 clock hours of service for each credit hour is required. May be repeated up to nine hours credit, but not for the purpose of changing the grade originally earned. PREREQUISITES: CMUS 4800 and permission of instructor.

CMUS 4812. Concert Sound Practicum. (1-3). Diverse live sound reinforcement activities. A minimum of 42 clock hours of service for each credit hour is required. May be repeated up to nine hours credit, but not for the purpose of changing the grade originally earned. PREREQUISITE: CMUS 4800, 4806 and permission of instructor.

CMUS 4895. Senior Project: Jazz and Studio Performance. (3). (4897001). Project must include live and recorded performances demonstrating the student's mastery of various styles of jazz and popular music performance. PREREQUISITES: upper division standing in applied music, CMUS 3827 or permission of instructor.

CMUS 4896. Senior Project: Jazz and Studio Composition/Arranging. (4) (4897002). Project must include original compositions and original arrangements of existing compositions in a variety of styles. Project should include live performance, recorded album tracks, and film music. PREREQUISITES: CMUS 4501, 4502 or permission of instructor.

CMUS 4898. Senior Project in Music Business or Recording Technology. (4). Comprehensive final project which demonstrates mastery of creative, technical, and business elements of commercial music industry. Intended to be taken during the student's last semester before graduation. PREREQUISITES: senior standing and permission of instructor. [I]

CMUS 4899. Internship. (1-3). One semester of supervised field work experience in selected areas of the commercial music industry. A minimum of 42 clock hours of service for each credit hour is required. May be repeated up to nine hours credit, but not for the purpose of changing the grade originally earned.

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PREREQUISITE: placement interview and permission of instructor.

COMMUNICATION

LAWRENCE FREY, Ph.D., *Chair*

Room 143, Theatre and Communication Arts Building

NOTE: In addition to specific prerequisites, junior standing or permission of the department chair is a prerequisite for all 3000- and 4000-level courses in the Department of Communication.

(COMM) COMMUNICATION

COMM 1780. Introduction to Human Communication. (3). Principles and processes underlying all human communication. Study of communication models, communication purposes and breakdowns, and variables related to interpersonal, small group, intercultural, and public communication.

COMM 1781. Introduction to the Rhetoric of Mass Media. (3). Principles, values, forms, and effects of persuasive public communication. Consideration of rhetorical styles and effects in speeches, debates, documentaries, and dramatic and entertainment forms.

COMM 1851. Introduction to Film. (3). Comprehensive study of the forms, functions, and history of film art; emphasis on developing student's critical skills and aesthetic appreciation through analysis of complex formal, social, historical, and cultural dimensions of the art of film. [G]

COMM 2381. Oral Communication. (3). Principles and practice of basic oral communication forms with emphasis on listening and critical understanding related to contemporary mass media, especially television and film, and to public information and decision-making. [G]

COMM 3321. Argumentation and Debate. (3). Theory of argumentation with emphasis on developing skills in analysis, reasoning, and use of evidence in various debate situations and understanding role of debate in public decision-making. PREREQUISITE: COMM 2381.

COMM 3322. Theories of Persuasion. (3). Principles underlying any communication designed to influence attitudes or behavior. Includes approaches to motivation, perception, message structure, attention, reasoning, audience analysis, persuasibility, and attitude change; items for analysis drawn from speeches, advertising, radio, television and film.

COMM 3330. Methods of Communication Analysis. (3). Examination and application of qualitative and quantitative methods of criticism and research. PREREQUISITE: COMM 1780 or JOUR 1700. [C]

COMM 3341. Discussion. (3). Study and practice of principles and techniques of discussion, dealing with current problems of wide interest and significance.

COMM 3342. Communication and Leadership. (3). Relationship between communication variables and leadership styles and effectiveness in various organizational and group settings.

COMM 3361. African-American Rhetoric. (3). (2361). Speeches and rhetoric of African-Americans. Emphasis on spokespersons such as Walker, Turner, Douglass, Washington, DuBois, Malcolm X, King, Davis, and Jackson.

COMM 3371. Freedom and Responsibility of Speech. (3). Development of freedom of speech as Western value and attendant problems of ethical practice, limitations, and responsibility.

COMM 3800. Elements of Broadcasting and Electronic Media. (3). (3881). Survey of broadcast and electronic media dealing with technology, history, programming, economics, advertising, and regulation.

COMM 3801. TV Production Techniques for Journalists. (4). For majors in the broadcast journalism sequence; basic principles and techniques of video production. Production exercises. PREREQUISITE: permission of instructor.

COMM 3802. Production Techniques for Organizations. (3). Location video and slide/tape equipment, operations and techniques. Emphasis on informational and public relations programming. Not open to Film and Video Production students.

COMM 3820. Broadcast Preparation and Performance. (3). Skills required for on-air performance in broadcasting and cable emphasizing use of voice and copy preparation; presentation of public affairs programming, talk show hosting, sportscasting, newscasting and general announcing.

COMM 3821. Radio Production and Studio Operations. (3). (3825). Preparation, production and evaluation of programs, including talk, discussion, interview, music documentary and special event shows; emphasis on construction, editing, and compilation for broadcast use.

COMM 3823. Film and Video Production I. (4). Basic production skills and theory; photography; 16mm

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film, audio and small TV studio. Hands-on production exercises.

COMM 3824. Film and Video Production II. (4). Continued production skills and theory in film and video; extensive production exercises. PREREQUISITE: A minimum grade of C in COMM 3823 or permission of instructor.

COMM 3842. Television Studio Production I. (4). Techniques of Studio TV production, including staging and direction of programs. PREREQUISITE: A minimum grade of C in COMM 3823 or permission of instructor

COMM 3861. Television and Culture. (3). Social, political, and aesthetic dimensions of television in modern culture. [W]

COMM 4011-6011. Communication in Organizations. (3). (3011). Study of communication systems and problems in contemporary organizations with emphasis on the role of communication in corporate culture and in organizational change.

COMM 4012-6012. Health Communication. (3). Examination of the role of communication in health care; application of communication theory and practice to the health care context from provider-patient interaction to cultural influences on health.

COMM 4013-6013. Communication in Political Campaigning. (3). (3013). Forms and effects of communication between politicians and constituencies; emphasis on campaign rhetoric via mass media, debates, and model speeches.

COMM 4210-19-6210-19. Special Topics In Communication Studies. (1-3). Topics are varied and announced in Schedule of Classes. May be repeated to a maximum of 9 hours when topic varies.

COMM 4220-29-6220-29. Special Topics in Film. (1-3). Topics are varied and announced in Schedule of Classes. May be repeated to a maximum of 9 hours when topic varies.

COMM 4341-6341. Interpersonal Communication. (3). Theory and research regarding one-on-one communication; effective practices for various interpersonal settings.

COMM 4342-6342. Small Group Communication. (3). Advanced study of group communication theory emphasizing group membership, member perceptions, group development, group process, and group outcomes.

COMM 4360-6360. Great American Speeches. (3). Examination of notable speeches from before founding of the republic through twentieth century; religious and secular foundations of American rhetoric; tensions of inclusion and exclusion in development of national self-understanding. [W]

COMM 4373-6373. Interracial Communication. (3). Special problems encountered in communication among races. Readings, discussion, and field study on how prejudice, stereotypes, and self-concepts can affect communication; exploration of rhetorical methods to minimize these problems.

COMM 4374. Directed Studies in Communication Arts. (1-3). Independent research in areas of special interest Includes rhetoric, broadcast and electronic media, and film. PREREQUISITE: permission of instructor.

COMM 4375-6375. Intercultural Communication. (3). Special problems encountered in communication among people of different cultural backgrounds. Focus on understanding communicative interaction between and among people with different national/cultural backgrounds and functioning more effectively in multi-cultural settings. [W]

COMM 4380. Communication and Conflict. (3). Theories and methods of conflict management and resolution focusing on practical communication skills. Concepts of perception, listening and peacemaking emphasized.

COMM 4381. Rhetoric and Public Controversy. (3). Intensive examination of the presentation of public issues in political and entertainment forms (speeches, drama, television, and film). PREREQUISITE: Senior standing or permission of instructor. [I]

COMM 4802-6802. Internship. (1-3). Field studies in communication. Supervised practical work with government institution, private business, film company, or broadcast and electronic media firm. Written analysis of experience required. May be repeated for maximum of 6 semester hours. PREREQUISITE: permission of instructor. (S/U)

COMM 4810-6810. Broadcast Regulation and Program Policy. (3). Effects of FCC and other governmental regulations on broadcast and electronic media management and operations; licensing, renewals, content control, politics, and copyright. PREREQUISITE: COMM 3800.

COMM 4811-6811. Radio and Television Programming. (3). Analysis of individual program formats (with examples); use of this information along with ratings and other audience research to study design of program schedules. PREREQUISITE: COMM 3800.

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COMM 4812-6812. Communications Law in the Performing Arts. (3). Artist, performer, management contractual relationships; acquisition, copyright and disposition of literary and audio-visual properties; production and distribution agreements; advertising law and other matters for TV, motion picture, radio and stage businesses.

COMM 4822-6822. Audio Production for Film and Video. (3). (3822, 3825). Intermediate principles and practices of audio (recording, editing, mixing, and design) with emphasis on film and video production. **PREREQUISITE:** A minimum grade of C in 3824 or permission of instructor.

COMM 4824-6824. Cinematography/Videography. (3). Art of visual interpretation with strong concentration in theory and techniques of lighting. Experience with professional film and video cameras and lighting equipment. **PREREQUISITE:** A minimum grade of C in 3824 or permission of instructor.

COMM 4825-6825. Editing and Post-Production. (3). Concentrates on the aesthetics of continuity development in a variety of editing styles; editing techniques and post-production procedures for both video tape and double system film. **PREREQUISITE:** A minimum grade of C in 3824 or permission of instructor.

COMM 4831-6831. Broadcast and Cable Sales and Advertising. (3). Relation of broadcasting and cable sales and advertising to networks, station representatives and salespeople; role of sponsors, agencies, and allied groups. **PREREQUISITE:** COMM 3800.

COMM 4841-6841. Television Workshop. (4). Production of television programming for local cable casting. May be repeated for a maximum of 8 semester hours; repetition will not result in a change of any grade previously given. **PREREQUISITE:** COMM 3842 or permission of instructor.

COMM 4842-6842. Television Studio Production II. (4). (4840). Advanced training in TV studio/multiple camera techniques. Extensive production work. **PREREQUISITE:** COMM 3842.

COMM 4850-6850. Film History I. (3). (4852). Historical survey of motion pictures from medium's pre-history to 1940. Emphasis on narrative film.

COMM 4851-6851. Film History II. (3). Historical survey of the major movements, genres, and themes in narrative film from 1940 to 1960.

COMM 4853-6853. Documentary Form in Film. (3). Development of non-fiction film as rhetorical and expressive form. Analysis of individual films, genres, and filmmakers.

COMM 4854-6854. Documentary Form in Broadcasting. (3). History, theory, and criticism of non-fiction broadcasting, including docudrama and television documentaries.

COMM 4856-6856. Women and Film. (3). Women as performers, viewers, subjects, and creators in American and international cinema.

COMM 4857-6857. History of Broadcast and Electronic Media. (3). Comprehensive study of history of broadcast and electronic media in United States as developed from 1895 to present. Use of primary sources. **PREREQUISITE:** COMM 3800.

COMM 4858-6858. Contemporary Cinema. (3). Major themes and styles in international and American narrative film from 1960 to present. [W]

COMM 4871-6871. Broadcast and Cable Management. (3). Theories of management; special problems and situations confronting managers of broadcast and cable outlets; personnel, engineering, programming, news, promotion and sales functions. **PREREQUISITE:** COMM 3800.

COMM 4891-6891. Producing and Directing for Film and Video. (3). Research and script preparation; budgeting and production management; working with actors and crew. **PREREQUISITE:** A minimum grade of C in 3824 or permission of instructor.

COMM 4892. Film and Video Production. (1-3). Film and video production workshop. Class members write, produce, direct, or assume crew responsibilities on productions. May be repeated for a maximum of 6 hours. See departmental guidelines for independent production requirements and procedures. **PREREQUISITES:** COMM 3824 and permission of instructor.

COMM 4960-6960. Documentary Writing. (3). Writing for non-fiction media.

COMM 4970-6970. Screenwriting. (3). Writing for fiction film and television; basic dramatic theory, narrative structure, characterization, dialogue, adaptation and the unique demands of the audio-visual media.

COMM 4980. Honors Studies. (3). (COMM, THCA). Reserved for students enrolled in Communication Arts Honors Program. May be repeated for a maximum of 15 hours. **PREREQUISITE:** Permission of Director of Communication Honors Program.

COMM 4982. Honors Seminar. (3). (THCA). Intensive study of particular problems in communication. May be repeated for a maximum of 12 hours when semester topics vary. **PREREQUISITE:** permission of Director

of Communication Honors Program.

4993. Senior Practicum. (3). Independent work in radio, video, or film production. Each student has complete creative control of a program from conception through final product. See departmental guidelines for independent production requirements and procedures. PREREQUISITE: permission of instructor. [I]

4999. Senior Honors Thesis. (3). Supervised independent research project. Open only to students enrolled in the Communication Honors Program. May be repeated for a maximum of 6 hours. PREREQUISITE: permission of Director of Communication Honors Program.

(COMP) COMPUTER SCIENCE
Department of Mathematical Sciences
JOHN R. HADDOCK, Ph.D., *Chair*
Room 373, Dunn Hall

COMP 1200. Computer Literacy. (4). Basic computer concepts including hardware, operating systems, software, human-user interface; software packages including word processing, graphics, spreadsheets, database management; programming in HTML; basics of networks and Internet; legal, ethical, social implications of computers and their role in our world. *Three lecture hours, two laboratory hours per week.* NOTE: Credit may not be used for degree with major computer science. PREREQUISITE: TRAC 0821 or two years of high school mathematics.

COMP 1900. Computer Programming. (4). (1000). Principles of computer programming, including style and documentation: specification, algorithmic development and coding; coding in a specific high-level programming language and its environment, including data types, iteration and flow controls commands, subprograms, parameters, i/o. NOTE: This course is designed for computer science majors. Non-majors should take COMP 4001. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: MATH 1211.

COMP 2150. Data Structures. (3). Principles of object-oriented programming and software engineering; problem solving with recursion and abstract data types, including linked lists, stacks, queues, trees, binary search trees, and graphs; basic sort and search algorithms; hashing. PREREQUISITE: COMP 1900 and MATH 1321; COREQUISITE: MATH 2701.

COMP 3160. Introduction to File and Database Systems. (3). (4160). Review of data structures and object-oriented concepts; implementation of advanced data structures in elementary algorithms; file structures, operations, types and other secondary storage organization; external sorting; indexing, B-trees and hashing. PREREQUISITE: COMP 2150.

COMP 3410. Computer Organization and Assembly Language. (3). (3420). Basic concepts in assembly language programming, including logic, comparing and branching, interrupts, macros, procedures, arrays, program design, testing, debugging, loading, and linking; combinational, arithmetic and logical circuits in ALU; memory circuits, latches, flip-flops, registers; computer structure; fetch-execute cycles, clocks and timing; microprogramming and microarchitecture: data path, timing, sequencing; cache memory organization; RISC architectures. NOTE: Students may not receive credit for all three of the following: COMP 3230, 3420, 3410. PREREQUISITE: COMP 1900.

COMP 4001-6001. Computer Programming. (3). (MATH 4710). Basic concepts in computer programming in BASIC and FORTRAN, including the software development cycle, data types, iteration and flow control commands, modular programming, i/o, file processing; basic skills for using operating systems (DOS, VMS), graphics, computer systems, and network navigation. NOTE: Computer Science majors may not use this course to fulfill degree requirements. PREREQUISITE: MATH 1211.

COMP 4002-6002. Accelerated Computer Programming. (3). Computers and computer programming; principles of style and documentation: specification, algorithms, coding, and step-wise refinement; structured language, modularity; recursive procedures; programming of basic data structures including linked lists, stacks, queues, trees, and sets; basic sort and search algorithms; hashing. NOTE: Computer Science majors may not use COMP 4002 to fulfill degree requirements. Credit for either COMP 1900 or COMP 2150 precludes credit for COMP 4002. PREREQUISITE: MATH 1321. COREQUISITE: MATH 4701 or 6701.

COMP 4003-6003. Computer Organization and Assembly Language Programming. (3). Binary signals, combinatorial and sequential logic networks, computer structure, memory, control, processing, and I/O units; instruction types and execution. Computer machine language: symbolic coding and assembly systems: design, coding, testing, tracing, and debugging. NOTE: Computer Science majors may not use COMP 4003 to fulfill degree requirements. Credit for COMP 3410 precludes credit for COMP 4003. PREREQUISITE: COMP 4002.

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COMP 4030-6030. Introduction to Algorithms. (3) Asymptotic behavior of programs, basic paradigms in algorithm design: greedy, divide-and-conquer, dynamic programming. Analysis of efficiency and optimality of representative algorithms, including graph, pattern matching, numerical, randomized, and approximation algorithms. Approaches to lower bound analysis. Basic parallel algorithms. PREREQUISITE COMP 2150.

COMP 4040-6040. Programming Languages. (3). (MATH 4769). Comparative features, syntax, and applicability of high-level programming languages such as FORTRAN, COBOL, PASCAL, SNOBOL, LISP, ADA, C, and FORTH, data types, and data structures, control structures and dataflow, procedures, recursion, runtime environment, string manipulation, list processing, array processing, documentation programming style. PREREQUISITE: COMP 2150 [W]

COMP 4041-6041. Introduction to Compilers. (3). Finite state recognizers, lexical scanners, symbol tables context-free languages and pushdown automata context-free parsing methods such as recursive descent, LL(K), precedence, LR(K), SLR(K); language translation, generation and improvement of machine independent codes, inherited and synthesized attributes, syntax-directed translation schema. PREREQUISITES: COMP 3410, 4040, 4030.

COMP 4081-6081. Software Development. (3). Advanced programming methods; testing, generic libraries, documentation methods; program analysis and design methodologies such as object-oriented, life cycles, metrics, process improvement strategies, personal software process; software quality. PREREQUISITE: COMP 4040 or permission of instructor.

COMP 4115-6115. Database Processing and Design. (3). Database processing and architecture; conceptual data modeling and data design; logical data models; relational models, operations and algebra; query languages and SQL; normalization and schema refinement; basic indexing techniques (hashing and B+trees). PREREQUISITE: COMP 3160 or permission of instructor.

COMP 4242-6242. Introduction to Computer Graphics (3). Characteristics of graphics I/O devices; 2D pictures, scaling, translation, rotation, and windowing; drawing histograms, simple maps, block diagrams, and flowcharts; curved lines, precision, quantization and interpolation, plotting equations; 3D pictures, scaling, translation, rotation, and projections hidden line problem, non-Euclidean geometry, animation. PREREQUISITES: COMP 3410.

COMP 4262-6262. Programming UNIX. (3). Fundamentals of the UNIX system and environment including: file system, shell concepts and programming, editors (vi and emacs), filters (sed, awk, grep, sort), utilities (make, yacc, lex), mail facility, communication software, C programming and its UNIX interface, X window system. PREREQUISITE: COMP 2150 or permission of instructor.

COMP 4270-6270. Introduction to Operating Systems (3). Hierarchy of storage devices, I/O buffering, interrupts, channels; multiprogramming, processor and job scheduling, memory management: paging, segmentation, and virtual memory; management of asynchronous processes: interrupt procedure calls, process stateword and automatic switch instructions, semaphores, concurrency; security and recovery procedures. PREREQUISITES: COMP 3410, 4040 4030.

COMP 4302-6302. Internet Applications and Java Programming. (3). Structure of the internet and world-wide web; client-server environments; programming applications in Java and HTML; java applets and web cgi scripts; security issues; other large networks. PREREQUISITE: COMP 2150.

COMP 4310-6310. Data Communications. (3). Network structure and architecture; network topology: ISO reference model: physical layer and datalink layer; communications lines; Fourier analysis and synthesis: modulation; transmission media; coding theory; data compression, cryptography, error detection and correction; case studies of LANs: CSMA/CD, token ring, token bus. PREREQUISITE: COMP 2150 and COMP 3410.

COMP 4601-6601. Models of Computation. (3). Computer models as a basis for the understanding and analysis of programming, computation and complexity; machine models (finite-state, stack and Turing machines); biologically-inspired models (neural nets; genetic algorithms); linguistic models (grammars, lambda calculus, predicate calculi); insolvability, universality, decidability, feasibility. PREREQUISITE: MATH 2701 or PHIL 3621 or permission of instructor.

COMP 4711-6711. Introduction to Mathematical Logic (3). (Same as MATH 4711). Propositional logic and truth table algorithms; first order calculus, terms, formulas, sentences, models, satisfaction, truth and logical validity; proof procedures and natural deduction; completeness and incompleteness theorems; applications to artificial intelligence; computer theorem proving, and verification of computer programs. PREREQUISITES: MATH 2701 or MATH 4701 or PHIL 3621 or permission of instructor.

COMP 4720-6720. Introduction to Artificial Intelligence (3). (Same as ELEC 4720-6720). Fundamentals of

programming in LISP. Central ideas of artificial intelligence, including heuristic search, problem solving slot-and-filler structures and knowledge representation. PREREQUISITE: COMP 4040 or permission of instructor.
COMP 4730-6730. Expert Systems. (3). (Same as ELEC 4730-6730). Fundamentals of programming PROLOG, central ideas of expert system development, including knowledge representation, control structures, tools, knowledge acquisition, and knowledge engineering. PREREQUISITES: MATH 2701 and COMP 4030 or permission of instructor.

COMP 4901-6901. Individual Studies in Computer Science. (1-3). Directed individual study of selected areas of computer science. May be repeated by permission for a maximum of 6 hours. PREREQUISITE: permission of instructor.

COMP 4911-6911. Internship in Computer Science. (1-6). Practical experience in computer science. Students placed for some time with governmental or private organizations. Project must be approved and supervised by department faculty. Academic credit granted upon certification of the cooperating agency and acceptance by supervising faculty of student's written report. May be repeated for up to a total of 6 semester hours credit. PREREQUISITE: permission of supervising faculty member. (S/U)

COMP 4990-99-6990-99. Topics in Computer Science. (1-3). Topics are varied and announced in Schedule of Classes. PREREQUISITE: permission of instructor.

◆(COUN) COUNSELING AND PERSONNEL SERVICES
Department of Counseling, Educational Psychology and Research

RONNIE PRIEST, Ph.D., *Chair*

Room 100, College of Education Building

<http://www.coe.memphis.edu/coe/CEPR/cepr.html>

COUN 1661. Career Development. (3). Relationship of interests, aptitudes and careers. Includes exploration of work settings and activities to support individual career planning. Students expected to investigate work settings, relate this investigation to academic programs, and utilize this information in individual career development.

COUN 4002. Independent Study in Counseling. (1-3). Opportunity for self-directed study and/or research under the supervision of faculty member. May be repeated for a maximum of 6 semester hours credit. PREREQUISITE: consent of faculty member. (S/U).

COUN 4010-29. Special Topics in Counseling and Personnel Services. (3). Topics varied and announced in Schedule of Classes.

COUN 4150-6150. Interpersonal Skills for Educators. (3). (EDSV, EDUC). Development of human relation skills to enhance educator's ability to interact effectively with people in educational environments.

COUN 4611-6611. Introduction to Counseling. (3). Exploration of history, principles and administration of counseling services in community agencies, schools, business and industry; survey of applicable counseling services, skills and techniques.

COUN 4621. Human Interactions. (3). Human relations exercises and other personal experiences related to effective learning climates. Includes communication skills for working in groups, one-to-one relationships, and identification and referral of persons to appropriate resources.

COUN 4691. Residence Hall Staff Counseling and Advising. (3). Practical experience for residence hall staff. Instruction and supervision provided. Individual and group activities in counseling, advising, communication, and leadership. Concerns such as drug abuse, family planning information, and student discipline. Utilizes interdepartmental disciplines.

COUN 4781. Strategies for Crisis Intervention. (3). Process of crisis intervention; study and practice in understanding crisis induced dysfunctional behavior, recognizing crisis situations. and crisis counseling procedures.

COUN 4782. Gerontological Counseling. (3). Survey of demographic, developmental, physiological, sensory and psychosocial aspects of aging as applied to counseling; experiences in use of appropriate individual and group counseling techniques for aged; emphasis on particular crisis situations such as retirement, leisure, relocation, housing, institutionalization, dying, death, and survivorship.

COUN 4783. Alcohol and Drug Abuse Services. (3). Survey of human services for treating alcoholics and substance abusers. Overview of treatment strategies and philosophies.

(CSED) CONSUMER SCIENCE AND EDUCATION

Due to possible changes in graduation requirements, it is the responsibility of the student to see his/her advisor for updates.

CSED 1101. Personal Development and Human Relations. (3). (HMEC). Individual and group adjustment and influences contributing to successful marriage and family life.

CSED 1105. Clothing Selection and Construction. (3). (HMEC). Standards in selecting and purchasing, construction of cotton garments to meet individual needs. *One lecture hour, four laboratory hours per week.*

CSED 2004. Technical Skills for Home Furnishings. (3). (HMEC). Students interested in housing, home furnishing, and related areas focus on varied program of technical skills involving 2-point perspective sketches and drafting freehand and with computer. ♦ For Family and Consumer Science majors who lack skills necessary to demonstrate concepts of depicting home furnishing interiors.

CSED 2005. Introduction to Fashion Merchandising. (3). (HMEC). Introduction to the types of enterprises, activities, operations, interrelationships, and practices in fashion industry; emphasis on merchandising terminology and techniques.

CSED 2101. The Family in Global Perspective. (3). (HMEC). (Same as SOCI 2101). Introduction to family as a primary, global, social institution; contributions sociology, anthropology, and Family and Consumer Science have made to understanding how and why family systems vary worldwide and common bonds and problems facing families in modern societies. [G]

CSED 2104. Home Furnishings and Related Arts. (3). (HMEC). Elements and principles of design applied to selection and arrangement of house and its furnishings.

CSED 2106. Visual Merchandising. (3). (HMEC). Theory and practice in visual merchandising (display); especially retail interior and window display techniques, display creation, planning promotions, and determining budgets.

CSED 2202. Nutrition. (3). (HMEC). Study of nutrients for the consumer; nutrition for preventive health throughout the life cycle.

CSED 2302. Principles of Food Preparation. (3). (HMEC). Culinary techniques and menu planning for individuals; food safety and sanitation; cultural and ethnic food considerations; kitchen design; computer applications. ♦ *Two lecture hours, three laboratory hours per week.*

CSED 3002. Advanced Nutrition. (3). (HMEC 4002, 4402). In-depth study of nutrients and body utilization and discussion of current issues in nutrition. PREREQUISITES: CSED 2202, CHEM 1131/1121, 1132/1122.

CSED 3100. Consumer Education. (2). (HMEC 3100, 3405). Examination of consumer problems in today's market place; emphasis on decision making, consumer rights and responsibilities and consumer information sources.

CSED 3202. Nutrition for Health Care. (3). Nutrition applications for health promotion and treatment of selected disease conditions. Required for admission to the Loewenberg School of Nursing ♦ at The University of Memphis. Prerequisites: BIOL 1751/1752, 1761/1762.

CSED 3204. Residential Kitchen Planning. (3). (HMEC 4203, 3204). (Same as ART 3204). Design aspects of residential kitchens and their relationship to housing; basic kitchen planning principles based on NKBA guidelines, trends in socio-economic, multi-cultural, universal design; selection, use, care of appliances. PREREQUISITE: CSED 2104 or permission of instructor.

CSED 3206. Merchandising Systems.(3). (HMEC). Analysis of formulas used to plan and control the flow of merchandise through the use of both computer and manual systems. PREREQUISITE: Satisfactory completion of the General Education mathematics requirements. Accounting also recommended. [C]

CSED 3302. Child and Adolescent Development. (3). (EDUC 3302). (Same as EDPR 3302). Principles and processes of child and adolescent development applied to education. PREREQUISITE: EDPR 2111 (CSED 1101 FOR CSED MAJORS).

CSED 3401. Parenthood Education. (3). (HMEC). Parental role, parent-child relationship, and factors that influence parenthood.

CSED 3502. Advanced Foods/Food Systems. (3). Food systems management applications; procurement, production, and menu planning for groups; legislation and environmental issues; institutional equipment and design; human resource management; additional 16 hours of lab experiences in professional food service operations outside of classroom. PREREQUISITE: CSED 2302.

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CSED 4101-6101. Preschool Curriculum. (3). (HMEC). Application of child development principles to program planning; infancy through four years of age.

CSED 4102. Medical Nutrition Therapy. (3). (HMEC). Nutrition assessment techniques; medical terminology and nutritional pharmacology; nutrition modalities for health promotion and selected conditions. ❖
PREREQUISITES: BIOL1751-1752, BIOL 1761, 1762, CSED 2202, 3002; or permission of instructor.

CSED 4106. Trends and Issues in the Profession. (3). (HMEC 4106, 3106). Senior capstone seminar that applies synergistic thinking to integrative discipline of home economics and specializations that make up the discipline; changing trends, issues, and technology affecting today's family and consumer sciences professional; professional orientation and leadership skills critiqued and enhanced in oral and written activities [W, I]

CSED 4112. Medical Nutrition Therapy II. (3). Nutrition care process and pathophysiology for selected conditions; alternative nutrition therapies. **PREREQUISITE:** CSED 4102

CSED 4204-6204. Furnishings Problems and Presentations. (3). (HMEC). Critical thinking and problem solving related to planning, coordinating, and purchasing of home furnishings. *Two lecture hours, one lab hour per week.* **PREREQUISITE:** CSED 2004, 4304.

CSED 4205-6205. Behavioral Science Aspects of Clothing. (3). (HMEC). Interdisciplinary study of clothing and appearance; concepts, methodologies, and applications of behavioral science to clothing.

CSED 4211-4217. Readings. (1-3). For Senior Consumer Science majors. In-depth reading or research in area of specialization. **PREREQUISITE:** Senior Consumer Science majors only.

CSED 4211. Readings in Child Development and Family Relations. (HMEC 4200-001).

CSED 4212. Readings in Foods and Nutrition. (HMEC 4200-002).

CSED 4213. Readings in Family Economics and Consumer Education. (HMEC 4200-003).

CSED 4214. Readings in Housing and Home Furnishings. (HMEC 4200-004).

CSED 4215. Readings in Clothing and Textiles. (HMEC 4200-005).

CSED 4216. Readings in Fashion Merchandising. (HMEC 4200-006).

CSED 4217. Readings in Family and Consumer Science Education. (HMEC 4200-007).

CSED 4300-6300. Family Resource Management. (3). (HMEC). Investigates values, goals, and human and material resources necessary for individuals and families to make informed management decisions throughout the life span.

CSED 4304-6304. Trends in Housing and Home Furnishings. (3). (HMEC 4304, 3104). Major trends and influences on contemporary residential furnishings as these affect home furnishings merchandising. **PREREQUISITE:** CSED 2104.

CSED 4314. Contemporary Trends in Housing/Home Furnishings. (3). Multi-cultural and global trends of the 20th Century on housing and home furnishings. Emphasis on major design influences as they relate to housing/home furnishings.

CSED 4322. Purchasing/Financial Management in Food Systems. (3). Problem solving of food and beverage purchasing decisions; budgeting for food services; managerial finance, productivity indicators.

CSED 4383-6383. Materials and Methods in Family and Consumer Sciences Education. (3). (HMEC). Methods in high school subjects with an emphasis in Consumer Science and Education Instruction.

CSED 4393-6393. Occupational Methods in Family and Consumer Sciences Education. (3). (HMEC 4393, 3393). Special emphasis on instructional strategies and evaluation through classroom and on-site participation. **PREREQUISITE:** CSED 4383.

CSED 4405-6405. Textiles. (3). (HMEC 3305). Selection, use, and care of textiles related to properties of fibers, yarn structures, fabric construction, and finishes Morphology and chemistry of fibers, finishes, dyes, fabric maintenance, and procedure involved in fiber, yarn, and fabric identification. **PREREQUISITE:** CSED 2005, 2104 or permission of instructor.

CSED 4600. Senior Seminar in Merchandising. (6). (HMEC). Concentrated study of factors influencing fashion and home furnishings merchandising functions and transitional process from career academics to career implementation. Meets first six weeks of semester. **PREREQUISITES:** Students are required to complete all coursework in concentration, (and minor), prior to professional semester. Approved application for admission must be received before exam week of previous semester. **COREQUISITE:** Fashion Concentration-CSED 4705; Home Furnishings Concentration-CSED 4804.

CSED 4602-6602. Community Nutrition. (3). (HMEC). Nutritional problems and practices of various ethnic, age, and socio-economic groups; community and agencies concerned with meeting these needs.

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PREREQUISITE: CSED 2202 or permission of instructor.

CSED 4612. Effective Teaching Methods in Health Care. (3). (HMEC). Development of effective teaching methods for use with patients/clients; emphasis on demonstration, practice, critique.

CSED 4702-6702. Food Production Internship. (3). (HMEC 4702-001, 4302-001). Supervised field experience in the field of food production management.

CSED 4705. Fashion Merchandising Internship. (6). (HMEC). Supervised full-time work experience in fashion merchandising in approved business establishments. Meets last 8 weeks of semester. Majors may not enroll for more than a total of 12 semester hours during professional semester. COREQUISITE: CSED 4600. (S/U).

CSED 4712-6712. Clinical Nutrition Internship. (3). (HMEC). Supervised field experience in clinical nutrition. PREREQUISITE: CSED 4102. (S/U)

CSED 4722-6722. Catering Internship. (3). (HMEC 4702-002, 4202-002). Supervised field experience in the field of catering.

CSED 4802. Experimental Foods. (3). (HMEC). Technology related to chemical properties of foods and the development of new food products. Critical thinking and problem solving skills used in the preparation and evaluation of food products. PREREQUISITES: CSED 2302, CHEM 1131, 3311 or permission of instructor.

CSED 4804. Home Furnishings Merchandising Internship. (6). Supervised full-time work experience in home furnishings merchandising in approved business establishments. Meets last 8 week of semester. Majors may not enroll for more than a total of 12 semester hours during professional semester. COREQUISITE: CSED 4600. (S/U).

CSED 4900-4906/6900-6906. Consumer Science Study Tour. (1-3). (HMEC 4900-6900). On-the-scene knowledge about specific academic areas of specialization within Consumer Science and Education. PREREQUISITE: Permission of instructor. Maximum of 6 credit hours for degree program.

CSED 4900-6900. Study Tour in Consumer Science and Education.

CSED 4901-6901. Study Tour: Child Development and Family Relations. (HMEC 4900-001).

CSED 4902-6902. Study Tour: Foods and Nutrition. (HMEC 4900-002).

CSED 4903-6903. Study Tour: Family Economics and Consumer Education. (HMEC 4900-003).

CSED 4904-6904. Study Tour: Housing and Home Furnishings. (HMEC 4900-004).

CSED 4905-6905. Study Tour: Clothing and Textiles. (HMEC 4900-005).

CSED 4906-6906. Study Tour: Fashion Merchandising. (HMEC 4900-006).

CSED 4920-29-6920-29. Special Topics in Consumer Science and Education. (1-3). (HMEC). Lectures and conferences covering selected areas of current interest. See Schedule of Classes for topics. May be repeated; credit applicable to degree is limited.

CSED 4940-49. Workshop in Family and Consumer Science and Education. (1-3). (HMEC). Group study related to specific phases of family and consumer education. May be repeated.

[Last Updated: 6/12/15](#)

(DANC) DANCE**Department of Theatre and Dance**ROBERT A. HETHERINGTON, M.A., *Chair**Room 143D, Theatre and Communication Building*

DANC 1821, 1825, 1827, 2821, 2825, and 2827 may be used to fulfill the university degree requirements for physical activity courses. See Graduation from the University for details.

DANC 1151. Introduction to Dance. (3). Comprehensive study of dance as an expressive art form, a symbolic language, and an integral aspect of world cultures; emphasis on developing both aesthetic response and critical skills through an analysis of major dance forms, styles, and genres. [G]

DANC 1821. Modern Dance I. (2). Introduction to modern dance techniques; emphasis on exploration of fundamentals of dance. For student with little or no previous experience in modern dance. May be repeated for a maximum of 4 semester hours with permission of instructor. [G]

DANC 1825. Ballet I. (2). Introduction to classical ballet technique; emphasis on barre and center floor work. For student with little or no previous experience in ballet. May be repeated for a maximum of 4 semester hours credit with permission of instructor. [G]

DANC 1827. Jazz Dance I. (2). Contemporary jazz dance techniques; emphasis on fundamentals of idiom. For student with little or no previous experience in jazz dance. May be repeated to a maximum of 4 hours with permission of instructor. [G].

DANC 2101. Dance Improvisation. (3). Elements of space, time and force; their interrelationships and their specific applications to movement sequences; experiences in spontaneous development of dance phrases. May be repeated to a maximum of 6 hours with permission of instructor. (*Offered alternate years*).
PREREQUISITE: permission of instructor.

DANC 2821. Modern Dance II. (2). (1822). Intermediate modern dance techniques. May be repeated to a maximum of 4 hours with permission of instructor. PREREQUISITE: DANC 1821 or permission of instructor. [G]

DANC 2825. Ballet II. (2). (1826). Intermediate ballet techniques. May be repeated to a maximum of 4 hours with permission of instructor. PREREQUISITE: permission of instructor. [G]

DANC 2827. Jazz Dance II. (2). (1828). Intermediate jazz dance techniques. May be repeated to a maximum of 4 hours with permission of instructor. PREREQUISITE: DANC 1827 or permission of instructor. [G]

DANC 3101. History of Dance. (3). Basic features of and uses for dance and expressive movement from early cultures to present. (*Offered alternate years*). (W)

DANC 3201. Dance Movement Analysis. (3). Theory and methods of analyzing and describing dance movement. Varied semester topics: dance notation, Laban movement analysis, Bartenieff fundamentals, rhythmic analysis, kinetic awareness and body alignment techniques. Repeatable up to 6 hours with permission of instructor. PREREQUISITE: permission of instructor. (*Offered alternate years*).

DANC 3829. Advanced Dance Techniques. (3-4). Intensive development and refinement of dance technique. Focus on artistic concerns appropriate to advanced level. Repeatable for a maximum of 12 hours with permission of the instructor; repetition will not result in a change of any grade previously given. PREREQUISITE: permission of instructor.

DANC 4000-4029-6000-6029. Special Topics in Dance. (1-3). Topics are varied and announced in Schedule of Classes. May be repeated to a maximum of 9 hours when topic varies.

DANC 4101-6101. Dance Repertory. (3). Exploration of stylistic, technical, and expressive elements in rehearsal and performance; notated works, faculty and guest artist choreography. May be repeated for a maximum of 9 hours. PREREQUISITE: permission of instructor.

DANC 4201-6201. Dance Composition. (3). Investigation of movement sources and development of elements of choreographic craft. Emphasis on solo and duet work. May be repeated for a maximum of 6 hours with permission of instructor. (*Offered alternate years*). PREREQUISITE: permission of instructor.

DANC 4202-6202. Advanced Dance Composition. (3). Continued investigation of movement sources and choreographic craft from concept development through rehearsal and performance; emphasis on group forms. May be repeated for a maximum of 6 hours. PREREQUISITE: DANCE 4201 or permission of instructor. (I)

DANC 4301-6301. Directed Studies in Dance. (1-3). Individual study, research or practicum. May be repeated for a maximum of 12 hours. PREREQUISITE: permission of instructor.

DANC 4402-6402. Dance Education in Diverse Settings. (3). Theory, methods and materials for teaching

modern and creative dance in schools, dance studios, arts programs, and community settings; current research in aesthetic education and curriculum development. PREREQUISITE: DANC 2821, or permission of instructor.

(ECED) EARLY CHILDHOOD EDUCATION
Department of Instruction and Curriculum Leadership

DENNIE L. SMITH, Ed.D., *Chair*
Room 106D, College of Education Building
<http://www.coe.memphis.edu/coe/ICL/icl.html>

ECED 3555. Observation and Assessment of Infant and Early Childhood Development. (3). Developmental perspective on measurement and evaluation in early childhood years. Considers standardized tests, observations, checklists and rating scales, and tests designed by teachers; their advantages and disadvantages for use with young children; and professional ethical issues pertaining to evaluating young children. PREREQUISITES: EDPR 2111, and admission to TEP. PREREQUISITES or COREQUISITES: Two of the following: EDPR 3300, 3301, 4301. [C]

ECED 3565. Development of Play in Early Childhood. (3). Role of play in early childhood development and learning from birth through age eight; applications of play theory to young children's total development and learning; and study of play environments and adult roles in supporting appropriate play activities and environments. PREREQUISITES: EDPR 2111, and admission to TEP. PREREQUISITES or COREQUISITES: Two of the following: EDPR 3300, 3301, 4301.

ECED 4107-6107. Workshop in Montessori Instruction. (3). (ICL, CIED). Basic principles of how children learn, how they should be taught, what didactic materials should be presented, how the classroom is prepared, and in which sequence didactic materials should be taught using Maria Montessori's philosophies.

ECED 4510-6510. Early Childhood Programs and Practices. (3). Applying professional knowledge to early childhood education values and principles, programs and practices, issues, problems, and trends; and exploring early childhood teacher roles and responsibilities through observations in multicultural early childhood program settings. PREREQUISITES: EDPR 2111, 3300, 3301 or 4301 and admission to TEP. COREQUISITE: ECED 4520. (Sp)

ECED 4520-6520. Planning and Facilitating Social Learning and Development. (3). Focus on planning, implementing, and evaluating programs to facilitate young children's social learning and development from birth through age 8. Socialization and social science skills, knowledge, and dispositions addressed in context of integrating instruction and learning with children's literature, art, music, mathematics, science, etc. PREREQUISITE: TEP admission. COREQUISITE: ECED 4510. (Sp)

ECED 4530-6530. Planning and Facilitating Math and Science Learning and Development. (3). Knowledge skills and dispositions necessary to plan for and facilitate development and learning of physical, logico-mathematical, and social knowledge of mathematics and science for children from birth through eight years. PREREQUISITES: ECED 3555, 3565, 4510, 4520 and admission to TEP. (F)

ECED 4540-6540. Planning and Facilitating Infant and Toddler Development. (3). Models, principles, curriculum and practices of developmentally appropriate infant toddler care giving; emphasis on teacher's knowledge, skills and dispositions necessary to plan and facilitate development of infants and toddlers in group care settings. PREREQUISITES: ECED 3555, 3565, 4510, 4520 and admission to TEP. (F)

(ECON) ECONOMICS

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*
 CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*
Room 114, Fogelman College of Business and Economics Building

Students must have junior standing and have met specific course prerequisites with a grade of C (2.0) or better to be eligible for all 3000- and 4000-level courses. In addition to these requirements, students seeking a degree in the Fogelman College of Business and Economics must have (1) completed all required lower division business courses with a minimum grade of C (2.0) in each; (2) minimum of 2.25 GPA in all required lower division business courses and MATH 1312, and (3) 55 hours of course work including MATH 1312 and 9 hours of English (See B.B.A. Degree Requirements-General Requirements).

ECON 2110. Introduction to Macroeconomics. (3). Nature and functions of the national economy in a global context. Includes consumption and investment behavior, national income and product determination, fiscal and

monetary policy, and international trade. [G]

ECON 2120. Introduction to Microeconomics. (3). Operation of the market economy at the individual and firm level. Includes supply and demand analysis, consumer behavior, behavior of firms in both competitive and monopoly environments, income distribution theory, and effects of government intervention in the market economy. [G]

ECON 3010. East Asia in the Global Economy. (3). Process and consequences of integrating selected East Asian countries into the global economy; unique and general factors explaining recent success; economic adjustments in both advanced and developing countries needed for their integration; environmental impact of increased demand for resources.

ECON 3020-29. Special Topics in Economics. (3). Current economic issues and problems in the United States; emphasis on application of tools and analytical methods. PREREQUISITES: ECON 2110, 2120.

ECON 3210. Labor Economics. (3). Introduction to institutional aspects of American labor force and its organization wage and employment theory, economic role of collective bargaining, and basic ingredients of public policy toward labor organization. PREREQUISITE: ECON 2120.

ECON 3310. Microeconomic Theory. (3). Intermediate approach to price theory. Stress on market mechanism as device for resource allocation; attention to uses of basic microeconomic concepts in analysis of economic problems and in formulation of policy. PREREQUISITE: ECON 2120.

ECON 3320. Macroeconomic Theory. (3). Intermediate approach to social income accounting and to functional relationships between important aggregate economic variables as well as to forecasting and social policy implications. PREREQUISITE: ECON 2110.

ECON 3411. Economics of Social Issues. (3). Applications of economic theory and analysis to current social problems, and evaluation of current and potential policy solutions to social issues.

ECON 3580. International Economic Development-An Ecological Perspective. (3). Process of economic development as adaptive interplay between man's needs and ways in which environment is exploited to satisfy those needs in both developed and less developed countries. PREREQUISITE: ECON 2110 or consent of instructor.

ECON 3610. Money and Banking. (3). Monetary and banking history of leading countries with special emphasis on theory of money and banking in United States, deposit and earnings operations of individual banks, interbank and central bank relations. PREREQUISITE: ECON 2110.

ECON 4040. Economic Analysis of Law. (3). Evaluation of economic effects of both existing and proposed laws. Specifically, to model transactions that occur in changing legal environment and then to estimate impact of changes in legal position on outcomes of voluntary transactions. PREREQUISITE: ECON 2120.

ECON 4111. Managerial Economics. (3). Direct application of economics to common business problems. Economic framework and empirical techniques of production and cost analysis, project evaluation, pricing, and demand analysis. PREREQUISITES: MATH 1312, ECON 2120, ISDS 2711, 2749, 2755. [C]

ECON 4112. Organizational Economics. (3). Analysis of markets and organizations, competitive advantage, production and cost, consumer and market demand, strategic management decision-making, decision rights, incentives and rewards, and structure of performance systems. PREREQUISITES: MGMT 3110, ECON 2120 and senior standing.

ECON 4120. Economic Forecasting. (3). Current economic thinking on problems of recession and inflation as background to economic forecasting. Methodologies of forecasting analyzed with examples of each. PREREQUISITE: ISDS 3711 or equivalent.

ECON 4130-6130. Government Regulation of Business. (3). Approaches to legal and legislative control of business-especially tax laws, commission regulations, and antimonopoly legislation-in view of impact of each on industrial operating policy. PREREQUISITE: ECON 2120.

ECON 4260. Environmental Economics and Policy. (3). Economic analysis of environmental problems and various techniques that can be implemented in their resolution (pollution taxes, sale of pollution rights, regulation and outright prohibition); complex interaction of environmental degradation, population explosion and economic progress. PREREQUISITE: ECON 2120 or consent of instructor.

ECON 4313. Economic Strategies Under Uncertainty. (3). Introduction to analytical methods of game theory developed by economists as they apply to making business decisions in an uncertain economic environment where competitors' decisions are interdependent. PREREQUISITE: ECON 2120.

ECON 4340. Comparative Economic Systems. (3). Factors contributing to differential performance of economic systems, including property rights, information flow, incentive structure, management-labor relations,

government policies on technology and competitiveness. Emerging trends of system convergence and corporate globalization. PREREQUISITE: ECON 2120.

ECON 4350. International Economics. (3). Historical approach to theory of international trade; consideration given to Classical, Neo-Classical and Modern approach to trade theory with emphasis on policy implications of the analysis. PREREQUISITE: ECON 2120 or equivalent.

ECON 4351. International Monetary Economics: Theory and Policy. (3). Open economy macroeconomics. Includes examination of payments among nations, foreign exchange markets, determinants of exchange rate policies. National income and foreign exchange, internal and external balance and international factor movements. PREREQUISITE: ECON 2110.

ECON 4410. Development of Economic Thought. (3). Historical development of economic thought. Attention primarily on emergence of Classical and Neoclassical thought, several dissident schools of thought, and twentieth-century economic thought. PREREQUISITE: ECON 2110.

ECON 4740. Health Care Economics. (3). Topics include unique nature of health care as economic good, health care market and its participants including patients, physicians, and hospitals, and financing and delivery of personal health care in United States and other countries.

ECON 4810-6810. Quantitative Economic Analysis. (3). Introduction to application of mathematical tools in business and economics; review of matrix algebra, differential and integral calculus; optimization with and without constraints; comparative statistics.

ECON 4820. Econometrics. (3). Introduction to statistical procedures used to estimate and test quantitative economic theories, using microcomputer software for regression analysis.

ECON 4910. Problems In Economics. (1-3). Students investigate issues surrounding selected economic problems and develop reports of that investigation. May be repeated to maximum of 3 hours credit. PREREQUISITES: upper division standing and approval of Director of Undergraduate Programs.

ECON 4911. Internship In Economics. (1-6). Internship in business organization to gain on-the-job experience. Project to be approved and supervised by area faculty. Credit allowed only after acceptance of report. PREREQUISITES: senior standing and minimum GPA of 2.75.

ECON 4920. Senior Seminar In Economics. (3). Coordinated by area coordinator and conducted by selected members of area; integrate several fields and course areas pursued by undergraduate majors into meaningful whole. Required of all area majors in their last year of undergraduate enrollment. [I]

ECON 4996. Honors Thesis In Economics. (3). Independent research open only to students enrolled in Economics Honors Program. Honors thesis supervised by three-faculty committee selected by student and approved by Economics Honors Committee. PREREQUISITE: permission of Economics Honors Committee.

(EDPR) EDUCATIONAL PSYCHOLOGY AND RESEARCH
Department of Counseling, Educational Psychology and Research

RONNIE PRIEST, Ph.D., *Chair*

Room 100, College of Education Building

<http://www.coe.memphis.edu/coe/CEPR/cepr.html>

EDPR 2111. Development Across the Life Span. (3). (EDPS). Principles and processes of human development across the life span.

EDPR 3100. Assessment and Evaluation. (3). (EDUC). Assessment techniques, test construction, interpretation, and their relationship to instructional decisions. Ethical issues of assessment and assessment needs of diverse populations. [C]

EDPR 3121. Learning Processes and Assessment. (3). Major theories and perspectives on classroom learning and classroom assessment practices; emphasis on cognitive processes, individual differences, strategies for instruction, motivation, critical thinking, and self regulation of learning; developing and using classroom assessment and interpreting standardized testing. PREREQUISITE: EDPR 2111 or permission of instructor.

EDPR 3300. Infant Development. (3). Theories, philosophies, research, and pedagogy relating to optimal development and education of infants and toddlers. PREREQUISITE: EDPR 2111 or permission of instructor.

EDPR 3301. Early Childhood Development. (3). Theories, research, and pedagogy which facilitate the cognitive, socio-emotional, and physical stages of children's development from 3-8 years of age. PREREQUISITE: EDPR 2111 or permission of instructor.

EDPR 3302. Child and Adolescent Development. (3). (EDUC). (Same as CSED 3302). Principles and processes of child and adolescent development applied to education. PREREQUISITE: EDPR 2111 or

permission of instructor.

EDPR 4008. Special Problems in Educational Psychology and Research. (1-3). (EDFD). Individually directed reading, field study or research; written report required. PREREQUISITE: permission of instructor.

EDPR 4301-6301. Early Childhood Development for the Beginning Teacher. (3). Philosophy, theory, research, and pedagogy relating to the physical, cognitive, social, and emotional development of children from birth to eight years of age. PREREQUISITES: EDPR 2111 and TEP admission.

EDPR 4530-6530. Microcomputers in Education: Theoretical and Technical Foundations. (3). (EDRS). History, development, and status of microcomputers in education and introduction to technical knowledge and skills needed to operate microcomputers for specialized educational applications. Prerequisite knowledge for advanced computer-related training in different education specialty areas.

EDPR 4541. Fundamentals of Applied Statistical Methods. (3). (EDRS). Use of statistical techniques in education and behavioral sciences; emphasis on practical use and interpretation of concepts. Self-instructional. [C]

(EDSV) EDUCATIONAL SERVICES

Department of Instruction and Curriculum Leadership

DENNIE L. SMITH, Ed.D., *Chair*

Room 106D, College of Education Building

<http://www.coe.memphis.edu/coe/ICL/icl.html>

EDSV 3350. The Adult Learner. (3). (EDUC). Variety of learning patterns and developmental characteristics of adults; emphasis on applications in programs or other activities for adult learners.

EDSV 4350-6350. Instructional Development for Training. (3). (EDUC). Instructional development techniques and applications in training settings; principles of curriculum development, instructional delivery, and evaluation.

EDSV 4450-6450. Media Development for Training. (2). (EDUC). Practical preparation of audiovisual material for training, applying instructional design techniques; development of media presentation skills. PREREQUISITE: EDSV 4350 or permission of instructor.

EDSV 4550-6550. Organization and Management of Training Programs. (3). (EDUC). Development and management of instructional programs in non-school settings; focus on goals, personnel, operational, and budgetary considerations. PREREQUISITE: MGMT 3110.

EDSV 4750. Special Problems: Educational Services. (1-3). (EDUC). Independent study and field projects on selected problems, interests, and needs related to educational programs in training settings.

EDSV 4800. Professional Seminar. (1). (EDUC). Extension of student's professional preparation through a series of required and elective activities: exploration of issues and topics related to professional development. Serves as a capstone experience for synthesizing the student's professional preparation program. COREQUISITE: EDSV 4950. (S/U)

EDSV 4850. Practicum in Training Settings. (1-3). (EDUC). Opportunities to gain experience in a variety of settings; tailored to interests, needs and career pathways of student. PREREQUISITE: approval by program coordinator. (S/U)

EDSV 4950. Internship in Training Settings. (3-12). Planned and supervised full-time experience in a training setting appropriate to the student's specialization area; opportunities to synthesize knowledge and skills and demonstrate professional competencies in an appropriate setting. PREREQUISITE: approval in advance by program director. COREQUISITE: EDSV 4800. (S/U)

(EETH) ELECTRONICS ENGINEERING TECHNOLOGY

Department of Engineering Technology

RONALD LEE DAY, M.A., *Chair*

Room 203, Engineering Technology Building

<http://www.people.memphis.edu/~engtech/home.html>

EETH 1811. Electronic Circuit Technology. (3). Fundamental electronic theory and circuit analysis methods. Laboratory emphasis on safety, measurement and confirmation of mathematical solutions. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: MATH 1213, TECH 1010.

EETH 2812. Basic Industrial Control Devices. (3). Theory and applications of devices commonly used in modern industrial control; including transistors, operational amplifiers, thyristors, and solid-state logic.

Applications and characteristics of motors and control system I/O devices. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 1811.

EETH 2813. Industrial Control Systems. (3). Theory and operation of logic control systems: including relay ladder logic, solid-state logic, and programmable logic controllers. Emphasis on practical industrial applications. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 2812.

EETH 2821. Solid-State Technology. (3). Theory of solid-state devices with application in power supplies, amplifiers, and other basic electronic circuits. Solid-state diodes and bipolar junction transistors emphasized. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: EETH 1811.

EETH 2831. Advanced Solid-State Technology. (3). Theory of field effect transistors and operational amplifiers. Emphasis on practical applications, including amplifiers, filters, and oscillators. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: EETH 2821, MATH 1321.

EETH 3811. Electronics Communications. (3). Principles of noise, oscillators, modulation and power amplifiers with associated circuitry; transmission line and antenna theory; emphasis on operating frequencies up to UHF. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 2831, TECH 3044.

EETH 3812. Advanced Electronic Communications Technology. (3). (4811). Concepts, systems and practical applications in generation, transmission and detection of aural, data and visual information in analog and digital form. PREREQUISITE: EETH 3811.

EETH 3821. Industrial Electronics. (3). Electronic circuits and systems in modern industry; principles of open and closed loop control systems; theory and application of devices and thyristors such as unijunction transistors, silicon controlled rectifiers, diacs and triacs. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: EETH 2831, TECH 3044.

EETH 3822. Programmable Logic Controllers. (4). Theory and operation of programmable logic controllers; emphasis on practical industrial applications and programming techniques. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 3821. COREQUISITE: EETH 3841.

EETH 3841. Electrical Power and Motor Control. (3). Generation and utilization of AC and DC electrical power; applications and operating characteristics of motors, generators and transformers with emphasis on control of motors. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 3821. COREQUISITE: EETH 3822.

EETH 4821. Microwave Technology. (4). Generation and transmission of energy at frequencies above 300 megahertz, emphasizing techniques and equipment which contrast sharply with those at lower frequencies. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 3811.

EETH 4823. Advanced Programmable Logic Controllers. (3). Advanced applications of programmable logic controllers, including analog I/O techniques and computer interfacing. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: EETH 3822, 3841.

EETH 4841. Video Communications. (3). Theory and application of technical equipment for generation, transmission, and reception of video signals, both closed circuit and broadcast. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: EETH 3811.

EETH 4944. Senior Thesis. (3). (Same as ARCH 4944, CETH 4944, METH 4944). Study and research in specific area culminating in an integrating experience through individual and/or group projects and technical reports. (A-F, IP) [W, I]

◆(ELEC) ELECTRICAL ENGINEERING

BABAJIDE O. FAMILONI, Ph.D., *Chair*

Room 206, Engineering Building

<http://www.ee.memphis.edu/>

ELEC 1202. Electrical Engineering Concepts. (3). Introduction to basic electrical engineering concepts and models. DC circuits. Introduction to computers and computer ethics; use of text processors and spreadsheets. PREREQUISITE: MATH 1211 or 1213.

ELEC 1207. Electrical Engineering Computations. (3). Structured solutions to electrical problems through use of computers. PREREQUISITE: ELEC 1202 or sophomore standing.

ELEC 2201. Circuit Analysis I. (4). Fundamental properties of electrical circuits; basic concepts and circuit elements; analysis methods and network theorems; analysis of transient circuits using differential equations. *Three lecture hours, three laboratory hours per week.* COREQUISITES: MATH 3391. PREREQUISITES: MATH 2322, ELEC 1202.

ELEC 2222. Digital Circuit Design. (4). Review of number systems and base conversions; analysis and design of digital circuits; logic and sequential design. Introduction to microprocessors. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ELEC 1207.

ELEC 2281. Electrical Engineering and Instrumentation Laboratory. (1). Introduction to basic meters, power supplies, and test equipment; transient responses and AC power measurements; operational amplifier circuits, bridge circuits, and transducers. Electrical Engineering majors may not use ELEC 2281 to fulfill degree requirements. *Three laboratory hours per week.* COREQUISITE: ELEC 2283.

ELEC 2283. Electrical Engineering and Instrumentation. (3). Analysis of electric circuits, sinusoidal steady state analysis, instrumentation circuits, op amps, and transducers. Electrical Engineering majors may not use ELEC 2283 to fulfill degree requirements. PREREQUISITES: MATH 2322, PHYS 2004, 2520.

ELEC 3201. Circuit Analysis II. (4). Laplace transform techniques for network analysis, sinusoidal steady-state response of single and three phase circuits, resonant circuits, linear transformers and magnetic coupling, and introduction to filter design. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ELEC 2201, MATH 3391.

ELEC 3202. Transform Methods in Network Analysis. (3). Introduction to transform theory; Fourier Series; application of Fourier, Laplace and Z-transforms to solution of network problems. PREREQUISITE: ELEC 2201, MATH 3391.

ELEC 3203. Electrical Engineering Computation. (3). Applications of differential equations to modeling physical systems. Solution and interpretation of systems of equations; computer modeling and interpretation. PREREQUISITES: PHYS 2004, 2520; MATH 2322.

ELEC 3211. Electronics I. (3). Solid state devices as elements of electronic circuits; linear models and linear operation of these devices emphasized. PREREQUISITE: ELEC 2201.

ELEC 3212. Electronics II. (4). Utilization of devices in linear, non-linear, and switching modes of operation. Modeling and simulation of electronic circuits. *Three lecture hours, three laboratory hours per week.* PREREQUISITES: ELEC 2222, 3201, 3211, 3213.

ELEC 3213. Electronics I Laboratory. (1). Emphasis on laboratory techniques in performance of basic electronic experiments. COREQUISITE: ELEC 3211.

ELEC 3220. Computer Software Engineering. (3). Introduction to software engineering; metrics, estimation, and planning; system and software requirements analysis; hardware-software interactions and effects on the design process; software design and implementation techniques; software integrity issues - quality assurance, testing, reliability and maintenance; software development tools. PREREQUISITE: ELEC 1207 and either ELEC 3160 or permission of instructor.

ELEC 3221. Matrix Computer Methods in Electrical Engineering. (3). Fundamentals of matrix theory; application of matrix theory and digital computer techniques to the solution of circuit problems; state equations and their application to the solution of systems of differential equations. PREREQUISITE: 2201.

ELEC 3240. Electromagnetic Field Theory I. (3). (4211). Maxwell's equations electrostatics, magnetostatics and time varying electromagnetic fields and waves. PREREQUISITE: MATH 3391. [C]

ELEC 4201. Energy Conversion. (3). Energy conversion by electromechanical processes, energy relations in magnetic systems, mathematical modeling of magnetic systems, transformers and electrical machines. PREREQUISITE: ELEC 3201 or 2283. [C]

ELEC 4202-6202. Electrical Power Systems. (3). Investigation of problems associated with transmission of electrical energy. Load-flow studies, and fault analysis by use of symmetrical components. PREREQUISITE: ELEC 3221.

ELEC 4203. Energy Conversion Laboratory. (1). Fundamental properties associated with testing and utilization of direct current and of alternating current equipment such as motors, generators, alternators and transformers. COREQUISITE: ELEC 4201.

ELEC 4204-6204. Power Distribution Systems. (3). Distribution of power from transmission systems to users; primary and secondary feeders, voltage regulation; distribution transformers; overhead, underground and network distribution system design; lightning phenomena and protective device coordination. PREREQUISITES: ELEC 4201, 4203.

ELEC 4212-6212. Electromagnetic Field Theory II. (4). Plane waves; steady state and transient solutions of transmission line equations; steady state solutions to waveguide equations. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ELEC 3240.

ELEC 4213-6213. Antenna Theory and Design. (4). Theory of operation and design of antennas;

determination of antenna radiation characteristics; introduction to antenna array theory. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ELEC 3240.

ELEC 4221-6221. Electronics III. (4). Applications of analog and digital electronic circuits; special purpose circuits and devices. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ELEC 3211.

ELEC 4222-6222. Digital Logic and Computer Design. (3). Applications of digital system design using MSI, LSI, and VLSI circuits; design of arithmetic logic units, multiple-input controllers, and practical interfacing techniques. PREREQUISITE: ELEC 2222.

ELEC 4223-6223. Electrical Engineering Instrumentation. (4). (3222). Transducers for physical systems; mechanical, temperature, acoustic, and biomedical transducers; methods of processing and analyzing data. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: ELEC 3212.

ELEC 4230-6230. Data Communication Systems. (3). Data communications in information and computing systems; analog and digital means of transmitting and controlling information; organization and requirements of data communication systems including modulation and demodulation, multiplexing, switching, error detection and correction. PREREQUISITE: ELEC 3202.

ELEC 4231-6231. Communication Theory. (3). Frequency and time domain; modulation, random signal theory, autocorrelation; noise, communication systems. PREREQUISITE: ELEC 3202 or permission of instructor.

ELEC 4232-6232. Discrete Signal Processing. (3). Introduction to discrete-time signal analysis. Includes discrete system concepts, discrete-time Fourier analysis, sampling of continuous-time signals, z-transform, and transform analysis of discrete time systems; structures for discrete-time systems and discrete filter design techniques. PREREQUISITE: ELEC 3202.

ELEC 4235-6235. Random Signal Analysis. (3). Analysis of signals using techniques of probability and statistics; introduction to probability, random processes and statistics; discrete signals and analog signals with random components are studied in time, spatial and frequency domains; autocorrelation, cross-correlation and power spectra are applied to various signals; effects of filters, both discrete and analog, are determined. PREREQUISITE: ELEC 3202.

ELEC 4240-6240. Lasers. (3). Laser theory, analysis, and design; quantum description of light generation, ray optics, cavity design, Gaussian beams, and optical resonators; laser survey.

ELEC 4241-6241. Solid State Physical Electronics. (3). Quantum concepts; statistics; crystal structure; conduction processes in solids; p-n junctions and devices; field-effect devices; charge transfer devices. PREREQUISITES: ELEC 3211, 3240.

ELEC 4242-6242. Electro-Optics. (3). Classical optics including Gaussian optics, Newtonian optics, and vergence theory; optical design with aberration concepts, F-numbers, pupils, and stops; radiometry with respect to flux transfer calculations; light sources and detectors.

ELEC 4243-6243. Linear Optical Systems. (3). Review of Fourier techniques for analysis and design of linear systems, extension to 2-dimensional techniques, 2-dimensional transform applied to linear optical systems and optical data processing. PREREQUISITE: ELEC 3202.

ELEC 4251-6251. Control System Engineering. (3). General equations of physical linear systems and their transfer functions; transient analysis and stability of servo systems; Bode plot, Nichols chart, Nyquist plot, Routh criterion, root locus methods, introduction to compensation techniques and systems in state space. PREREQUISITES: ELEC 3202, 3221.

ELEC 4252-6252. Digital Control Systems. (3). Problems and analysis techniques applicable to digital control systems. Prior knowledge of Laplace transforms required; basic knowledge of feedback control theory desirable. PREREQUISITES: ELEC 3202, 3221.

ELEC 4253-6253. Control Systems Laboratory. (1). Investigations of fundamental properties associated with control systems engineering; laboratory procedures in analysis of control systems, compensating networks, analog and digital computer simulations. COREQUISITE: ELEC 4251 or 4252.

ELEC 4254-6254. Digital Control Systems Laboratory. (1). Investigations of fundamental properties associated with digital control systems engineering; laboratory procedures in analysis of digital control systems, compensating networks, digital computer simulations and PLCs. COREQUISITE: ELEC 4252.

ELEC 4261-6261. Introduction to Network Synthesis. (3). Design, simulation, and realization of active filter networks with emphasis on sensitivities, tolerances, and implementation. PREREQUISITE: ELEC 3202.

ELEC 4270-6270. Introduction to Microprocessors. (4). LSI circuitry, microprocessor architecture, hardware and software, application and system design. *Three lecture hours, three laboratory hours per week.*

PREREQUISITE: ELEC 2222.

ELEC 4272-6272. Engineering Software. (3). Introduction to hierarchical operating systems; C programming language. PREREQUISITE: ELEC 3221 or permission of instructor.

ELEC 4273-6273. Database Engineering. (3). Logical database design, data models for database engineering; entity-relationship, relational, object oriented, logic data models; design theory for relational databases, relational query languages, introduction to integration of database and knowledge-base systems for engineering applications; emerging trends in database machine design and implementation. PREREQUISITE: permission of instructor.

ELEC 4274-6274. Software Design with Ada. (3). Introduction to Ada; detailed software design methodology using structured and object oriented techniques for large systems; reusable components, Ada Programming Support Environment. PREREQUISITE: knowledge of a structured high level language.

ELEC 4275-6275. Network Programming. (3). Introduction to engineering of computer networks, network hardware, and network software; design of software systems for network applications. PREREQUISITES: ELEC 1207 and ELEC 3221.

ELEC 4276-6276. Advanced Network Programming. (3). Advanced methods for engineering software systems; implementations of distributed object models, remote database connectivity, and reusable software components. PREREQUISITE: ELEC 4275 or permission of instructor.

ELEC 4277-6277. DSP Microprocessors. (4). Architecture and instruction set of fixed-point and floating-point devices; hardware interfacing, host communication, real-time signal generation, filtering, and code development using assembly language and C. PREREQUISITES: ELEC 2222 and ELEC 3202.

ELEC 4280. Electrical and Computer Engineering Design. (3). Individual and/or team design projects that require application of electrical engineering or computer engineering concepts. Oral and written presentations required. PREREQUISITES: ENGL 3603, ELEC 3202, and either ELEC 3212, 3220, or 4221. [W, I]

ELEC 4720-6720. Introduction to Artificial Intelligence (3). (Same as COMP 4720-6720). Fundamentals of programming in LISP; central ideas of artificial intelligence, including heuristic search, problem solving, slot-and-filler structures, and knowledge representation. PREREQUISITE: Permission of instructor, ELEC 3221.

ELEC 4730-6730. Expert Systems. (3). (Same as COMP 4730-6730). Fundamentals of programming in PROLOG, central ideas of expert system development, including knowledge representation, control structures, tools, knowledge acquisition, and knowledge engineering. PREREQUISITE: Permission of instructor, ELEC 3221.

ELEC 4900-09-6900-09. Special Topics in Electrical Engineering. (1-3). Topics are varied and announced in Schedule of Classes.

ELEC 4910-19. Honors Special Topics. (3). Topics vary and are announced in the Schedule of Classes. PREREQUISITE: Approval by the Honors Committee of the Department of Electrical Engineering.

ELEC 4991. Electrical and Computer Engineering Projects I. (1-3). Independent investigation of problem selected in consultation with instructor; report required. PREREQUISITE: senior standing with a minimum GPA of 2.0 in ELEC courses completed at The University of Memphis.

ELEC 4992. Electrical and Computer Engineering Projects II. (1-3). Design, implementation and testing of project investigated in ELEC 4991; report required. PREREQUISITE: ELEC 4991 with a minimum GPA of 2.0 in ELEC courses completed at The University of Memphis.

ELEC 4993. Research Studies. (3). Consultation, reading, and design work to investigate selected areas of electrical engineering or computer engineering under supervision of faculty member; formal paper required; emphasis on applied work, design, and scientific writing. PREREQUISITE: ENGL 3603, ELEC 3202 and either ELEC 3212, 4221, or 3220. [W, I]

ELEC 4999. Honors Thesis. (3). Under the direction of a faculty member, the student writes and defends a thesis based upon background reading and experimental research on a topic in electrical engineering. PREREQUISITE: Approval by the Honors Committee of the Department of Electrical Engineering.

(ELED) ELEMENTARY EDUCATION

Department of Instruction and Curriculum Leadership

DENNIE L. SMITH, Ed.D., *Chair*

Room 106D, College of Education Building

<http://www.coe.memphis.edu/coe/ICL/icl.html>

ELED 3251. Teaching Methods in the Sciences: Mathematics. (3). Curriculum methods and materials for

teaching mathematics with emphasis on problem solving. PREREQUISITE: admission to TEP. [C]

ELED 3261. Teaching Methods in the Sciences: Science. (3). Principles, techniques and materials for teaching relationships among science, technology, and society. PREREQUISITE: admission to TEP.

ELED 3271. Teaching Methods in the Sciences: Social Studies. (3). Curriculum, methods and materials for teaching social studies and global education to elementary school students. PREREQUISITE: admission to TEP.

ELED 4240. Literacy in Grades K-4. (3). Cognitive view of literacy processes in developmental perspective; material and methods of teaching; assessing listening, speaking, reading, writing, and thinking. PREREQUISITE: Admission to TEP. (Field experiences: 12 hours)◆ [W]

ELED 4241. Literacy in Grades 5-8. (3). Instructional strategies and assessment procedures relevant to the acquisition of reading, speaking, listening, writing, and thinking skills for students in the middle grades. PREREQUISITE: Admission to TEP and ELED 4240. (Field experiences: 12 hours)

ELED 4242. Literacy and Language. (ELED 3241 and 4242). (6). Includes scope and sequence of skills assessment, organization strategies, materials and methods of listening, speaking, writing and reading for preschool and primary grade students. Interrelatedness of these skills stressed through activities which teach children of all cultures to think and communicate. PREREQUISITE: admission to TEP. [W]

ELED 4243. Corrective Reading. (2). Diagnostic and prescriptive approaches for assessment and correction of reading and reading-related processes needed for learning. Clinical experience required. PREREQUISITES: ELED 4242.

ELED 4344. Literacy in the Middle Grades. (3). Instructional strategies and assessment procedures relevant to the acquisition of reading, speaking, listening, writing and thinking skills for students in the middle grades.

ELED 4351. Organizing for Teaching and Learning in the Early and Middle Grades. (2). Teacher candidates develop knowledge of best practices for student learning and cognition; identify, develop, and evaluate strategies and techniques of instruction that are sensitive to individual needs of children within a culturally and economically diverse population; emphasis on planning, instruction, assessment, and professional development. Co/Prerequisites: ELED 4352, 4353, 4354, admission to TEP, and completion of ALL coursework except Student Teaching and Professional Seminar. *Ten hours field experiences.*

ELED 4352. Curriculum and Methods in the Early and Middle Grades.◆ (4). Teacher candidates will learn developmentally appropriate curriculum for K-8 in literacy, science, mathematics, social studies, and fine arts; methods specific to content areas and evaluate current educational materials such as software, textbooks, and manipulatives. Co/Prerequisites: ELED 4351, 4353, 4354, admission to TEP, and completion of ALL coursework except Student Teaching and Professional Seminar. *Twenty hours field experiences.* [C]

ELED 4353. Thematic Instruction in the Early and Middle Grades in Urban Settings. (4). Curriculum, methods, and materials for teaching integrated curriculum with a focus on real-world experiences with diverse students in urban settings; teacher candidates will develop and use a thematic unit to instruct K-8 students; emphasis includes critical reflection of how to improve learning and instruction for all students. Co/Prerequisites: ELED 4351, 4352, 4354, admission to TEP, and completion of ALL coursework except Student Teaching and Professional Seminar. *Twenty hours field experiences.*

ELED 4354. K-8 Practicum, Integrative Learning in Urban Settings. (2). Integration of the curriculum and teaching for K-8 grades that includes urban site visitation experiences for observation and teaching diverse learners in real-world situations. Co/Prerequisites: ELED 4351, 4352, 4353, admission to TEP, and completion of ALL coursework except Student Teaching and Professional Seminar.

(ENGL) ENGLISH

JACK CARPENTER, Ph.D., *Interim Chair*
Room 467, Patterson Hall

<http://www.people.memphis.edu/~english>

◆ All candidates for graduation at The University of Memphis are required to complete ENGL 1101 and 1102 or their equivalents, with a grade of C or better. Before enrolling in ENGL 1101, a student must have either: (1) an ACT English score of 19 or above, or (2) an SAT verbal score of 360 or above, (3) a satisfactory score on the AAPP English Placement Essay administered by the Testing Center, or (4) completion of R&DS 0810 with a grade of C or better. Students admitted to the university through the Developmental Studies program must meet one of the following conditions before enrolling in ENGL 1101: (1) completion of R&DS 0810 with a grade of C or better, or (2) a satisfactory score on the English Placement portion of the AAPP

Complete test administered by the Testing Center.

◆ After completing ENGL 1101 and 1102 with a grade of C or better, all students must take 2201 or 2202. Freshman and sophomore sequence must be scheduled until completed. ENGL 1101 and 1102 must be taken in sequence; no credit will be allowed for ENGL 1102 until 1101 has been completed with a grade of C or better.

(ENGL) ENGLISH

ENGL 0101. English as a Second Language. (1). Introduction to English Composition, concentration on composition skills; emphasis on sentence structure in written discourse. Open to non-native speakers of English only. Admission by placement only. (T grade allowed).

ENGL 0102. English as a Second Language (1-2). Intermediate Composition, Practice in process of writing English expository prose, specifically paragraphs and short essays; review of grammar and sentence structure needed for academic writing skills. Open to non-native speakers of English only. Admission by placement only. (T grade allowed).

ENGL 0103. English as a Second Language (1-3). Advanced Composition, practice in expository writing of paragraphs and essays with emphasis on the writing process; extensive reading in fiction used to encourage writing skill acquisition. Open to non-native speakers of English only. Admission by placement only. (T grade allowed).

NOTE: The accumulation of three credit hours from the above courses and successful completion of 0103 will be considered the equivalent of ENGL 1101. Not more than 3 hours credit may be accumulated in 0101, 0102, 0103.

ENGL 1101. English Composition. (3). Practice in expository writing with emphasis on content, organization, and style (levels of usage and sentence structure) for different purposes and audiences. PREREQUISITE: R&DS 0810 with grade of C or better, or ACT English score of 19 or above, or SAT verbal score of 360 or above, or satisfactory completion of placement essay. [G]

ENGL 1102. English Composition and Analysis. (3). Practice in expository writing that synthesizes ideas from various readings. Includes library work and production of documented papers. PREREQUISITE: ENGL 1101 with a grade of C or better, or equivalent. [G]

ENGL 2201. Literary Heritage. (3). Major texts of literary heritage; modes of literary expression and cultural context; emphasis on works as products of their historical contexts and as processes shaping human consciousness. Composition and critical thinking beyond levels expected of freshmen. PREREQUISITES: ENGL 1101 and 1102, with a grade of C or better, or their equivalent. [G]

ENGL 2202. Literary Heritage: African-American Emphasis. (3). Consideration of major texts of literary heritage with emphasis on African-American culture; modes of literary expression and cultural context; emphasis on work as products of historical contexts and as processes shaping human consciousness; ◆ composition and critical thinking beyond levels expected of freshmen. PREREQUISITES: ENGL 1101 and 1102, with a grade of C or better, or their equivalent. [G]

ENGL 1101, 1102, and 2201 or 2202 or equivalents with a grade of C or better are prerequisites for all upper division courses in the Department of English.

ENGL 3100-19. Special Topics in Literature. (1-3). Topics are varied and announced in Schedule of Classes.

ENGL 3210. British Literature to 1798. (3). Concentration on major authors, themes, and movements.

ENGL 3211. British Literature of the Medieval Period. (3).

ENGL 3212. British Literature of the Sixteenth Century. (3).

ENGL 3213. British Literature of the Seventeenth Century. (3).

ENGL 3214. British Literature of the Restoration and Eighteenth Century. (3).

ENGL 3220. British Literature since 1798. (3). Concentration on major authors, themes, and movements.

ENGL 3221. British Literature of the Romantic Period. (3).

ENGL 3222. British Literature of the Victorian Period. (3).

ENGL 3224. British Literature of the Twentieth Century. (3).

ENGL 3321. American Literature Before 1860. (3).

ENGL 3322. American Literature from 1860 to World War I. (3).

ENGL 3323. American Literature from World War I to Present. (3).

ENGL 3411. European Literature to Renaissance. (3). (4411).

ENGL 3412. European Literature since Renaissance. (3). (4412).

ENGL 3500. Practical English Grammar. (3). Extended study of the fundamentals of English grammar,

sentence structure, usage, diction, punctuation, and spelling. Does not apply to the English major or minor.

ENGL 3501. Modern English Grammar. (3). Introduction to current grammatical theory; description of sounds, word structures, syntax, and semantics of English within theoretical frameworks.

ENGL 3511. Introduction to Linguistics. (3). Introduction to the nature and functions of human language, to its structural principles, and to its place in culture and society; emphasis on language diversity and change through history and contact; discussion of language and thought, origin of language, and other topics.

ENGL 3521. The American Language. (3). Changing nature and variety of American English, especially in vocabulary and usage, its range-formal-informal, written-colloquial, and standard and dialectal variations; shifting standards of usage especially reflected in dictionaries; and appropriateness dependent upon context; language as both reflector and shaper of thought.

ENGL 3601. Technical and Professional Writing. (3). Introduction to rhetoric and style of documents written by scientists, engineers, technical writers, and other professionals; extensive practice in writing reports, proposals, manuals, and correspondence. [W]

ENGL 3602. Writing and Editing in the Professions. (3). Workshop in techniques of communicating effectively in business, industry, and government; developing practical writing skills for technical publications such as reports, data analyses, and research articles; editing practices involved in packaging and distributing professional writing in printed form.

ENGL 3603. Engineering Communications. (3). Form and contexts of written and oral communications in engineering professions; extensive practice in oral reporting, written reports, manuals, and proposals. May not apply to the English major or minor.

ENGL 3604. Persuasive Writing. (3). (2602). Study and practice of writing essays and reports with emphasis on persuasion; introduction to empirical and library research, application of rhetorical principles, and nature of evidence; academic and professional writing, editing, and revision. [W,C]

ENGL 3605. Introduction to Creative Writing. (3). (2601). Introduction to the writing of fiction and poetry. [W]

ENGL 3701. Introduction to Literary Criticism. (3).

ENGL 4001. Senior Honors Seminar I. (3). Intensive study of a problem in language or literature. Enrollment limited to English honors students.

ENGL 4002. Senior Honors Seminar II. (3). Intensive study of a problem in language or literature. Enrollment limited to English honors students.

ENGL 4100-09. Special Topics In English. (3). Topics are varied and announced in Schedule of Classes.

ENGL 4231. Chaucer. (3).

ENGL 4232. Shakespeare's Tragedies. (3).

ENGL 4234. Milton. (3).

ENGL 4235. Shakespeare's Comedies and Romances. (3). NOTE: Students who have completed English 4233 (Shakespeare's Comedies and Histories) will not receive credit for English 4235.

ENGL 4236. Shakespeare's Histories. (3). NOTE: Students who have completed English 4233 (Shakespeare's Comedies and Histories) will not receive credit for English 4236.

ENGL 4241. British Novel: Restoration Through Romantic. (3).

ENGL 4242. British Novel: Victorian and Modern. (3).

ENGL 4251. Renaissance Drama. (3).

ENGL 4252. Restoration and Eighteenth-Century Drama. (3).

ENGL 4321. American Literature: Major Writers Before 1860. (3).

ENGL 4322. American Literature: Major Writers Since 1860. (3).

ENGL 4323. Southern Literature. (3).

ENGL 4341. American Novel to 1900. (3). (3341).

ENGL 4342. American Novel Since 1900. (3). (3342).

ENGL 4371. African-American Literature. (3).

ENGL 4423. Modern British and American Poetry. (3).

ENGL 4424. Modern British and American Fiction. (3).

ENGL 4441. European Fiction. (3). (3441). Movements and writers important to development of continental fiction from late 18th century to present.

ENGL 4451. Studies in Women and Literature. (3). Literature and criticism by and about women.

ENGL 4452. Modern Drama. (3). American, British, and European drama from Ibsen to 1950.

- ENGL 4453. Contemporary Drama. (3).** American, British, and European drama from 1950 to the present.
- ENGL 4461. The Bible as Literature. (3).**
- ENGL 4471. Art of Biography. (3).** Reading, discussion, and practice of the literary construction of lives, one's own and others. Examines authors' artistic strategies, motives, audience, and perspectives based on gender and culture. [W]
- ENGL 4501. History of the English Language. (3).**
- ENGL 4511. Language and Literature. (3).** How linguistics can illuminate the analysis of literature, the nature of literary language, and the linguistic options open to a writer. [W]
- ENGL 4521. Language and Society. (3).** Place of language in society and how it creates and reflects social relationships; geographical and social dialects, male/female differences, and language of various subgroups within our culture; intensive examination of implications of language differences. [I]
- ENGL 4530. Practicum in ESL. (3-6).** Experience in observing and teaching, peer teaching, and work with an ESL specialist. Repeatable to a maximum of 6 hours.
- ENGL 4531. Methods and Techniques in ESL. (3).** Methods and techniques of teaching English as a Second Language in various settings.
- ENGL 4532. Skills Approaches and Assessment for ESL. (3).** Approaches to evaluation and means of assessment of language skills, with special emphasis on English as a Second Language. [C]
- ENGL 4540-4550. Special Topics in Language and Linguistics. (3).** Topics are varied and announced in Schedule of Classes.
- ENGL 4601. Poetry Workshop. (3).** The nature of poetry, critical approaches to the poem, and practical experience in writing and revising text. Repeatable to maximum of 6 hours with permission of instructor. PREREQUISITE: ENGL 3605.
- ENGL 4602-6602. Advanced Composition (3).** Principles involved in writing clear expository prose; emphasis on application of these principles; analysis of readings and of student's writing. [W]
- ENGL 4603. Fiction Workshop. (3).** Nature of short story and longer forms of fiction, critical approaches to fiction, and practical experience in writing and revising text. Repeatable to maximum of 6 hours with permission of instructor. PREREQUISITE: ENGL 3605.
- ENGL 4604. Forms of Poetry. (3).** A study of metrics, forms, and types of poetry in English with attention to the principal traditions and critical ideas associated with the writing of verse in English.
- ENGL 4605. Forms of Fiction. (3).** A study of how fiction works through analyzing the short story, the novella, and the novel with attention to technical developments.
- ENGL 4606-15. Topics In Advanced Technical Writing. (3).** Theories, contexts, and practices of writing in the world of technology; topics vary; extensive practice in writing, editing, and preparing technical publications.
- ENGL 4616. The Publishing Process. (3).** Steps in the publishing process from writing a manuscript to printing it, including the publishing of various genres throughout the world.
- ENGL 4617. Computers and Writing. (3).** Impact of computers on writing process in academic, personal, creative, and professional writing.; extensive practice in using computer tools for invention, planning, drafting, revising, editing, and production. Students explore their own writing processes and effects of technology on those processes as they work through variety of individual and collaborative assignments. [W]
- ENGL 4630. Internship in Professional Writing. (3).** Experience in technical, scientific, legal, government, or business writing with a professional in the field. Dependent upon availability. PREREQUISITES: 3601 and 3602 (one of which may be completed concurrently) and permission of instructor.
- ENGL 4711. The Author, the Text, the Reader, and the World. (3).** Methodological reflection upon theory and practice of reading linguistic, literary, and rhetorical models. PREREQUISITE: 15 hours of English. [I]
- ENGL 4900. Independent Study. (1-3).** A selected topic or problem in the field of literature, language, or writing. PREREQUISITE: permission of instructor. Repeatable when the content is different.
- ENGL 4996. Honors Thesis. (3).**

◆(ENGR) ENGINEERING

RICHARD C. WARDER, JR., Ph.D., *Dean*
Room 201A, Engineering Building

- ENGR 4001. Engineering Work Experience. (3).** Off-campus work experience working on selected projects in coordination with chair or chair's designee in student's major department under direction of practicing

engineer. Oral and written presentations may be required. May be repeated as many times as student chooses. PREREQUISITE: chair's and CO-OP director's approvals.

NOTE: Students participating in ENGR 4001 are considered to be full-time students for enrollment certification purposes.

◆(EXSS) EXERCISE AND SPORT SCIENCE

Department of Human Movement Sciences and Education

RALPH C. WILCOX ,Ph.D., *Chair*

Room 106, Fieldhouse

<http://www.hmse.memphis.edu/>

EXSS 1102. Personal Health. (3). (HLTH 1102). Concepts of personal health including chronic and infectious diseases, sexually transmitted diseases, mental health, substance use and abuse, health consumerism, sexuality, aging, and death and dying.

EXSS 2001. Concepts and Applications of Conditioning Programs. (3). (PHED 2001). Overview of physical conditioning programs with emphasis on selection, development and leadership of programs designed to foster cardiovascular and musculoskeletal development. Variable hours of supervised laboratory/field experience will be required. Purchase of an approved uniform may be required.◆ Course requires a practical assignment with the Wellness Evaluation and Resource Unit.

EXSS 2002. Techniques of Team Sports. (3). (PHED 2002). Knowledge, skills, and teaching techniques of basketball, soccer, softball, track and field, and volleyball to children and youth.

EXSS 2003. Techniques of Individual Sports. (3). (PHED 2003). Knowledge, skills, and techniques of teaching selected individual sports and recreational games. Includes but not limited to badminton, tennis, and golf.

EXSS 2009. Dance Instruction in the Exercise and Sport Science Program. (3). (PHED 2009). Knowledge, skills, and techniques of teaching educational dance activities to children and youth.

EXSS 3306. School Health, Safety and First Aid. (3). (HLTH 3306). School health program involving health services, healthful school living, health screening, home and school safety; health content, skills and materials suitable for elementary education; first aid with CPR.

EXSS 3307. Psychosocial Aspects of Sport. (3). (PHED 3307, 2101). Designed to help students develop understanding of psychological aspects of participation in sport; emphasis on research and theoretical frameworks related to performance enhancement and enjoyment in sport.

EXSS 3308. Adapted Physical Activity for Special Populations. (2). (PHED 3308). Nature and etiology of disabilities prevalent in children, knowledge and technical skills pertinent to the design of adapted physical activity programs and the teaching of physical activities for specific disabilities. PREREQUISITES: EXSS 3604/ 3605, SPED 2000. COREQUISITE: EXSS 3309.

EXSS 3309. Clinical Experiences in Adapted Physical Activity for Special Populations. (1). (PHED 3309). Observation and participation activities with teaching assistant responsibilities in a laboratory setting in physical activity with special populations. COREQUISITE: EXSS 3308. (S/U)

EXSS 3310. Exercise Programming for Special Populations. (3). Introduction to the principles of cardiovascular medicine related to therapeutic management of various disease states through exercise; emphasis placed on understanding the medical consequences of various disease states and developing comprehensive rehabilitative programs to decrease physical disability. Variable hours of supervised laboratory/field experience may be required.◆ Purchase of an approved uniform may be required for this course.

EXSS 3502. Prevention and Care of Athletic Injuries. (3). (SAFE 3502, HLTH 3502). Practical and theoretical aspects of treatment of athletic injuries in athletic training programs; supplies, training table, therapeutic equipment, and techniques in conditioning and bandaging. PREREQUISITE: HMSE 2102 or consent of instructor.

EXSS 3503. Health Aspects of Fitness. (3). (PHED 2000, 3503). Health related aspects of physical fitness; focuses upon relationship between a physically active lifestyle and wellness. Variable hours of supervised laboratory/field experience may be required.◆ Purchase of an approved uniform may be required for this course.◆ Course requires a practical assignment with the Wellness Evaluation and Resource Unit.

EXSS 3505. Principles of Health Fitness Instruction. (3). Introduction to principles of health fitness instruction for apparently healthy and medically stable asymptomatic populations in preparation for American College of Sports Medicine Exercise Leader- and Health/Fitness Instructor-certifications. Variable hours of

supervised laboratory/field experience may be required. Purchase of an approved uniform may be required for this course. Course requires a practical assignment with the Wellness Evaluation and Resource Unit.
PREREQUISITES: EXSS 3503 and 3703.

EXSS 3603. Physiological Bases of Strength Conditioning. (3). (PHED 3603). Study of anatomic and physiologic bases for the expression, development, and maintenance of muscular strength, power, and endurance, as well as various factors which may affect them. **PREREQUISITES:** BIOL 1751/1752 and 1761/1762.

EXSS 3604. Teaching Exercise and Sport Science, K-Middle School. (2). (PHED 3604). Skills, activities, and resource materials for teaching elements of movement, educational games, educational gymnastics, and physical fitness to youth. **COREQUISITE:** EXSS 3605.

EXSS 3605. Clinical Experience in Teaching Exercise and Sport Science, K-Middle School. (1). (PHED 3605). Observations and the teaching of mini-lessons in physical activity in an elementary school setting. **COREQUISITE:** EXSS 3604. S/U.

EXSS 3703. Physiology of Exercise. (4). (PHED 3703). Scientific basis of physiological principles of various systems and organs of the body in response to muscular activity; emphasis on principles of motor performance and training with appropriate laboratory experience. **PREREQUISITES:** BIOL 1751/1752 and 1761/1762.

EXSS 3803. Motor Learning. (3). (PHED 3803). Theory and research concerning the psychological basis for understanding the process involved in motor skill learning and performance.

EXSS 3853. Motor Development. (3). Introduction to developmental aspects of human motor behavior across the lifespan; characteristics, stages, and issues related to physical growth, development, and motor performance. **PREREQUISITE:** EXSS 3703.

EXSS 3903. Historical and Philosophical Aspects of Physical Activity. (3). (PHED 3903, 2903). Development of the discipline of physical education through historical, philosophical, sociological and scientific bases. **PREREQUISITES:** Upper division standing and satisfactory completion of the English composition requirements. [W]

EXSS 4002. Health Promotion Strategies. (3). Presentation and examination of health promotion strategies and programs that emphasize lifestyle behaviors that impact health and wellness. **PREREQUISITE:** EXSS 3503.

EXSS 4003. Health Program Development and Administration. (3). An overview of the principles of managing and directing health and exercise facilities; program planning and administration; facility design; staffing; business plans; and business structure. Course is based on American College of Sports Medicine facility management guidelines. **PREREQUISITE:** MKTG 3010.

EXSS 4204. Assessment and Evaluation in Human Movement Sciences and Education. (3). (PHED 4204). Measurement techniques, tools, and resources and their application to assessment of physical performance and fitness factors. **PREREQUISITES:** Upper division standing and satisfactory completion of the mathematics requirement. Variable hours of supervised laboratory/field experience may be required. Purchase of an approved uniform may be required for this course. Course requires a practical assignment with the Wellness Evaluation and Resource Unit. [C]

EXSS 4305. Problems in Exercise and Sport Science. (1-3). Independent study and/or research project on selected exercise and sport science problem, issue, or concern. **PREREQUISITE:** Permission of instructor (S/U).

EXSS 4403-6403. Kinesiology. (3). (PHED 4403, 3403). Analysis of bodily movements in terms of muscular forces operating on bones. **PREREQUISITES;** BIOL 1751/ 1752, BIOL 1761/1762 with a minimum grade of C.

EXSS 4406-6406. Exercise Testing and ECG Interpretations. (3). (PHED 4401). Introduction to the methods of conducting ECG and cardiopulmonary exercise testing for asymptomatic and symptomatic populations; ACSM principles of exercise testing as well as methods of ECG interpretation will be covered. Variable hours of supervised laboratory/field experience may be required. Purchase of an approved uniform may be required for this course.

EXSS 4502. Advanced Prevention and Care of Athletic Injuries. (3). Advanced practical and theoretical aspects of treatment of athletic related injuries in athletic training programs; supplies, management, organization, injury recognition, evaluation and assessment, therapeutic modalities, bandaging, and techniques in conditioning and rehabilitation. **PREREQUISITE:** EXSS 3502.

EXSS 4602. Psychological Aspects of Exercise. (3). Emphasis on the application of psychological principles

in fostering motivation among individuals in exercise/physical activity settings. [W]

EXSS 4603-6603. Advanced Methods of Strength Conditioning. (3). An advanced study of training principles for strength and conditioning programs and their underlying physiological bases. PREREQUISITES: EXSS 3603 and EXSS 3703.

EXSS 4605. Internship in Exercise and Sport Science. (3-9). (PHED 4605 and HLTH 4402). Culminating experience allowing students the opportunity to demonstrate knowledge and skills in an appropriate professional setting. PREREQUISITE: Completion of all course work in major and concentration. This course may be taken to improve the grade for one, but not both, of the former courses. COREQUISITE: HMSE 4999. S/U.

EXSS 4703. Clinical Exercise Physiology. (3). Introduction to theoretical and functional techniques of graded exercise testing for functional and/or diagnostic assessment. Variable hours of supervised laboratory/field experience may be required. ♦ Purchase of an approved uniform may be required for this course.

EXSS 4705-11-6705-11. Special Topics Workshop in Exercise and Sport Science. (3). Selected phases of exercise and sport science through group study. In-depth study of area of interest and need for exercise and sport scientists. May be repeated with a change in topic.

EXSS 4802. Environmental Health. (3). (HLTH 4802). Survey of complex association between environment and human productivity, health, and happiness; environmental factors within general framework of ecological perspective in which interrelationship of all living things to one another affect human growth and well-being.

EXSS 4808. Secondary Methods in Exercise and Sport Science. (2). (PHED 4808, 3808). Teaching strategies, management techniques, curricula planning, evaluation and research for effective teaching in grades 7-12. PREREQUISITES: EXSS 2002, 2003, and 2009, ICL 3000. COREQUISITE: EXSS 4809.

EXSS 4809. Clinical Experience in Secondary Methods in Exercise and Sport Science. (1). (PHED 4809, 3809). Observation and teaching of mini-lessons in physical activity in a Jr./Sr. high school. COREQUISITE: EXSS 4808. S/U.

EXSS 4902-11-6902-11. Special Topics in Exercise and Sport Science. (1-3). Current topics in exercise and sport science. May be repeated with change in topic and content. See Schedule of Classes for specific topics.

(FIR) FINANCE, INSURANCE AND REAL ESTATE

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*

CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*

Room 114, Fogelman College of Business and Economics Building

Students must have junior standing and have met specific course prerequisites with a grade of C (2.0) or better to be eligible for all 3000- and 4000-level courses. In addition to these requirements, students seeking a degree in the Fogelman College of Business and Economics must have (1) completed all required lower division business courses with a minimum grade of C (2.0) in each; (2) minimum of 2.25 GPA in all required lower division business courses and MATH 1312, and (3) 55 hours of course work including MATH 1312 and 9 hours of English (See B.B.A. Degree Requirements-General Requirements).

FIR 2220. Personal Financial Management. (3). Non-technical dealing with broad areas of budgeting, insurance, borrowing and credit purchases, home ownership, investment, taxes, and family financial planning. NOTE: If taken after student has received credit for FIR 3710 or 3810, credit will not count for BBA degree.

FIR 3011. Business Law. (3). Elements of law and legal principles encountered in business; emphasis on basic law of contracts, sales and secured transactions, negotiable instruments, real and personal property, agency, forms of business organization, suretyship, insurance contracts and torts.

FIR 3130. The Legal, Social, and Political Environment of Business. (3). Emphasis on legal, social, and political environment in which business and its executives exist; legal, social, and political forces that affect business operations. Lectures and case discussions.

FIR 3220. Personal Investing. (3). To assist individual investors of all backgrounds in development and monitoring of an investment portfolio by explaining possible investment alternatives including terminology and analysis techniques to fulfill future financial goals. NOTE: Open to all University students. ♦ PREREQUISITES: NONE. This course may not be counted for fulfilling the requirements for the Finance major.

FIR 3310. Real Estate Principles. (3). Basic terminology, principles and issues; market analysis, real estate law, instruments, legal descriptions, appraisal, investment, finance, brokerage, property management. Designed for non-real estate majors as well as a foundation for further study.

FIR 3410. Business Finance. (3). Fundamentals of business finance; time value of money, capital budgeting techniques, securities valuation, and cost of capital. PREREQUISITES: ACCT 2020, ECON 2120, ISDS 2710.

FIR 3710. Investments. (3). Principles of investment in stocks and bonds. Includes fundamental, economic, and technical analysis; measurable and unmeasurable aspects of risk; portfolio management; psychological aspects of the market. PREREQUISITE: FIR 3410.

FIR 3720. Financial Markets. (3). Survey of important funds markets, institutions and characteristics peculiar to them. Sources of supply of and demand for funds in each market, and complex interrelations among several markets analyzed. PREREQUISITE: FIR 3410.

FIR 3770. Commodity Futures Market. (3). Mechanics of trading including the contract, commodities traded, and exchanges involved; transfer of risk and stabilization of prices through futures trading; role of speculators. Buying/selling strategies including hedging used by farmers, commodity marketers, speculators, and processors. PREREQUISITE: FIR 3710.

FIR 3810. Principles of Risk and Insurance. (3). Nature and handling of risk in personal and business situations; emphasis on property, liability and life exposures to loss. Designed for non-insurance major as well as a basis for advanced study.

FIR 4011-6011. Estate Planning and Law of Taxation. (3). Survey of law of taxation as applied to transmission of property by gift or death and its impact upon accumulations of wealth; estate planning from individual viewpoint designed to create, maintain, and distribute maximum estate possible.

FIR 4110-19. Special Topics. (3). Current topics in one of following areas: Finance, Insurance, Real Estate, or Business Law. Topics varied and announced in Schedule of Classes (for example, International Business Law). May be repeated once with change in topic area. PREREQUISITE: consent of instructor.

FIR 4310-6310. Real Estate Law. (3). Law and legal instruments as applied to real estate; needs of property owners and those engaged in real estate business.

FIR 4320. Real Estate Finance. (3). Terminology, legislation, principles, and analytical techniques pertaining to financing of real estate; perspective of lender, residential borrower, and income property borrower. PREREQUISITE: FIR 3410.

FIR 4340-6340. Real Estate Appraisal. (3). Basic terminology, principles, procedures, and issues; nature of value, principles of value, appraisal process, market approach, cost approach, capitalization of income approach, gross rent multiplier approach, and appraisal reports.

FIR 4350. Real Estate Investment Principles. (3). Principles and practices reviewed and evaluated; investment strategy, ownership forms, tax implications, cash flow analysis, measures of return, risk management, and property selection.

FIR 4360. Commercial Land Use. (3). Factors influencing the location pattern of commercial land uses; emphasis on location analysis of commercial real estate.

FIR 4440. Managerial Finance. (3). Analytical approaches to firm's financial decisions; including current asset management, capital budgeting, cost of capital, capital structure determination, and dividend policy. PREREQUISITE: FIR 3410.

FIR 4550. International Finance. (3). Financing international trade and investments; foreign exchange markets and exchange rates; balance of payments; current developments in international financial cooperation. PREREQUISITE: FIR 3410.

FIR 4610-6610. Cases In Managerial Finance. (3). Application of tools and principles introduced in previous courses to develop up-to-date problem solving techniques; cases approached from standpoint of top level management and utilize both quantitative and qualitative analysis. PREREQUISITE: FIR 4440.

FIR 4710. Commercial Banking. (3). Study of bank management and bank regulation; examination of conditions that lead to bank regulation and conditions that caused deregulation; exploration of current theories of profitable bank operations. PREREQUISITE: FIR 3410.

FIR 4720-6720. Management of Financial Institutions. (3). Exposure to financial policies and decision-making that are peculiar to financial institutions in United States; management of institutions consistent with adequate standards of liquidity and solvency. PREREQUISITES: FIR 3410, 3720.

FIR 4770. Security Analysis and Portfolio Management. (3). Development of techniques for finding actual worth of securities, primarily stocks and bonds; selection, timing, diversification, and other aspects of supervising investment funds. PREREQUISITE: FIR 3710.

FIR 4810-6810. Property and Liability Insurance I. (3). Forms and functions of fire, marine, automobile, general liability and other types of property and liability insurance; emphasis on business and industrial

applications.

FIR 4820-6820. Life and Health Insurance. (3). Functions of life and health insurance; emphasis on economic security needs, human behavior and the problems related to death and dying. Individual life, health and annuity contracts and social insurance; concepts in risk selections and regulation.

FIR 4840-6840. Multiple Line Insurance Company Operations. (3). Company and industry functions other than contracts, including rating, rate-making, reserves, auditing, underwriting, reinsurance, claims, production engineering, and governmental supervision.

FIR 4860-6860. Employee Benefit Programs. (3). Life, health and pension benefit programs from the viewpoint of the benefit planner; reasons for providing such programs, alternate methods for providing benefits, and broadly designing specifications for benefits.

FIR 4870. Risk Management. (3). Problems of risk manager in small and large firms, methods of handling risk that serve as alternatives to obtaining insurance, and brief survey of insurance as standard for comparisons.

FIR 4880-6880. Risk Management Finance. (3). Emphasis on integrating financial theory into practice of risk management for the firm; use of quantitative tools to carry out risk management process by developing spreadsheets to measure expected loss, determine appropriate risk handling method, and analyze risk financing arrangements. PREREQUISITE: FIR 3410.

FIR 4910. Problems in Finance, Insurance, or Real Estate. (1-3). Student will carry on approved research projects in the major area under supervision of staff members. PREREQUISITES: senior standing and permission of the Director of Undergraduate Programs.

FIR 4911. Internship in Finance, Insurance, and Real Estate. (1-6). Internship in business organization to gain on-the-job experience in real-life environment. Project to be approved and supervised by department faculty. Credit allowed only after acceptance of report. PREREQUISITES: senior standing and minimum GPA of 2.75.

FIR 4912. Personal Financial Planning Applications. (3). Computer based applications of practical financial planning problems common to planner. PREREQUISITES: junior standing and minimum of 9 hours in finance courses.

FIR 4996. Senior Honors Thesis In Finance, Insurance, and Real Estate. (3). Independent research open only to those students enrolled in the honors program. Thesis supervised by area faculty member. PREREQUISITES: senior standing and permission of the Director of the College Honors Program.

(FREN) FRENCH

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

Room 375, Dunn Hall

<http://www.people.memphis.edu/~forlanglit/FLhome.html>

FREN 0701. French for Reading Knowledge I. (3). (4701). Introduction to reading French; intensive drill in recognizing and interpreting grammatical structures, especially those peculiar to scholarly written language; emphasis on vocabulary building and on determining the meaning of words not previously encountered; reading of texts in French at sight or after preparation. No previous knowledge of French required. Does not fulfill any part of undergraduate language requirement and cannot be applied toward major. (S/U)

FREN 0702. French for Reading Knowledge II. (3). (4702). Further work in recognizing and interpreting grammatical structures; reading of specialized scholarly texts. Does not fulfill any part of undergraduate language requirement and cannot be applied toward major. (S/U)

FREN 1101. Elementary French. (3). Basic skills fundamental to language proficiency and culture.

FREN 1102. Elementary French. (3). Further development of basic skills fundamental to language proficiency and culture. PREREQUISITE: FREN 1101 or equivalent.

FREN 2201. Intermediate French. (3). Comprehensive review of French grammar, exercises in writing, and readings in French literature and culture. PREREQUISITE: FREN 1102 or equivalent.

FREN 2202. Intermediate French. (3). More advanced readings. PREREQUISITE: FREN 2201 or equivalent.

FREN 3301. Conversation and Composition. (3). PREREQUISITE: FREN 2202 or equivalent.

FREN 3302. Conversation and Composition. (3). PREREQUISITE: FREN 3301 or permission of instructor.

FREN 3401. French Civilization. (3). Culture of France as reflected in its history, social institutions, art, and music. Recommended for Foreign Language, liberal arts, and International Business majors. PREREQUISITE RECOMMENDED: FREN 3301.

FREN 3411. Introduction to French Literature. (3). Selections from origins to present time; emphasis on textual analysis. PREREQUISITE: FREN 3301.

FREN 3791. French for Commerce I. (3). Introduction to French business terminology and forms of correspondence with regular readings of business, commercial and technical publications. PREREQUISITE: FREN 3301 recommended.

FREN 3792. French for Commerce II. (3). Continuation of French 3791. PREREQUISITE: FREN 3791 or equivalent.

FREN 4301-6301. French Phonetics. (3). Theory and practice of French sounds, especially recommended for teachers of French. PREREQUISITE: three years of college French or permission of instructor.

FREN 4302-6302. Advanced Grammar. (3). Practical advanced grammar course concerned with grammatical, syntactical, and lexical usage of contemporary French.

FREN 4412-6412. Seventeenth and Eighteenth Centuries. (3). Classical theatre and critical theories: essay, nouvelle, and conte in 18th century. PREREQUISITE: FREN 3301. RECOMMENDED: FREN 3411.

FREN 4413-6413. Nineteenth Century French Literature. (3). Survey of literary movements and major authors with readings in all major genres. PREREQUISITE: FREN 3301. RECOMMENDED: FREN 3411.

FREN 4414-6414. Twentieth Century French Literature. (3). Survey of literary movements and major authors with readings in the novel, poetry and theater. PREREQUISITE: FREN 3301. RECOMMENDED: FREN 3411.

FREN 4780. Individual Studies in French. (1-3). Directed individual study in selected areas of French chosen in consultation with instructor. May be repeated for a maximum of 6 hours credit. PREREQUISITE: permission of instructor.

FREN 4791-99. Special Topics in French Literature, Language, or Civilization. (3). May be repeated for maximum of 6 hours credit. PREREQUISITE: permission of chair and instructor.

[Last Updated: 6/12/15](#)

(GEOG) GEOGRAPHY
Department of Geography
SCOTT KIRSCH, Ph.D, *Interim Chair*
Room 107, Johnson Hall
<http://lrsgis2.memphis.edu/~master/>

GEOG 1001. Introduction to Environmental and Earth Science: Weather and Climate. (3). (1101). Atmospheric processes and geographic distribution of radiation, moisture, pressure, and circulation interacting to create weather systems and storms; oceanic influences, earth-sun relationships, global climate patterns; human interaction with atmosphere. PREREQUISITE: two years of high school algebra. [G]

GEOG 1002. Introduction to Environmental and Earth Science: Landforms. (3). (1102). Agents and processes of landform development and geographic relationships of landscapes including volcanic, fluvial, glacial, and coastal environments; soil development and vegetation associations; environmental hazards to humans; maps and aerial photo interpretation as sources of environmental information. PREREQUISITE: two years of high school algebra. [G]

GEOG 1003. Global Environmental Change. (3) (1103). Examination of global environmental change from interdisciplinary approach; changes in the atmosphere, lithosphere, and hydrosphere, especially those that seem to be related to human actions; greenhouse-gas induced global warming, ozone depletion as related to CFCs released by people, effect of accelerated deforestation and reforestation on biosphere; relation between human activities and soil erosion and depletion. PREREQUISITE: one introductory natural science course or permission of instructor.

GEOG 1011. Introduction to Environmental and Earth Science: Weather and Climate Laboratory. (1). (1101 Lab). Laboratory exercises, observations, and experiments designed to apply scientific methods to lecture; observations of atmospheric phenomena and use instruments, both in lab and in field, in order to better understand what is involved in experimental problems. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: GEOG 1001. [G]

GEOG 1022. Introduction to Environmental and Earth Science: Landforms Laboratory. (1) (1102 Lab). Laboratory exercises, observations, and experiments designed to apply scientific methods to lecture subjects; topographic maps and aerial photographs are major information sources for interpretation and analysis; stereoscopes utilized for three-dimensional viewing; stream tables, soil profiles, and landscape models used to illustrate physical processes interacting to modify earth's surface. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: GEOG 1002. [G]

GEOG 1301. Survey of World Regions. (3). Survey of economic, cultural and physical traits characteristic of developing and industrialized nations. [G]

GEOG 1401. Introduction to Cultural Geography. (3). Geographical aspects of human behavior; distributional patterns and interactions of such cultural characteristics as language, religion, politics, and economics. [G]

GEOG 3200. Peoples and Cultures of the World (Same as ANTH 3200). (3). Major ethnographic areas and selected cultures of world.

GEOG 3221. Principles of Conservation. (3). Development of conservation ethic and wilderness concepts; survey of environmental problems, land use, and energy and resource utilization; soil erosion and crop productivity relationships.

GEOG 3401. Historical Geography of the U.S. (3). Evolution of the cultural landscapes of the United States with emphasis on the interaction of environment and people in the development of this nation. [G]

GEOG 3430. Economic Geography. (3). Spatial characteristics and distribution of economic activities.

GEOG 3451. Introduction to Urban Planning. (3). Introduction to regional and urban planning emphasizing spatial relationships of physical, economic, and cultural phenomena necessary in planning process.

GEOG 3501. Map Reading. (3). Comprehensive study of maps as geographic tools that enable user to gain knowledge of earth through map reading and map interpretation and to make intelligent use of such map information.

GEOG 3514. Introduction to Geographic Information Systems and Techniques. (3). Introduction to geographic information processing and the fundamental techniques of Geographic Information Systems, Aerial Photo Interpretation, Remote Sensing, and Map Design. PREREQUISITE: GEOG 1002 AND GEOG 1022.

GEOG 4122-6122. Environmental and Earth Science: The Soil. (3). Processes and dynamics of soil profile

development; major models of soil development examined and applied to soil genesis in Tennessee; application of soil techniques to archaeology, planning, earth sciences, and soil conservation and erosion problems; emphasis on field and laboratory techniques with field work in soil mapping and soil taxonomy. *Two lecture hours, two laboratory hours per week.*

GEOG 4201-6201. Urbanization and Environment. (3). Ways man has changed natural environment by urbanization and how physical features and processes influence development and function of cities.

GEOG 4211-6211. Climatology. (3). Climatic elements and methods of data analysis; applications of climatology in agriculture, health, economics, and architecture. PREREQUISITES: GEOG 1001/1011 and PHYS 2110 and 2001.

GEOG 4215-6215. Physical Climatology. (3). Components of earth's energy balance, emphasis on solar radiation, heat transfer, and evapotranspiration. PREREQUISITES: GEOG 1001/1011 and PHYS 2110 and 2001.

GEOG 4231-6231. Water Resources. (3). Hydrologic processes and their application to needs of cities, industry, agriculture, and recreation.

GEOG 4241-6241. Biogeography. (3). Principles underlying spatial distribution of plants, including physical, biotic, and historical controls; vegetation dynamics; survey of patterns and processes of North American vegetation.

GEOG 4251-6251. Environmental Issues and Natural Hazards. (3). Interrelations between human beings and natural hazards; importance of policy decisions; planet-wide climatic changes, potential changes in earth-sun relations, inadequate food production, local disasters, and nuclear contamination.

GEOG 4271-6271. Park Resource Protection and Visitor Management I. (4). (INTD 4510, 3510). Concepts of geography and psychology required for resource protection and visitor management positions as park rangers in federal and state parks. Classroom instruction, readings, and applied practical exercises included. PREREQUISITE: permission of instructor.

GEOG 4272-6272. Park Resource Protection and Visitor Management II. (4). (INTD 4511, 3511). Advanced content and skills involved in protecting natural resources and managing park visitor behavior in recreational areas. Includes knowledge and skill-building in natural resource law, enforcement skills, and advanced interpersonal development. PREREQUISITE: GEOG 4271-6271 and permission of instructor.

GEOG 4304-6304. Geography of Europe. (3). Geographic analysis of physical, cultural and economic characteristics of Europe.

GEOG 4306-6306. Geography of Asia. (3). Significance of regional differences in Japan, China, and India, and brief survey of remaining areas.

GEOG 4313-6313. Geography of the United States and Canada. (3). Physical, cultural, and economic characteristics of United States and Canada.

GEOG 4316-6316. Geography of the South. (3). Selected regions in South; emphasis on changes and trends in cultural-physical complex.

GEOG 4318-6318. Geography of American National Parks. (3). An examination of individual types of parks with regard to location, physical characteristics and use; the history and mission of the National Park Service with regard to management of the national parks past and present; implications for future public land management strategies.

GEOG 4324-6324. Geography of Middle America. (3). Peoples and places of Mexico, Central America, and the Caribbean; history of Maya and Aztec culture, cultural ecology and traditional land use, contemporary development issues, and the region's global situation.

GEOG 4325-6325. Geography of South America. (3). Lands and peoples of the diverse regions of South America, folk populations, Amazonia, Andean issues; contemporary economics and resources in a developing world region.

GEOG 4431-6431. Urban Geography. (3). Allocation of land for urban uses; adjustments and adaptations to existing physical phenomena; patterns, functions, and forms of specific urban land areas; and some continuous problems of urban development and growth.

GEOG 4443-6443. Transportation Planning. (3). Planning for various transportation modes and networks and impact they have on land use and contemporary development problems.

GEOG 4502-6502. Computer Mapping. (3). Use of computer mapping programs as effective techniques for visual presentation of wide variety of data. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOG 3514.

- GEOG 4503-6503. Map Design and Production. (3).** Cartographic theory and application to thematic mapping; use of computer for creation, editing, proofing, and reproduction of maps. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOG 3514.
- GEOG 4510-6510. Aerial Photo Interpretation. (3). (Same as GEOL 4510).** Elements and steps involved in interpreting, measuring, and mapping of images appearing on aerial photographs. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOG 3514.
- GEOG 4511-6511. Remote Sensing of the Environment. (3). (Same as GEOL 4512).** Survey of theory and application, use of color, infrared, thermal, and radar images generated from satellites for geographic, environmental, and planning purposes. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOG 4510 or consent of instructor.
- GEOG 4514-6514. Geographic Information Systems. (3).** Role and nature of using interactive computer mapping for decision support in resource management; structure and use of spatial databases in the decision process. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOG 3514.
- GEOG 4521-6521. Quantitative Methods. (3).** Introduction to quantitative methods in spatial analysis. [C]
- GEOG 4522-6522. GIS for Business and Social Sciences. (3).** Introduction to the application of interactive computer mapping and geographic information systems software in business and social science decision making.
- GEOG 4524-6524. Advanced Geographic Information Systems. (3).** Advanced study of database manipulation, data interface, and cartographic modeling techniques with emphasis on customizing GIS applications and automated modeling procedures; use and manipulation of commercially available data as sources for GIS applications. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOG 4514 or consent of instructor.
- GEOG 4531-6531. Field Methods. (3).** Basic methods of geographic analysis used in classifying, analyzing and reporting field-generated data including field mapping, sampling procedures, questionnaires and archival and public document research. *One and one-half lecture hours, three laboratory hours per week.*
- GEOG 4541. Field Studies. (1-6).** Faculty-conducted field trip emphasizing study of geographic phenomena. Location will vary. Topics may include physical landscapes, land-use patterns, cross-cultural analysis, micro and regional economics, or other geographical processes. Credit hours based on length of time in field. Requires field journal and report to receive credit. May be repeated with change in content for maximum of 6 hours credit. PREREQUISITES: permission of instructor and completion of special registration.
- GEOG 4551. Urban Planning Studio. (3).** Application of planning process to urban problems and preparation of plans for the urban area. PREREQUISITE: GEOG 3451 or consent of instructor.
- GEOG 4610-19-6610-19. Special Topics In Geography. (1-3).** Topics are varied and announced in Schedule of Classes.
- GEOG 4621. Independent Study. (1-3).** Student, under faculty supervision, studies in-depth particular geographic topic. Repeatable with change in content to maximum of 3 semester hours. PREREQUISITE: approval of instructor.
- GEOG 4700-6700. Geography Internship. (1-9).** Experience working with agency in which geographic knowledge can be utilized. Repeatable to maximum of 9 semester hours. Credit allowed only after acceptance of report. PREREQUISITE: approval of instructor and chair. (S/U)
- GEOG 4801. Geographical Thought and Application. (3).** Major concepts in environmental/earth sciences, human/cultural, and economic/urban geography. Proseminar format requires review of readings with oral and written presentations. Focus on synthesis and application of geographic concepts to contemporary research themes. PREREQUISITE: 23 semester hours in Geography to include: GEOG 1001, 1002, 1011, 1022, 1301 or any 43-course; 1401 or 3430, 3514 and two additional upper division courses selected from two of the following areas: human/economic, environmental/earth, or the techniques. Registration by permit only. [W, I]

(GEOL) GEOLOGY

Department of Geological Sciences

GEORGE SWIHART, Ph.D., *Chair*

Room 402, J. M. Smith Hall

GEOL 1101. Physical Geology. (4). Introduction to processes that form the rocks in the earth's crust; the earth's internal forces that make mountains and volcanoes; special emphasis on topics that impact the Mid-South, such as earthquakes. *Three lecture hours, two laboratory hours per week.* [G]

GEOL 1102. Historical Geology. (4). (1201). Overview of history of earth and its life as interpreted from rock and fossil record; origins of continents, mountain ranges, ocean basins and natural regions of U.S. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 1101. [G]

GEOL 1103. Environmental Geology. (4). Applications of Physical Geology to understanding, evaluating and solving problems created by natural hazards and those created by humans; study in management, utilization and preservation of our natural regions, finite space and resources. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 1101. [G]

GEOL 3211. Invertebrate Paleontology. (4). Fossil invertebrate animals and their importance in interpretation of ancient environments, evolution, and geologic time. *Three lecture hours, two laboratory hours per week.* PREREQUISITES: GEOL 1101 or permission of instructor. [W]

GEOL 3311. Mineralogy. (4). Structural and chemical crystallography of minerals; classification and identification of minerals. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: GEOL 1101. COREQUISITES: CHEM 1121, 1131.

GEOL 3312. Introduction to Petrology. (4). Classification, identification and genesis of igneous and metamorphic rocks in hand specimens; optical theory of light transmission through minerals; identification of translucent minerals in oil immersion with the petrographic microscope. *Two lecture hours, four laboratory hours per week.* PREREQUISITE: GEOL 3311.

GEOL 3512. Structural Geology. (4). Structures of the crust; geometry of folds and faults, rock deformation, criteria for recognizing structures, solution of geometrical problems. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 1101, MATH 1321, or consent of instructor. [C]

GEOL 3712. Sedimentology and Stratigraphy. (4). Origin and classification of sedimentary rocks and mutual relationship of sedimentary rock bodies both geographically and through geologic time. Lecture emphasizes comparison of modern depositional systems with their ancient counterparts. Laboratory emphasizes hand specimen analysis and preparation of geologic maps. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 1102 or 1103.

GEOL 3802. Introduction to Oceanography. (3). Origin, chemistry, water circulation, shoreline and deep water characteristics of oceans; its role in evolution and history of earth; marine life and its ecology.

GEOL 4010-19-6010-19. Special Topics In Geological Sciences. (3). Topics vary and are announced in the Schedule of Classes.

GEOL 4100. Petroleum Geology. (3). Application of geologic principles to search for economic accumulations of oil and gas; lab emphasis on prospect selection using subsurface techniques, lecture emphasis on depomodels and depositional systems. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 3712.

GEOL 4202-6202. Geomorphology. (4). Description, origin and interpretation of landforms and their relationships to underlying structure and geologic history; processes acting on earth's surface, including active tectonics; weather; mass-wasting; climate change; and fluvial, shoreline, and glacial processes. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 1103 or GEOG 1002/1022.

GEOL 4211-6211. Physical Hydrogeology. (4). Movement, storage and development of groundwater; groundwater in the hydrologic cycle; aquifer characteristics and tests. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 1103 and one semester of calculus.

GEOL 4332-6332. Introduction to Geochemistry. (3). Geological and chemical processes that govern or control migration and distribution of elements and atomic species of earth in space and time. *Three lecture hours per week.* PREREQUISITE: GEOL 3312.

GEOL 4341-6341. Aqueous Geochemistry. (3). Physical chemistry of aqueous solutions as applied to geochemical processes on earth's surface. PREREQUISITE: CHEM 1112.

GEOL 4351-6351. Advanced Structural Geology, (3). (4642). Analysis of crustal structure; stress in rocks, mechanical interpretation of crustal structures. PREREQUISITES: GEOL 3512, MATH 1321.

GEOL 4510-6510. Aerial Photo Interpretation. (3). (Same as GEOG 4510). Elements and steps involved in interpreting, measuring and mapping images appearing on aerial photographs. *Two lecture hours, two laboratory hours per week.*

GEOL 4512-6512. Remote Sensing of the Environment. (3). (Same as GEOG 4511). Survey of theory and application; use of color, infrared, thermal and radar images generated from satellites for geographic, geologic, environmental and planning purposes. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: GEOL 4510.

GEOL 4622. Geology Field Camp. (6). Preparation of structural and lithologic maps in prescribed geologic areas using topographic maps and aerial photographs. Instruments used are the alidade and the Brunton compass. Offered in summer school only. PREREQUISITES: GEOL 3312, 3512, and 3712. [I]

GEOL 4701-6701. Spring Field Trip. (1-2). Conducted field trips during spring vacation. About 30 hours of field work follow 2-4 hours of lectures. Open to nonmajors. Among areas which may be included are Quachita-Arbuckle-Wichita Mountains of Oklahoma; Quachita, Ozark dome and adjacent mineral districts; central and southern Appalachians; Gulf Coastal Plain; Death Valley, CA; and Grand Canyon, AZ. Check Schedule of Classes for specific location.

NOTE: May be repeated three times when location varies. A total of no more than 8 hours credit may be earned. Dates, hours and credits to be arranged. PREREQUISITE: consent of instructor.

GEOL 4721. Investigations In Geology. (1-3). Individual or group work on topics of current interest. May be repeated for maximum of 6 hours. PREREQUISITE: consent of instructor.

GEOL 4731. Senior Thesis. (1-3). Original study on subject of geological significance to be carried on independently by student with faculty supervision. PREREQUISITE: senior standing in Geology.

◆(GEO) GEOPHYSICS

Department of Geological Sciences

PHILI DEBOO, Ph.D., *Chair*

Room 402, J. M. Smith Hall

GEOP 4101-6101. Introduction to Geophysics. (3). (GEOL 4652). Fundamental topics: earth's ages and their thermal state, main gravity and magnetic fields; dynamic models of earth's interior, comparison of terrestrial planets. PREREQUISITES: PHYS 2111, MATH 1321.

GEOP 4111-6111. Advanced Physical Geology. (3). Geology for geophysicists from advanced quantitative viewpoint; the earth as a planet; its structure; its physical and chemical environment; its materials and processes on its surface and interior; its evolution from a physical and geological viewpoint. PREREQUISITE: consent of instructor.

GEOP 4201-6201. Applied Geophysics. (4). (GEOL 4632). Geophysics prospecting methods; seismic reflection and seismic refraction techniques, and electrical, magnetic, and gravity field measurements with emphasis on fundamental principles governing acquisition and interpretation of geophysical data. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: consent of instructor.

GEOP 4401-6401. Introduction to Seismology. (3). (GEOL 4440). Wave propagation in the earth; elasticity, elastic wave equation, vibration and waves, body and surface elastic waves seismic rays reflection and refraction of seismic waves, and the earthquake source. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: MATH 4391 or consent of instructor.

GEOP 4721. Seismogram Reading. (1). Introduction to seismogram interpretation of recent earthquakes recorded by the instruments of CERl and the Global Digital Seismic Network. PREREQUISITE: consent of instructor. (S/U)

GEOP 4722. Investigations In Geophysics. (1-3). (GEOL 4722). Individual or group work on topics of current interest in the broad field of geophysics. May be repeated for maximum of 6 hours. PREREQUISITE consent of instructor.

GEOP 4931. Senior Thesis. (1-3). Original study on subject of geophysical significance, to be carried on independently by student with faculty supervision. PREREQUISITE: senior standing.

◆(GERM) GERMAN

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

Room 375, Dunn Hall

GERM 0701. German for Reading Knowledge I. (3). (4701). Introduction to reading of German. Intensive drill in recognizing and interpreting grammatical structures, especially those peculiar to scholarly written language; emphasis on vocabulary building and on determining meaning of words not previously encountered; reading of texts in German at sight or after preparation. No previous knowledge of German required. Does not fulfill any part of undergraduate language requirement and cannot be applied toward major. (S/U)

GERM 0702. German for Reading Knowledge II. (3). (4702). Further work in recognizing and interpreting grammatical structures; reading of specialized scholarly texts. Does not fulfill any part of undergraduate

language requirement and cannot be applied toward major. (S/U).

GERM 1101. Elementary German. (3). Basic skills fundamental to language proficiency and culture.

GERM 1102. Elementary German. (3). Further development of basic skills fundamental to language proficiency and culture. PREREQUISITE: GERM 1101 or equivalent.

GERM 2201. Intermediate German. (3). Comprehensive review of German grammar, exercises in writing and readings in German literature and culture. PREREQUISITE: GERM 1102 or equivalent.

GERM 2202. Intermediate German. (3). More advanced readings in German literature and culture. PREREQUISITE: GERM 2201 or equivalent.

GERM 2204. Intermediate German (Business Emphasis). (3). A continuation of 2201, with emphasis on business language. PREREQUISITE: GERM 2201 or equivalent.

GERM 3301. Conversation and Composition. (3). PREREQUISITE: GERM 2202 or equivalent.

GERM 3302. Conversation and Composition. (3). PREREQUISITE: GERM 2202 or equivalent.

GERM 3411. Introduction to German Literature and Culture. (3). From beginnings to late eighteenth century. PREREQUISITE: GERM 2202 or equivalent.

GERM 3412. Introduction to German Literature and Culture II. (3). From late eighteenth century to modern period. PREREQUISITE: GERM 2202 or equivalent.

GERM 3791. German for Commerce I. (3). German business terminology and forms of correspondence; regular readings of business, commercial and technical publications. PREREQUISITE: GERM 2202 or equivalent.

GERM 3792. German for Commerce II. (3). German business terminology and correspondence; reading of business, technical, commercial publications.

GERM 4443-6443. Major German Writers of the Twentieth Century. (3). Selected works of Hesse, Thomas Mann, Kafka, Frisch, Duerrenmatt, Brecht, and Boell. PREREQUISITE: two courses from the group GERM 3301, 3302, 3411, 3412; or permission of instructor.

GERM 4451-6451. The German Drama. (3). Survey of dramatic literature from sixteenth to twentieth centuries; readings from Reformation, Baroque, Enlightenment. Sturm und Drang, Classicism, Romanticism, Realism, and modern period. PREREQUISITES: two courses from the group GERM 3301, 3411, 3412; or permission of instructor.

GERM 4465. German Narrative Prose. (3). Reading of major prose writings from Romanticism to present; emphasis on the Novelle. PREREQUISITES: one course from the group GERM 3301, 3302, 3410, 3411, 3412; or permission of instructor.

GERM 4501. Applied German Linguistics. (3). Application of modern linguistic theories to learning German. PREREQUISITES: Two courses from the group GERM 3301, 3411, 3412; or permission of instructor.

GERM 4511. The German Language: Development and Structure. (3). German language in its various stages of development. PREREQUISITE: GERM 3301 or 3302; or permission of instructor.

GERM 4780. Individual Studies in German. (1-3). Directed individual study in selected areas of German chosen in consultation with instructor. Repeatable for a maximum of 6 semester hours credit by permission of chair. PREREQUISITE: permission of instructor.

GERM 4791-99. Special Topics in German Language or Literature. (3). May be repeated for maximum of 6 hours credit. PREREQUISITE: permission of chair and instructor.

(GREK) GREEK

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

Room 375, Dunn Hall

GREK 1101. Elementary Greek I. (3). Elements of grammar and syntax of classical and koine Greek; practice in reading and translation.

GREK 1102. Elementary Greek II. (3). Continuation of grammar and syntax of classical and koine Greek; practice in reading and translation of both classical and New Testament Greek. PREREQUISITE: GREK 1101 or equivalent.

GREK 2201. Intermediate Greek I. (3). Comprehensive review of Greek grammar; practice in reading and translation of both classical and New Testament Greek. PREREQUISITE: GREK 1102 or equivalent.

GREK 2202. Intermediate Greek II. (3). Readings in unaltered classical and New Testament Greek; emphasis on interpretive techniques used in reading primary texts. PREREQUISITE: GREK 2201 or

equivalent.

GREK 3111. Greek Historians. (3). Reading and analysis of selections from writings of Herodotus, Thucydides, and later Greek historians.

GREK 3511. Greek Tragedy. (3). Reading and analysis of selected tragedies of Aeschylus, Sophocles, and Euripides.

GREK 3911. Plato's Apology, Crito. (3). Reading and analysis of dialogues of Plato that give a prelude to death of Socrates.

GREK 4441. Homer. (3). Reading and analysis of selections from Homer's Iliad and Odyssey.

(HEBR) HEBREW

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

Room 375, Dunn Hall

HEBR 1101. Elementary Hebrew. (3). (LALI 1701004). Principles of pronunciation; everyday expressions: basic sentence patterns through oral practice, writing and reading.

HEBR 1102. Elementary Hebrew. (3). (LALI 1702004). Continued study of sentence patterns through oral and written practice. PREREQUISITE: HEBR 1101 or equivalent.

HEBR 2201. Intermediate Hebrew. (3). (LALI 2701004). Continued study of sentence patterns through oral and written practice. PREREQUISITE: HEBR 1102 or equivalent.

HEBR 2202. Intermediate Hebrew. (3). (LALI 2702004). Continued study of sentence patterns through oral and written practice. PREREQUISITE: HEBR 2201 or equivalent.

(HIST) HISTORY

KENNETH W. GOINGS, Ph.D., *Chair*

Room 100, Mitchell Hall

HIST 1301. The Development of World Civilization I. (3). Especially recommended for freshmen; traces forms of civilization from beginnings to 1500. [G]

HIST 1302. The Development of World Civilization II. (3). Especially recommended for freshmen; traces forms of civilization from 1500 to present. [G]

HIST 2601. The United States to 1877. (3). United States from discovery to end of political reconstruction. [G]

HIST 2602. The United State Since 1877. (3). United States from 1877 to present. [G]

HIST 3010. Special Issues In History. (3). May be repeated for a maximum of 9 hours when topic varies.

HIST 3035. Technology and Culture in American History. (3). Interrelationship between technology and culture; emphasis on 19th and early 20th centuries.

HIST 3045. Quantification and History. (3). Concepts of quantification in history; survey of literature of quantitative history; practical work in quantitative methods in history. PREREQUISITE: COMP 1200 or its equivalent or successful completion of university's computer literacy examination. [C]

HIST 3121. England Before 1714. (3). Political, constitutional, cultural, social, and economic development of England from coming of Anglo-Saxons until Hanoverian accession in 1714.

HIST 3122. England Since 1714. (3). Development of England's democratic government, considering economic, social, intellectual, diplomatic, and imperial affairs.

HIST 3211. Colonial Latin America. (3). Political, economic, social and cultural development in Latin America from pre-conquest era to 1808.

HIST 3212. The Latin American Nations. (3). Major political, economic, and social trends in Latin America since 1808. Emphasis on Argentina, Brazil, Chile, and Mexico.

HIST 3273. Islamic Civilization. (3). Survey of the development of Islamic religious, social, political, intellectual, and cultural traditions from the time of Muhammad through the 18th century. Geographical focus is the Middle East, India, Asia, and Africa.

HIST 3274. Modern Islamic World. (3). Survey of the Islamic World from 1800 to the present, focusing on the role of Islam in the political and social development of the Middle East, India, Asia, and Africa, as well as the emergence of Islamic communities in Europe and the Americas.

HIST 3275. History of the Jewish People. (3). History of Jewish people from antiquity to present; emphasis on their changing relationships to larger cultures in which they participated.

HIST 3280. African Civilization. (3). Survey of Africa's historical and cultural diversity, including African religious, social, political, intellectual, cultural, and artistic heritage, from ancient to modern times.

HIST 3290. Traditional Asia. (3). Comparative survey of civilizations in India, China, Japan, and Southeast Asia, from their beginnings through the 18th century.

HIST 3291. Modern Asia. (3). Asia from 1800 to present, focusing on Asian reactions to colonialism, and rise of modern nation states in India, Japan, China, and Southeast Asia.

HIST 3300. The Ascent to Civilization. (3). (Same as ANTH 3300). Interdisciplinary integrative examination of nature of civilization through investigation of origins of civilization and comparative study of world's earliest civilizations. PREREQUISITE: 9 hours of history or anthropology, including either HIST 1301 or ANTH 1100. [I]

HIST 3301. Early Modern Europe, 1500-1800. (3).

HIST 3302. Modern Europe, 1800 to Present. (3).

HIST 3320. The Ancient World. (3). Survey of civilizations of ancient Egypt and the Near East, Greece, and Rome.

HIST 3370. Medieval and Renaissance Europe. (3). Political, religious, social, economic, intellectual, cultural, and artistic developments in Europe from the 6th to the 16th centuries; ways of thought and life; collapse and recovery after the fall of the Roman Empire; flourishing of High Medieval culture; disasters after 1300; rise of humanism; Italian and Northern Renaissance.

HIST 3506. Cultural and Intellectual History of Europe. (3). (4506). Topics in history of European culture and thought from late Middle Ages to twentieth century. [W]

HIST 3803. American Diplomatic History. (3). Though including the 18th and 19th centuries, course concentrates on 20th century; emphasizes relationship between foreign policy and domestic forces. NOTE: Students who have received credit for HIST 3801 or 3802 will not be allowed credit for HIST 3803.

HIST 3811. United States Military and Naval History. (3). (4811). Developments since colonial period; emphasis on background and growth of national military and naval establishments, military and naval thought, difficulties accompanying modernization and assumption of global responsibilities, and problem of relationship between civilian and military-naval sectors in democracy.

HIST 3815. World War II. (3). Broad overview of origins, principal campaigns, and effects of World War II with some attention to domestic considerations; legacy of Great War, blitzkrieg, invasion of Europe, Pearl Harbor, Battle of Midway, defeat of Germany and Japan, and domestic impact of the war.

HIST 3817. Vietnam War in Global Perspective. (3). Traditional Vietnamese culture, its response to contact with the West and, more extensively, involvement of United States in the Indochina War.

HIST 3823. Economic History of the United States. (3). NOTE: Students who have received credit for HIST 3821 or 3822 will not be allowed credit for HIST 3823.

HIST 3840. United States Constitutional History. (3). Constitutional developments from colonial period to present, emphasis on English heritage, constitutional antecedents of revolutionary era, origins and growth of federal system under Constitution of 1787, and evolution of modern constitutional government in United States.

HIST 3863. Social and Intellectual History of the United States. (3). Survey of way Americans have thought about essential features of social and political order; development of and debate over central ideas of equality, freedom, and individualism that have defined the order of the common life. NOTE: Students who have received credit for HIST 3861 or 3862 will not be allowed credit for HIST 3863. [G]

HIST 3900. History of Tennessee. (3). Political, economic, and social development of Tennessee from earliest times. [G]

HIST 3905. History of Memphis. (3). Political, social and economic aspects of development of Memphis from foundation to present.

HIST 3920. The Old South. (3). Southern institutions prior to outbreak of Civil War.

HIST 3930. The New South. (3). South from Civil War to present.

HIST 4003. The Philosophy of History. (3). History as a distinct discipline; thought of leading Western philosophers of history about nature of history in its two senses: history as actuality and history as thought about actuality. [W]

HIST 4012. Directed Readings, Honors. (3). Under the direction of faculty member, student reads about

particular topic or topics. PREREQUISITE: admission to Honors Program.

HIST 4014. Directed Readings. (1-3). Readings on particular topic in history under supervision of member of faculty.

HIST 4020-6020. Internship in History. (3-12). Supervised internships working with various governmental agencies, private foundations or businesses of interest to historians. May be repeated for up to 12 hours credit. PREREQUISITE: permission of department.

HIST 4022-6022. Oral History. (3). Applied history, covering oral history theory, research, and interviewing procedures.

HIST 4050-69-6050-69. Special Topics in History. (1-3). Intensive study of selected topics; topic announced in Schedule of Classes.

HIST 4126-6126. Victorian and Edwardian England. (3). Social, political, and cultural adjustments of England to experience of industrialization in 19th and early 20th centuries.

HIST 4145-6145. History of Modern Germany. (3). Germany from origins of unification movement in Napoleonic Era through Second World War.

HIST 4160-6160. Russia to 1917. (3). Russia from earliest times to 1917; emphasis on the rise of serfdom and autocracy and evolution of revolutionary movement.

HIST 4162-6162. History of the Soviet Union. (3). Detailed study of 1917 Revolution and major developments in government, economy, cultural and social life, and international affairs that followed. [W]

HIST 4200-6200. History of Spain. (3). Spanish institutions, culture and politics from ancient times to present.

HIST 4240-6240. History of Mexico. (3). Political, economic, social, and cultural development of Mexico from ancient times to present.

HIST 4250-6250. History of Brazil. (3). Political, economic, social, and cultural development of Brazil from early times to the present.

HIST 4260-6260. The World Since 1945. (3). Global ideological, economic and political developments since World War II. Emphasizes rising affluence of industrial free market, movement of former colonies to independence, and growth in diversity among Soviet bloc nations.

HIST 4272-6272. Modern Middle East. (3). (3271). Political, diplomatic, social and religious developments in Middle East from 1800 to present.

HIST 4273-6273. Islamic Egypt. (3). Study of the political, economic, social, and cultural development of Egypt from the Islamic conquest (640) to the present.

HIST 4285. Africa: Antiquity and Tradition. (3). African history from ancient civilizations to Sudanic kingdoms; social, political, economic, intellectual, and cultural developments of Africa from the earliest human records to era of the great states of the western Sudan; emphasis on African ecumena, traditions of the major regions of the continent.

HIST 4286. Africa: Continuity and Flux. (3). African history in the period of globalization from the slave trade to colonialism; social, political, economic, intellectual, and cultural developments of Africa; Africa's involvement in the Atlantic world; major regions of the continent with emphasis on precolonial topics.

HIST 4287. Africa: Twentieth Century. (3). Colonialisms and nationalisms in Africa; history of colonial and post-independence periods, with focus on examining major issues in modern African history from modern African intellectual perspectives; emphasis on nationalist and pan-Africanist analytical frameworks.

HIST 4292-6292. History of Modern China, 1800 to the Present. (3).

HIST 4294-6294. History of Modern Japan, 1800 to the Present. (3).

HIST 4295-6295. Intellectual History of East Asia Since 1800. (3). Evolution of modern Chinese and Japanese thought.

HIST 4320-6320. Ancient Near East. (3). From beginning Mesopotamia down through the great oriental empires of Assyria, Babylon, Persia.

HIST 4321-6321. The Greek Experience. (3). Politics, society and culture in ancient Greece to Alexander the Great.

HIST 4322-6322. The Roman World. (3). Hellenistic kingdoms and Roman Empire.

HIST 4323-6323. Egypt of the Pharaohs. (3). Survey of ancient Egyptian civilization, covering major political and social developments, religion, writing and literature, Egypt's relations with the rest of Africa, and sample problems illustrating how Egyptologists make sense of the scattered remains from which our understanding of ancient Egypt must be built.

HIST 4361-6361. History of the Byzantine Empire. (3). Byzantine or East Roman Empire from 330 to 1453 and its influence on Slavic, Turkic, and Islamic peoples.

HIST 4371-6371. Early Middle Ages. (3). Late Roman Empire, migration period, emergence of Islamic, Byzantine, and West European cultures through period of Investiture Controversy.

HIST 4372-6372. The High Middle Ages. (3). Summary of the Early Middle Ages, economic, technological, cultural, intellectual, and religious expansion after 1000; courtly love, Romanesque and Gothic art; limited government, church and state conflicts; reason vs revelation; universities, scholasticism, women, Judaism, science, Franciscans, heretics; life of ordinary people; disasters of the 14th century, roots of the Renaissance.

HIST 4380-6380. Renaissance Europe, 1300-1520. (3). Rise of humanism during 14th century disasters; intellectual, economic, social, cultural, religious, and artistic developments of 14th through 16th centuries, emphasizing Italy, especially Florence; women, life of ordinary people; guilds, republicanism and despotism, neoplatonism; Christian and civic humanism, Northern Renaissance.

HIST 4390-6390. Europe in the Age of the Reformation. (3). Characteristic political, social, economic, intellectual, and cultural developments and religious conflicts of late fifteenth and sixteenth centuries.

HIST 4401-6401. Europe in the Age of the Baroque. (3). Political crises, development of monarchical absolutism, rise of modern science, and cultural synthesis in seventeenth century.

HIST 4440-6440. The Era of the French Revolution. (3). The Old Regime, origins and development of Enlightenment thought, and revolutionary and counter-revolutionary movements in 18th century Europe.

HIST 4453-6453. Europe, 1815-1914. (3). NOTE: Students who have received credit for HIST 4451 or 4452 will not be allowed credit for HIST 4453.

HIST 4461-6461. Europe, 1914-1945.(3).

HIST 4620-6620. Colonial America, to 1783. (3). Political development and economic, social and cultural institutions of English Colonies in America, including origins and conduct of American Revolution.

HIST 4630-6630. The New Nation, 1783-1815. (3).

HIST 4640-6640. Jacksonian America, 1815-1850. (3).

HIST 4670-6670. Civil War and Reconstruction, 1850-1877. (3).

HIST 4680-6680. Emergence of Modern America, 1877-1914. (3). United States from end of Reconstruction to outbreak of World War I.

HIST 4701-6701. The United States, 1914 to the Second World War. (3). United States from outbreak of World War I to World War II

HIST 4702-6702. United States from the Second World War. (3). The United States from World War II to present.

HIST 4823-6823. American Labor History. (3). Historical development of labor movement in United States; emphasis on social, economic, and political trends related to labor movement.

HIST 4824-6824. Business History. (3). Historical development of business in the United States; attention to social, economic, and political trends related to American business communities.

HIST 4831-6831. History of American Family. (3). Analysis of changes in family size and structure and relationships between family and society from colonial times to present.

HIST 4851-6851. History of Women in America. (3). History of women from discovery of America to present. [G]

HIST 4861-6861. Parks/People/Public Policy. (3). Comparative study of history and administration of public land areas in the United States, and of American conservation.

HIST 4863-6863. History of Childhood in America. (3). Historical consideration of children and childhood in American society from early 17th century to present. [W]

HIST 4871-6871. United States Urban History. (3). Development of American cities, including formation of local social, economic, and political institutions, and impact of urbanization on United States.

HIST 4881-6881. African American History. (3). History and culture of African Americans in light of their experiences; aspects of African American life and attitudes of dominant society within which African Americans lived; ways African American men and women shaped and nurtured their own lives, culture and history in U.S. [G]

HIST 4882-6882. Civil Rights Movement in the United States Since 1930. (3). Struggle for African American equality, with emphasis on key civil rights issues, events, leaders, and strategies.

HIST 4941-6941. History of the American Indian. (3). Role of Indian in American history.

HIST 4996. Honors Thesis. (3). Under direction of faculty member, and with approval of Honors Committee,

student writes thesis based on research in primary and/or secondary sources. PREREQUISITE: admission to Honors Program. Credit cannot be earned for both HIST 4996 and 4998.

HIST 4998. Historical Research and Writing. (3). The nature of historical research and writing as practiced by professional historians; includes the writing of a substantial research paper. PREREQUISITES: 21 hours in history. Credit cannot be earned for both HIST 4998 and 4996.

HIST 4999. The Nature of Historical Inquiry. (3). A synthetic examination of the nature of historical inquiry as practiced by the discipline of history, including historical interpretation and controversy, analyses of historical sources, historical research and writing and integration of the various subfields of the discipline of history. PREREQUISITE: 21 hours in history. [I]

◆(HMSE) HUMAN MOVEMENT SCIENCES AND EDUCATION

RALPH C. WILCOX, Ph.D., *Chair*

Room 106, Fieldhouse

<http://www.hmse.memphis.edu/>

HMSE 1100. Concepts of Fitness and Wellness. (2). (HPER 1100). Emphasis on individual responsibility for achieving optimal well-being and preventive health practices that promote healthful lifestyles and reduce risk factors [G]

HMSE 2102. First Aid and CPR. (3). (SAFE 2102 & SAFE 3302, HLTH 2102). Safety skills and techniques of immediate and temporary care in the event of injury or sudden illness. Includes necessary training and skill for CPR certification. Successful completion qualifies the student for First Aid certificate endorsed by the American Red Cross. This course may be taken to improve the grade for one, but not both, of the former courses.

HMSE 4999. Senior Project in Human Movement Sciences and Education. (3). (HPER 4999). Comprehensive final project demonstrating mastery of pedagogy and knowledge. Emphasis on independent work, class discussion and student project. Students will receive a letter grade or an in-progress grade. PREREQUISITES: Senior status and permission of instructor. This represents a culminating experience and can only be conducted when all other course work is complete. COREQUISITE: SLS 4605. (A-F, IP) [I]

(HPRO) HEALTH PROMOTION

Department of Human Movement Sciences and Education

RALPH C. WILCOX, Ph.D., *Chair*

Room 106, Fieldhouse

<http://www.hmse.memphis.edu/>

HPRO 4000-6000. Lifetime Wellness I. (3). (HLTH 4000). Concepts, applications and assessments for secondary teachers of Lifetime Wellness. Emphasis on personal fitness, disease prevention and nutrition.

HPRO 4001-6001. Lifetime Wellness II. (3). (HLTH 4001). Concepts, applications and assessments for secondary teachers of Lifetime Wellness. Emphasis on mental health, safety and first aid, sexuality and family life, and substance use/abuse.

HPRO 4401-6401. Death and Dying Education. (3). (HLTH 4203). An examination of dying and death phenomena via cognitive, affective, experiential and cultural perspectives.

HPRO 4501-6501. Sexuality Education. (3). (HLTH 4204). Special study of selected phases of human sexuality.

HPRO 4601-6601. Drug Education. (3). (HLTH 4205). Examines current issues concerning drug use and abuse including etiology, knowledge base, drug laws, and educational prevention approaches.

HPRO 4602-6602. Organization and Administration in Public Health. (3). (HLTH 4602). Basic functions, principles, and procedures of organization and administration as applied to health; emphasis on relationship and responsibilities of personnel in planning, promoting, improving, and evaluating total health activities in family-centered health services. This course will not be offered after December 2001.

(HPRM)◆ HOSPITALITY AND RESORT MANAGEMENT

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*

CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*

Room 114, Fogelman College of Business and Economics Building

HPRM 3010. Hospitality and Resort Industry Colloquium. (1). Introduction to hospitality and resort

industry; presentations and discussions by major industry professionals; students submission of a synopsis of each speaker's major points. PREREQUISITE: Junior-level standing.

HPRM 4315. Hospitality Human Resource Management. (3). Topics include acquisition, utilization, and retention of human resources in hospitality industry; human resource planning, job analysis, recruitment, selection, orientation, training, development, motivation, associate relations, performance appraisal, legal issues. PREREQUISITE: MGMT 3110.

HRM 4320. Hospitality Services Marketing. (3). Principles and models of services marketing with focus on applications to hospitality services industry; expansion of traditional marketing mix variables into additional development of hospitality service concepts, marketing plans, and service quality assessments. PREREQUISITE: MKTG 3010.

HPRM 4322. Advanced Food and Beverage Management. (3). (Same as CSED 4322). Foundations of managing restaurants and associated beverage operations; planning and control procedures, human resources management, customer service, marketing strategies, and emerging technologies; relationship between food and beverage operations and overall hospitality organization. PREREQUISITE: MGMT 3110, MKTG 3010, or permission of advisor.

HPRM 4330. Managing Hotel and Resort Operations. (3). Management of critical resources for running hotel and resort operation in effective and efficient manner; customer services, service quality, and service delivery. PREREQUISITE: ISDS 3510.

HPRM 4340. Information Technology for Hospitality and Resort Management. (3). Framework for information technology, systems development methodologies, and strategic information systems planning; current issues relating to the hospitality industry; focus on using information technology in networked environment to achieve organizational goals and objectives.

HPRM 4350. Properties Development and Planning. (3). Problems and opportunities inherent in developing and planning resort and hospitality facilities; sequence of property development, conceptual and space planning, design criteria, and construction management; establishing appropriate facilities requirements, understanding industry practices, and implementing properties decisions with integrated design, operations, financial and real estate framework.

HPRM 4911. Internship in Hospitality and Resort Management. (3). Entails the involvement of the student to gain on-the-job experience in a hospitality organization. Project must be approved and supervised by area faculty members in coordination with professionals from business organizations.

(ICL) INSTRUCTION AND CURRICULUM LEADERSHIP

DENNIE L. SMITH, Ed.D., *Chair*

Room 106D, College of Education Building

<http://www.coe.memphis.edu/coe/ICL/icl.html>

ICL 0555. Test Taking Skills. (3). (CIED). Educational principles, strategies, and techniques designed to enhance individual test taking skills. Emphasis on preparation for the National Teacher's Exam (NTE). This course will not count in any degree program. (S/U)

ICL 2601. Clinical Experience. (1). (EDUC). Observation and participation in educational settings; emphasis on how teachers utilize developmental concepts and principles of learning with students. COREQUISITE: LEAD 2010.

ICL 3000. Principles of Teaching. (3). (EDUC). Research practices and application of principles of instruction that promote effective teaching and facilitate cognition. PREREQUISITES: EDPR 2111, LEAD 2010.

ICL 3501. Classroom Management. (3). (EDUC). Utilization of appropriate knowledge and skills for managing total classroom environment; emphasis on development of skills that facilitate effective teaching through constructive management techniques.

ICL 3511. School and Community Relations.(3) (CIED 3511, ELED 4411). Development of strategies for communicating with and involving parents and community members in school activities and student learning.

ICL 3900. Education Honors Program Colloquium. (3). (EDUC). Interdisciplinary colloquium on a broad education theme or topic. PREREQUISITES: junior standing and permission of the Education Honors Council.

ICL 3901. Special Problems in Instruction. (1-6). (CIED). Supervised individual investigation in area of instruction. PREREQUISITE: experience as teacher or satisfactory evidence of being qualified to benefit from course.

ICL 4001. Learning in the Urban Environment. (3). Use of appropriate knowledge and skills for managing total learning environment in both early and middle school setting; emphasis on development of skills that facilitate effective teaching through appropriate management techniques and involvement of parents and community members. PREREQUISITES: LEAD 2010 SPED 2000. ♦ *Ten hours field experiences.*

ICL 4111-6111. Library Materials for Children. (3). (CIED, LIBS 4111). Evaluation and selection of books and related library materials for leisure interests and curriculum needs of elementary school children; extensive reading, introduction to selection criteria, bibliographic aids, authors and illustrators and types of literature and information books.

ICL 4121-6121. Library Materials for Young People and Adults. (3). (CIED, LIBS 4121). Evaluation and selection of books and related library materials for leisure interests and curriculum needs of young people and adults from junior high school up; extensive reading, introduction to selection criteria, bibliographic aids, authors and illustrators, and types of literature and information books.

ICL 4450. Individualized Instruction Practicum. (1-3). (CIED). Implementation of instruction in individual and small group situations for learners experiencing difficulty in selected basic skills areas; requires design and delivery of tutorial type instruction under guidance of supervisory personnel. Repeatable to maximum of 9 semester hours. (S/U)

ICL 4601-6601. Workshop in Curriculum and Instructional Leadership-Environmental Education (3). (CIED). Current, relevant environmental issues with emphasis on resources and appropriate strategies for application of knowledge.

ICL 4701-09-6701-09. Workshops in Curriculum and Instructional Leadership. (1-9). (CIED). Various areas of curriculum and elements of instruction explored. Active student participation included. See Schedule of Classes for specific workshop number and topic. Repeatable for maximum of 9 semester hours in any one topic. (S/U)

ICL 4715. Clinical/Practicum. (2). (EDUC 4701). Seminars and participation as assistant to classroom teacher; emphasis on teacher roles and on adapting subject discipline to school curriculum. PREREQUISITES: EDPR 2211; LEAD 2010. (S/U)

ICL 4761-6761. Aerospace Education in Schools (3). (CIED). Aerospace content and flight experiences. Emphasizes classroom application.

ICL 4762-6762. Advanced Aerospace Education in Schools. (3). Theory, principles and practices related to historical development of aerospace; emphasis on both civilian and military uses of aerospace capabilities. Appropriate utilization of aerospace research, concepts, and ♦ spinoffs ♦ for instructional purposes in the classroom at all grade levels. PREREQUISITE: ICL 4761.

ICL 4800. Professional Seminar. (3). (CIED). Senior seminar taken concurrently with student teaching which requires students to analyze and seek solutions to problems encountered in current practices and issues in education. Students draw upon each specialization within discipline to integrate and synthesize knowledge and experience in development of their roles as professional educational leaders. COREQUISITE: student teaching. [I]

ICL 4901-4919. Student Teaching. (2-10). Full-time planned and supervised experience in a setting appropriate to student ♦s area of specialization providing opportunities to synthesize knowledge and skills and demonstrate professional competencies in educational setting. PREREQUISITE: approval from Teacher Education Director. COREQUISITE: ICL 4800. (S/U)

ICL 4901. Student Teaching in Kindergarten. (EDUC 4901-002). (SIU)

ICL 4902. Student Teaching in Primary Grades. (S/U)

ICL 4903. Student Teaching in Preschool. (S/U)

ICL 4904. Student Teaching in Grades 1-8. (EDUC 4901-001). (S/U)

ICL 4905. Student Teaching in Special Education: Modified. (EDUC 4901-003). (S/U)

ICL 4906. Student Teaching in Special Education: Comprehensive. (S/U)

ICL 4907. Student Teaching in Secondary School. (EDUC 4901-004). (S/U)

ICL 4908. Student Teaching in Health. (EDUC 4901-008). (S/U)

ICL 4909. Student Teaching in Exercise Science and Education. (EDUC 4901-012). (S/U)

ICL 4910. Student Teaching in Vocational Home Economics. (EDUC 4901-013). (S/U)

ICL 4911. Student Teaching in Music. (S/U)

ICL 4912. Student Teaching in Art. (EDUC 4901-005). (S/U)

ICL 4950-59-6950-59. Special Topics in Instruction and Curriculum Leadership. (1-3). (CIED). Current

topics in areas of curriculum and instruction at all levels. See Schedule of Classes for special topic.

ICL 4960. Academic Content for Teaching. (1-9). (ICL 5501). Academic content areas in disciplines supportive of school curriculum. May be repeated to remove deficits for teacher licensure and with change of content. **(F, Sp)**

(ID&T) INSTRUCTIONAL DESIGN AND TECHNOLOGY

DENNIE L. SMITH, Ed.D., *Chair*

Room 106D, College of Education Building

<http://www/coe.memphis.edu/coe/ICL/icl.html>

ID&T 3600. Technology in Education. (3). (EDUC 3600, ICL 3600). Integration of varied uses of technology into classroom learning environment while increasing students' technological knowledge and skills; word processing, databases, spreadsheets, authoring, internet browsers, presentation, communication. *Five hours field experience required.*

(INSE) INDUSTRIAL AND SYSTEMS ENGINEERING

Department of Civil Engineering

MICHAEL RACER, Ph.D., *Coordinator*

Room 104, Engineering Building

INSE 3601. Engineering Design and Analysis. (3). Review of probability theory, random variables, mathematical expectations; introduction to sampling distributions, estimation theory, hypothesis testing, and regression; applications oriented towards engineering. **(Sp)** COREQUISITE: MATH 4637.

INSE 3610. Operations Research I. (3). Introduction to essential optimization tools: linear programming, goal programming, network analysis, dynamic programming, integer programming, nonlinear programming; presentation of case studies. **(F) [C]**

INSE 3612. Engineering Applications in Linear Optimization. (3). Review of linear algebra fundamentals; emphasis on modeling and formulation of LP's; development and use of simplex method, revised simplex method; development of linear models for problems in a range of engineering disciplines; motivation and use of duality, and sensitivity analysis. **(Sp).** PREREQUISITES: MATH 4240, INSE 3610.

INSE 3640. Operations Research II. (3). Review of probability; introduction to renewal processes, Markov Chains, and queueing; emphasis on applications. **(Sp).** PREREQUISITE: MATH 4637.

INSE 3644. Simulation. (3). Introduction to discrete and continuous event simulation; code development and verification; data collection and analysis emphasized; model validation, and performance enhancement techniques discussed. **(F)** PREREQUISITES: INSE 3601, 3640.

INSE 4608. Modeling. (3). Issues in problem formulation and modeling philosophy; case studies and formulation; emphasis on the process, rather than the product; topics include deterministic and stochastic models; data structures. **(F)** PREREQUISITES: INSE 3601, 3610, 3640. **[W]**

INSE 4610. Integer Programming. (3). Optimization and heuristic techniques; branch-and-bound, cutting plane are emphasized; case studies; brief introduction to complexity theory. **(Sp)** PREREQUISITES: INSE 3610, 3612.

INSE 4612. Network Models. (3). Path and tree problems introduced; focus on network flow problems, with discussions and case studies; scheduling problems will be addressed. **(F)** PREREQUISITES: INSE 3610, 3612.

INSE 4614. Dynamic Programming. (3). Both deterministic and stochastic models discussed; emphasis on formulation of models, with applications in equipment replacement, resource allocation, scheduling, and search. **(F)** PREREQUISITES: INSE 3610, 3612.

INSE 4642. Forecasting. (3). Development of trend analysis; ARMA/ARIMA Models and Box-Jenkins are central; topics include smoothing techniques, trends/seasonalities, regression, econometric models. **(F)** PREREQUISITE: INSE 3640.

INSE 4644. Inventory and Queueing. (3). Graphical representations of arrivals, storages, delays, and departures; time-dependent demand, and pulsed processes; deterministic analyses of simple systems; applications from service and manufacturing. **(Sp)** PREREQUISITE: INSE 3640.

INSE 4670. Quality Assurance and Reliability. (3). Data display and reduction; sampling techniques; economics of sampling; quality by design; network and component reliability; applications in equipment management. **(Sp)** PREREQUISITE: INSE 3640.

INSE 4672. Work Measurements. (3). Topics included are: performance standards, job evaluation, work sampling, process capability, time and motion studies. **(F)**

INSE 4674. Production Systems. (3). Overview of common and leading edge manufacturing processes; system design and evaluation; modeling CIM, MRP, JIT, group technology, and TQM; project management. **(Sp)**

INSE 4676. Facilities Planning. (3). Systems design and evaluation; development and use of computer support tools; line balancing, conveyor systems, integrated material control systems. **(F)**

INSE 4678. Logistics. (3). Logistic design and analysis; storage and retrieval, and inventory management systems; use of computer control systems is emphasized; automated mechanisms discussed. **(Sp)**

INSE 4690. Seminar. (1-3). Presentations by faculty, members of local industry, and upper division and graduate students. May be repeated for up to 6 hours credit. **(F, Sp)**

INSE 4691. Project. (3). Design and analysis of a systems engineering problem; evaluation of criteria and objectives; includes final oral and written reports. **PREREQUISITE:** Must be taken in final semester. **(F, Sp)**
[I]

◆(INTD) INTERDISCIPLINARY STUDIES

Interdisciplinary Studies Office

Room 213, Mitchell Hall

◆ The following courses, INTD 2100, 4100-4110, and 4120-4130, compose part of the Interdisciplinary Environmental Program described under the College of Arts and Sciences. Before offering any of these courses, an instructor must gain approval from the university's Environmental Research, Issues, and Programs Committee (213 Mitchell Hall; 901-678-2253).

INTD 2100. Introduction to Environmental Studies. (3). Interdisciplinary environmental science course that integrates material from the physical, natural and social sciences including ecosystems, land and water resources, population dynamics and control, pollution, and environment and society.

INTD 4100-4110. Topics in Biological-Physical Environmental Studies. (3). Biological-Physical environmental topics course. Each offering of this course must be approved by the Environmental Research, Issues, and Programs Committee. A student may repeat this course when the topics are different, but may not receive more than a total of 6 hours credit for 4100-4110.

INTD 4120-4130. Topics in Socio-Behavioral Environmental Studies. (3). Socio-behavioral environmental topics course. Each offering of this course must be approved by the Environmental Research, Issues, and Programs Committee. A student may repeat this course when the topics are different, but may not receive more than a total of 6 hours credit for 4120-4130.

(INTL) INTERNATIONAL STUDIES

CALVIN ALLEN, Ph.D., *Director*

Room 213, Mitchell Hall

www.people.memphis.edu/~intstud

INTL 1101. Analysis of Developing Nations. (3). Interdisciplinary survey of developing nations, other societies and problems of technologically developing nations. Basic concepts and methods of social sciences employed to study processes of social change in cross-cultural comparison. **NOTE:** A student may not receive credit for both INTL 1101-1102 and UNIV 1410.

INTL 1102. The Third World: A Regional View.(3). Interdisciplinary survey of contemporary developing nations within a major world region. Regional focus on Africa, Latin America, Southeast Asia, or Indian Subcontinent.

INTL 4601. Seminar in International Studies. (3). Investigation of selected topics in international relations from interdisciplinary perspective. Individual research and presentation of major paper that integrates tools, data or concepts of two or more disciplines. **PREREQUISITE:** permission of International Studies Director. **[W, I]**

INTL 4911. Internship in International Studies. (1-6). Practical experience in international organization. Students placed for some period of time with governmental or private organization to obtain practical experience in foreign policy making, problems of development, and/or cross-cultural communication. Academic credit granted upon certification of cooperating agency and acceptance by faculty of written report by student. May be repeated for up to 6 hours credit. **PREREQUISITE:** permission of Director of International Studies.

INTL 4912. Directed Individual Study. (1-6). Individually directed advanced reading and/or research in special areas of interest. NOTE: Course may be repeated for a maximum of 6 hours credit. PREREQUISITE: permission of Director of International Studies.

(ISDS) INFORMATION SYSTEMS AND DECISION SCIENCES

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*
 CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*
Room 114, Fogelman College of Business and Economics Building

Students must have junior standing and have met specific course prerequisites with a grade of C (2.0) or better to be eligible for all 3000- and 4000-level courses. In addition to these requirements, students seeking a degree in the Fogelman College of Business and Economics must have (1) completed all required lower division business courses with a minimum grade of C (2.0) in each; (2) minimum of 2.25 GPA in all required lower division business courses and MATH 1312, and (3) 55 hours of course work including MATH 1312 and 9 hours of English (See B.B.A. Degree Requirements-General Requirements).

ISDS 1240. Programming for Business. (3). (ADOS 1240). Programming methodology using BASIC and FORTRAN languages and business applications; designing and writing a variety of programs for use on CRT terminals, minicomputers, and microcomputers; emphasis on financial, accounting, management, economic, and office areas.

ISDS 2710. Business Statistics I. (3). Introduction to basic statistical procedures for analysis and interpretation of business data; collection and presentation of data, probability theory, measures of central tendency and variability, sampling distributions, estimation of parameters, and principles of hypothesis testing. Introduction to a statistical software package. COREQUISITE: MATH 1312.

ISDS 2711. Business Statistics II. (3). Emphasis on statistical analysis and decision making; nonparametric models, index numbers, analysis of variance, simple and multiple correlation and regression, and time series analysis. Extensive computer applications are used for decision support. PREREQUISITE: ISDS 2710; MATH 1312.

ISDS 2749. Introduction to Business Microcomputer Applications. (3). Introduction to use of microcomputers for performing business activities; use of lab environment with direct instruction uses of current software and electronic communication.

ISDS 2755. Introduction to Management Information Systems. (3). (2750) Introduction to major concepts in business information systems; emphasis on use of information systems to solve business problems. COREQUISITE: ISDS 2749.

ISDS 2770. Computer Hardware/Software. (3). Provides experience working with common operating systems including UNIX, DOS/Windows, and Mainframe; file manipulation, editing functions, communication, and shell programming. PREREQUISITE: ISDS 2749, 2755.

ISDS 3510. Production and Operations Management I. (3). Operations as a key element of organizational strategy from a competitive viewpoint. Integration of various techniques to facilitate solution to productivity and quality issues in both manufacturing and service industries using multifunctional approaches in the creation of goods and services. PREREQUISITE: ISDS 3711.

ISDS 3711. Analytical Tools for Business Decisions. (3). Applied analytical and qualitative methods for analysis of common business decision problems; regression, math programming and optimization; forecasting, computer simulation, and decision analysis. PREREQUISITES: ISDS 2710 and 2749 or equivalent. [C]

ISDS 3745. Application Program Development I. (3). (3750). Introduction to business application programming; program development using languages and techniques widely employed in business environment.

ISDS 3755. Application Program Development II. (3). (3730). Basic computer architecture knowledge necessary to master programming in business settings; program development employing random access and sequential file structures. PREREQUISITE: ISDS 3745 or equivalent.

ISDS 3760. Operations Research. (3). Introduction to decision making, concentrating on problem solving technique; emphasis on problem definition, model construction, and various solution techniques including linear programming, project analysis and control, queueing methods, and simulation. PREREQUISITES: ISDS 3711, 2749 and 2755, or equivalent.

ISDS 3770. Systems Analysis Methods. (3). (MGMT 2780). Overview of systems development life cycle; emphasis on current systems documentation through use of classical and structured tools and techniques for

describing process flows and data flows, data structures, file and input/output design and program specifications, data gathering and information reporting activities, transition from analysis to design. PREREQUISITES: ISDS 2749, 2755.

ISDS 3775. Database Management. (3). (MGMT 4755). Focus on designing programs written in a high-level language for business applications; selecting appropriate file organization; designing data models with electronic commerce implications; utilizing appropriate DBMS programs. PREREQUISITES: ISDS 2770.

ISDS 3780. Application Program Development III. (3). Programming elements including object oriented programming extensions among traditional high level programming language; editing files, compiling and debugging programs. PREREQUISITE: ISDS 3745 or equivalent.

ISDS 3790. Network Design and Management. (3). Introduction to business telecommunications concepts and terminology; decentralization of computer processing, communication links, communications-oriented hardware and software, network design, and network management. PREREQUISITES: ISDS 2749, 2755.

ISDS 4000-09. Special Topics in Management Information Systems. (3). Selected topics of current interest in management information systems and computer software application. Topics are varied and announced in Schedule of Classes.

ISDS 4110-19. Special Topics in Management Information Systems and Decision Sciences. (3). Topics varied and announced in Schedule of Classes. PREREQUISITE: consent of instructor.

ISDS 4510. Production and Operations Management II. (3). (MGMT 4510). Emphasis on entire production system; interface with engineering, role of materials management, relationship to data base management, and problems of systems coordination; master planning, value analysis, and organizational aspects of production environment critically examined. PREREQUISITES: MGMT 3110, ISDS 3510.

ISDS 4511. Materials Management. (3). (MGMT 4511). In-depth course in planning and control of materials requirements; order point models and systems and requirements planning techniques studied; aggregate inventory management, distribution, inter-plant inventories, and design of materials management systems emphasized. PREREQUISITES: MGMT 3110, ISDS 3510.

ISDS 4512. Productivity Management. (3). Total systems perspective toward analyzing productivity issues that affect organizational performance. Importance of correctly defining and measuring productivity and supporting activities to maintain it. PREREQUISITE: ISDS 3510 or consent of instructor.

ISDS 4760. Web Site Design. (3). (4765). Design, development, implementation and evaluation of business Web sites; global design and implementation issues.

ISDS 4770. Structured Systems Analysis and Design. (3). (MGMT 3780). Advanced study of structured systems development; emphasis on strategies and techniques of structured analysis and structured design for producing logical methodologies aiding in dealing with complexities in development of information systems. PREREQUISITES: ISDS 3770, 3775.

ISDS 4780-6780. Applied Software Development Project. (3). (MGMT 4780). Application of programming and systems development concepts, principles and practices to a comprehensive system development project; team approach used to analyze, design and document realistic systems of moderate complexity; use of project control techniques, formal presentations and group dynamics in development of information system; development of database to support system. PREREQUISITES: ISDS 3770, 3775.

ISDS 4790-6790. Management Information Systems. (3). Problems and techniques concerning design and installation of responsive systems brought together; special attention to executive use of system's product; system approaches utilizing current planning and control models studied through current literature and texts in computer field. PREREQUISITES: ISDS 2749, 2755 and one college level mathematics course; junior standing, or permission of instructor.

ISDS 4795. End User Support: Managerial Concepts and Applications. (3). Theory, methodology, and application tools necessary to management of end user computing environment; emphasis on management aspects of the unique environment; advanced techniques of pertinent application tools commonly found in end user environment as crucial to management of end user computing. PREREQUISITE: ISDS 3775.

ISDS 4800. Information Resource Management. (3). (4785). Broad overview of information systems management function with particular attention to planning, organizing and controlling user services and to managing computer information systems development process. PREREQUISITES: ISDS 3770, 3775 and 3790.

ISDS 4910. Management Information Systems and Decision Sciences Problems. (1-3). Approved research projects in student's major area under supervision of staff members. PREREQUISITES: senior standing and permission of the Director of Undergraduate Programs.

ISDS 4911. Internship in Management Information Systems and Decision Sciences. (1-6). Internship in business organization to gain on-the-job experience. Project approved and supervised by area faculty. Credit allowed only after acceptance of report. PREREQUISITES: senior standing and a minimum GPA of 2.75.

ISDS 4996. Senior Honors Thesis in Management Information Systems. (3). Independent research open only to those students enrolled in the honors program. Thesis supervised by area faculty member. PREREQUISITES: senior standing and permission of the Director of the College Honors Program.

(ITAL) ITALIAN

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

Room 375, Dunn Hall

ITAL 1101. Elementary Italian I. (3). Basic skills fundamental to language proficiency and culture.

ITAL 1102. Elementary Italian II. (3). Further development of basic skills fundamental to language proficiency and culture. PREREQUISITE: ITAL 1101 or equivalent.

ITAL 2201. Intermediate Italian I. (3). Comprehensive review of basic grammar, exercises in conversation, writing, and cultural readings. PREREQUISITE: ITAL 1102 or equivalent.

ITAL 2202. Intermediate Italian II. (3). Continued development of basic language skills through oral and written practice. PREREQUISITE: ITAL 2201 or equivalent.

ITAL 3301. Conversation and Composition. (3). Development of oral proficiency and writing skills. PREREQUISITE: ITAL 2202 or equivalent.

ITAL 3411. Introduction to Italian Literature. (3). Survey of major literary works from the Middle Ages to the present. PREREQUISITE: ITAL 2202 or equivalent.

ITAL 4441. Dante. (3). Study of the Vita Nuova and the Divina Commedia. Students taking this course do not receive credit for LALI 4441. PREREQUISITE: ITAL 2202 or permission of instructor.

[Last Updated: 6/12/15](#)

(JAPN) JAPANESE
Department of Foreign Languages and Literatures
 RALPH ALBANESE, Ph.D., *Chair*
Room 375, Dunn Hall

JAPN 1101. Elementary Japanese I. (3). (LALI 1702005). Principles of pronunciation; everyday expression; basic sentence patterns through oral practice, writing and reading using the Roman alphabet.

JAPN 1102. Elementary Japanese II. (3). (LALI 1702005). Continued study of sentence patterns through oral and (Romanized) written practice; the katakana and hiragana syllabaries.

JAPN 2201. Intermediate Japanese I. (3). Continued study of sentence patterns through oral and written practice; introduction to the Japanese writing system with approximately 250 kanji and their compounds in readings and written practice.

JAPN 2202. Intermediate Japanese II. (3). Continued study of sentence patterns; conversation; additional kanji to a total of approximately 500; readings.

JAPN 3301. Conversation and Composition I. (3). Comprehensive review of Japanese grammar for conversation and composition; continued study of sentence patterns through oral and written practice; conversation; additional 100 kanji and their compounds in readings and written practice. PREREQUISITE: JAPN 2202 or equivalent.

JAPN 3302. Conversation and Composition II. (3). Comprehensive review of Japanese grammar for conversation and composition; continued study of sentence patterns through oral and written practice; conversation; additional kanji to a total of approximately 500 and their compounds in readings and written practice. PREREQUISITE: JAPN 3301 or equivalent.

JAPN 3401. Introduction to Japanese Literature and Culture. (3). Introduction to Japanese literature and culture through a selection of unique traditional folktales and fables, segments of the more important literary works written since 1900. PREREQUISITE: JAPN 3301 or equivalent.

JAPN 4501. Japanese Linguistics. (3). Theory and hands-on data analysis in various aspects of Japanese linguistics, including phonetics, phonology, syntax, sociolinguistics, psycholinguistics. PREREQUISITE: JAPN 3301, 3302 or permission of instructor.

JAPN 4780. Individual Studies in Japanese. (1-3). Directed individual study in selected area of Japanese chosen in consultation with instructor. Repeatable for a maximum of 6 credit hours. PREREQUISITE: permission of instructor.

(JDST) JUDAIC STUDIES
 DAVID PATTERSON, Ph.D., *Director*
Room 301, Mitchell Hall

JDST 3201. Jewish Heritage I. (3). Heritage of Jewish people from earliest Israelites to 1492; interdisciplinary emphasis upon development of Jewish culture and ideas.

JDST 3202. Jewish Heritage II. (3). Continuation of JDST 3201; development of Jewish heritage to modern times.

JDST 3801. Jewish Thought I. (3). (UNIV 3801). Thinkers and texts that shaped Jewish thought and life in ancient and medieval times; Talmud, the Midrash, the Kabbalah, and such thinkers as Saadia Gaon, Solomon ibn Gabriel, Judah Halevi, Maimonides.

JDST 3802. Jewish Thought II. (3). Continuation of JDST 3801, from 16th century until modern times; concepts of God, humanity, nature, good and evil, making meaning out of life, and others.

JDST 4511. Holocaust Studies. (3). (Same as UNHP 4404). Interdisciplinary study of issues that arise out of the Holocaust; questions of good and evil, divinity and humanity, truth and responsibility. [W, I]

JDST 4661. Sacred Hebrew Texts. (3). Interdisciplinary examination of portions of Hebrew Bible, Mishnah, Midrash, and other texts along with commentaries. All texts will be read in translation.

JDST 4671. Jewish Literary Texts. (3). Development of Jewish narrative traditions; Jewish poetry, fiction, drama studied from perspectives of different national cultures in which Jewish literature has emerged. All texts will be read in translation.

JDST 4700-4799. Special Topics. (3). Examination of selected topics announced in Schedule of Classes.

*Note: Variable credit, 1-3 hours.

JDST 4820. Zionism. (3). Interdisciplinary study of development of Zionism from mid 19th century to mid 20th century including consideration of significance of Zionism since the founding of the State of Israel.

JDST 4830. Politics of Israel. (3). (UNIV 4830). Israeli political process.

JDST 4840-6840. Israel: Antiquity in Modernity. (3). (Same as ANTH 4840-6840). Interdisciplinary examination of relationship between ancient traditions and modern issues in Israel; emphasis on relationship between historical conditions, conflicts, and interconnections, and new choices facing Israel.

JDST 4841-6841. Biblical Archaeology. (3). (Same as ANTH 4841-6841). Relationship between historical texts in Hebrew Bible and historical evidence from archaeological research in Israel and surrounding area; emphasis on how archaeological evidence and biblical narratives illuminate each other.

JDST 4900. Independent Study. (3). Directed individual study or research. May be repeated once. PREREQUISITE: Completion of out-of-class learning contract and approval of director of Bornblum Judaic Studies.

(JOUR) JOURNALISM

JAMES REDMOND, Ph.D., *Acting Chair*

Room 300, Meeman Journalism Building

JOUR 1700. Survey of Mass Communication. (3). Social background, scope, functions, and organization of modern communication media, attention to all major mass communication media; philosophy and goals of modern journalism; impact on governmental, social and economic systems.

JOUR 2121. Media Writing. (3). Basic instruction in journalistic forms and style; use of computer in composition of news reports or articles and in solution of news writing problems; laboratory writing exercises on computer. *One lecture hour, four laboratory hours per week.* PREREQUISITE: Passing grade on the Journalism Department's Writing Proficiency Exam.

JOUR 2123. Editing I. (3). Practice in headline writing, editing, and newspaper makeup and study of contemporary editing problems. PREREQUISITE: JOUR 2121.

JOUR 2520. Press Photography. (3). Taking pictures with news camera, developing film, making enlargements, cropping and scaling for publication. Students may bring their own cameras. Open to non-majors with permission of instructor. *One lecture hour, four laboratory hours per week.* PREREQUISITE: ART 2701.

JOUR 3120. Reporting. (3). (3124, 3720). Gathering news of university community with laboratory writing assignments. PREREQUISITES: JOUR 2121.

JOUR 3123. News Feature Writing. (3). Fundamentals of non-fiction feature writing for newspapers, magazines, company publications and broadcast news presentations; story ideas, personality profiles, humor articles and complex, news-related features developed.

JOUR 3205. Magazine Article Writing. (3). Free-lance writing techniques; preparation of queries and articles for submission; generation and research of ideas appropriate for magazine market. PREREQUISITE: JOUR 3120 or 3123 or permission of instructor. [W]

JOUR 3300. Survey of Advertising. (3). (2300). Exploration of creative function of advertising; emphasis on role of media.

JOUR 3324. Advertising Copy Writing and Layout. (3). Principles of advertising psychology in relation to proven techniques for writing effective copy; approximately half of course devoted to practice in writing copy and preparing rough layouts. Typing proficiency required. *One lecture hour, four laboratory hours per week.* PREREQUISITE: JOUR 2121 or permission of instructor.

JOUR 3335. Advertising Sales. (3). Practical experience in preparation and selling of completed advertisements; students will work with own clients throughout semester. PREREQUISITE: JOUR 3322, 3324 or permission of instructor.

JOUR 3345. Advertising Research. (3). Fundamentals in advertising research; nature of the market, appropriate advertising strategies, message effectiveness and media audiences; primary and secondary research, sampling, questionnaire design, survey, and data processing and analysis. NOTE: Must be taken before JOUR 4328. PREREQUISITE: JOUR 3300. [C]

JOUR 3400. Introduction to Public Relations. (3). Development, scope, and modern role of public relations; emphasis on case studies, lectures, and experimentation with major public relations tools and practices.

JOUR 3410. Public Relations Research. (3). (4410). Identifying, characterizing and evaluating stakeholder groups and alternative channels of communication; formal research procedures include sampling, instrument

design, information gathering, data processing, analysis and reporting. [C]

JOUR 3421. Public Relations Writing. (3). Emphasis on communication tactics; plan, write, and produce public relations tools; audience and media selection; print and electronic media. *Two lectures hours, two laboratory hours per week.* PREREQUISITES: JOUR 2121, 3400. [W].

JOUR 3422. Electronic Media in Public Relations. (3). Planning and writing public relations copy for audio-visual presentations, radio, television, satellite-based communications networks, Videotext, teleconferencing, computer-based communications and other electronic delivery systems. PREREQUISITES: JOUR 3400; COMM 3802; JOUR 3421 or permission of instructor.

JOUR 3526. Digital Imagery in Journalism. (3). Story construction and reinforcement utilizing digital imaging elements including selection, editing, ethics, and story reinforcement in journalism publications including print, desk-top, and electronic media. *One lecture hour, four laboratory hours per week.* PREREQUISITE: JOUR 2121.

JOUR 3625. Radio and Television News Writing and Editing. (3). Processing of news for radio and television; attention to present-day style used by electronic media. *Two lecture hours, two laboratory hours per week.* PREREQUISITE: JOUR 2121.

JOUR 3649. Radio News Practicum. (3). Applied skills in producing, writing, reporting, and voicing daily news and information programming for campus radio station WUMR. *One lecture hour, four laboratory hours per week.* May be repeated for a maximum of six credit hours. PREREQUISITE: JOUR 3625 or permission of instructor. (S/U)

JOUR 3700. History of Journalism. (3). Origin and development of American journalism; students who enroll should have completed HIST 2601 and 2602 or equivalent.

JOUR 3800. Journalism Seminar. (1). Weekly presentation by media professionals on topics in their fields of journalistic expertise. Students prepare for discussion sessions through assigned readings. May be repeated for a maximum of 2 hours credit. PREREQUISITE: junior standing and permission of instructor.

JOUR 3900. Desktop Journalism. (3). Computer design and production of printed materials using desktop publishing software to create simple fliers, brochures and newsletters. *One lecture hour, four laboratory hours per week.*

JOUR 4120-6120. Reporting Public Issues. (3). Analyzing and writing news reports about government, courts, energy, economy, taxes, education, environment, medicine and science; relationship between current issues and public's need to be informed; emphasis on topics vital to large urban society. PREREQUISITE: JOUR 3120 or 3625. [W]

JOUR 4124-6124. Computer-Assisted Reporting. (3). Advanced use of computer technology and investigative techniques to access, analyze and develop database information in combination with traditional news reporting. PREREQUISITES: News Editorial Students: JOUR 3120; Broadcast News Students: JOUR 3625.

JOUR 4125. Editing II. (3). (3113, 3125). Practical editing applications using computer for page makeup and design; emphasis on entire editing process combining text and visual material.

JOUR 4130. Writing Internship. (3). Work in practical assignments at local media under supervision of qualified practitioners. **NOTE:** Students who have received credit for JOUR 4330, 4430 or 4630 may not receive credit for JOUR 4130. PREREQUISITE: permission of department chair. (S/U)

JOUR 4214-6214. Digital Magazine Editing and Production. (3). (3214). Editing and production problems of magazines; emphasis on business, industrial, and home periodicals; headline and title writing; pictorial copy layout, staff organization; and production processes. PREREQUISITE: JOUR 3900 or permission of instructor. [I]

JOUR 4327. Media Planning. (3). Procedures for analyzing the advertising situation, writing advertising and media goals, and setting advertising appropriations. Use of a microcomputer program to develop and evaluate optimum advertising media schedules. **NOTE:** Offered only in fall term and must be taken before 4328. PREREQUISITES: JOUR 3300 and MKTG 3010 or 3011.

JOUR 4328-6328. Strategic Advertising Campaigns. (3). Development of creative strategy and its execution to include layouts, audio tapes, slide shows, story boards and sales promotion application. **NOTE:** Offered only in spring semester. PREREQUISITES: JOUR 3322, 3324, 3345, 4327. [W, I]

JOUR 4330. Advertising Internship. (3). Work under supervision of qualified practitioners in local advertising agency; advertising department of newspaper, television, or radio station; or company advertising department. **NOTE:** Students who have received credit for JOUR 4130, 4430 or 4630 may not receive credit for

JOUR 4330. PREREQUISITE: permission of department chair. **(S/U only).**

JOUR 4420. Public Relations Case Problems. (3). (4423). Case studies and typical public relations problems; planning and preparation of communications materials for various media; application of public relations techniques. **PREREQUISITES:** JOUR 3421.

JOUR 4430. Public Relations Internship. (3). Work experience as intern with public relations department or organization or on team project assigned by instructor; analysis of public relations plan and evaluation of results. **NOTE:** Students who have received credit for JOUR 4130, 4330 or 4630 may not receive credit for JOUR 4430. **PREREQUISITES:** JOUR 4420 and permission of department chair. **(S/U only).**

JOUR 4440-6440. Public Relations Campaigns. (3). Application of theory, research data, and problem-solving techniques in the development of comprehensive public relations strategies. **PREREQUISITE:** JOUR 4420. **[I]**

JOUR 4500-6500. Mass Media Website Management . (3). Creation of journalism/mass media organization World Wide Web sites including conceptualization, layout, and integration of traditional news and information products; theoretical and ethical issues involving mass media publishing content on the Internet including concepts of product placement and audience engagement with news, public relations, and advertising. **PREREQUISITE:** JOUR 3900, or permission of instructor.

JOUR 4629. Electronic Reporting. (3). Gathering and writing of news for all electronic media (radio-TV-cable); emphasis on fundamentals of reporting and audio-video electronic news gathering. **PREREQUISITES:** JOUR 3625; COMM 3821, 3801 OR COMM 3821, 3823, and 3824.

JOUR 4630. Broadcast News Internship. (3). Work in practical assignments at local broadcast media under supervision of qualified practitioners. **NOTE:** Students who have received credit for JOUR 4130, 4330 or 4430 may not receive credit for JOUR 4630. **PREREQUISITE:** permission of department chair. **(S/U)**

JOUR 4639. Television Newsroom Production. (3). Producing, writing, editing and using electronic equipment to assemble a television newscast; emphasis on performing the various tasks in a working newsroom. **PREREQUISITE:** JOUR 3625, COMM 3801 or permission of instructor.

JOUR 4649. Television News Practicum. (3). Applied skills in producing, writing, reporting, voicing daily news and information programming for a television newscast. *One lecture hour, four laboratory hours per week.* May be repeated for a maximum of six credit hours. **PREREQUISITES:** JOUR 3625, 3649 or permission of instructor. **(S/U)**

JOUR 4655-6655. Seminar In Electronic Media. (3). An examination of issues and problems confronting electronic media, analysis of the various professional, societal and economic forces that affect broadcast journalism.

JOUR 4700. Mass Communication Law. (3). Origin and development of legal principles affecting freedom of expression and provisions of laws of libel, slander, copyright, and other statutes limiting communication in fields of publishing and broadcasting.

JOUR 4702-6702. Current Issues In Journalism. (3). Advanced study of recent, critical problems faced by mass media and complexities that cause them. **[I]**

JOUR 4708-6708. Journalism Professional Ethics. (3). Classical approaches to ethics presented with their application to the day-to-day considerations a journalist must face in working with employers, local public and the larger society which depends on a free and responsible press. **[I]**

JOUR 4712-6712. Mass Media and Cultures. (3). Designed for the professional communicator who needs to understand different cultures, both foreign and domestic; intercultural communication, comparison of cultural values and behaviors, the nature of news in different cultures, the international flow of news, growth and impact of global journalism, television, advertising, and public relations.

JOUR 4714/6714. Information Retrieval and Analysis. (3). Using computers to develop and execute search strategies in multiple on-line databases; critical analysis, webmastering, and archiving of collected information

JOUR 4800-09-6800-09. Special Topics in Journalism. (3). Intensive study of a single critical issue or current topic. May be repeated for a maximum of 6 hours credit.

JOUR 4830. Directed Individual Study. (1-3). Independent study and research, or practicum, or project under supervision. May be repeated for a maximum of 3 hours credit. **PREREQUISITE:** permission of instructor.

JOUR 4900. Desktop Presentation. (3). Using computers to learn processes/software/production design concepts involved in multi-media primarily designed for computer-to-computer communication. Involves digital editing of still images, off-line video editing, animation and production techniques for assembling all into a single CD or video to convey advertising, public relations, or news editorial concepts. **PREREQUISITE:**

JOUR 3900 or permission of instructor.

(LALI) LANGUAGES AND LITERATURE
Department of Foreign Languages and Literatures
 RALPH ALBANESE, Ph.D., *Chair*
Room 375, Dunn Hall

LALI 1701-1702. Special Studies in Foreign Languages (3, 3). (LANG). Freshman-level instruction in languages not regularly offered by Department of Foreign Languages; offered if and when sufficient demand exists and instructors available. Although credit earned in these courses may be used to satisfy foreign language requirements for degrees, students should be aware of two important points: (1) foreign language requirement for degrees in College of Arts and Sciences specifies that all twelve semester hours (or six for some professional degrees) must be in same language; (2) unless demand is sufficient and unless teachers are available, the university cannot offer enough courses to enable student to meet these requirements.

LALI 2701-2702. Special Studies in Foreign Languages (3, 3). (LANG). Continuation of LALI 1701-1702. Offered provided instructor is available and there is sufficient student enrollment.

NOTE: LALI literature courses may not be used to satisfy any part of the foreign language requirement. With the exception of LALI 4890 (Literary Criticism), LALI literature courses do not apply toward a major or minor in any of the foreign languages.

NOTE: Courses in Greek and Roman literature in translation and mythology are listed under Classics.

LALI 3401. Introduction to Chinese Literature and Culture. (3). Chinese literature and culture from their origins to the present.

LALI 4010-29-6010-29. Special Topics in Foreign Literatures. (3). Topics vary and are announced in Schedule of Classes.

LALI 4441-6441. Dante. (3). Study of the Vita Nuova and the Divina Commedia. **PREREQUISITE:** ITAL 2202 or permission of instructor.

LALI 4493. Contemporary French Literature. (3). (FREN 4493). Emphasis on widely translated, well-known works by major French writers; presented in English translation. [W]

LALI 4494. Nineteenth-Century Russian Literature in Translation. (3). Introduction to major literary works written in Russia during nineteenth century.

LALI 4661. Sacred Hebrew Texts. (3). (JDST 4661). Disciplines of history, philosophy, literature, religion, and culture; understanding the meanings, messages, and world views contained in sacred Hebrew texts.

LALI 4671. Jewish Literary Texts. (3). (JDST 4671). Narrative tradition in Jewish cultures throughout history; development of Jewish literary texts in modern times; selections from the modern period include fiction, poetry, and drama.

LALI 4780. Individual Studies in Language and Literature. (1-3). Directed individual study in selected areas of language or literature chosen in consultation with instructor. Repeatable for a maximum of 6 semester hours credit by permission of instructor. **PREREQUISITE:** permission of instructor.

LALI 4890. Literary Criticism. (3). Study of the history and theory of literary criticism from Antiquity to the present as exemplified by texts selected from various European and non-European literary traditions. [I]

◆**(LATN) LATIN**
Department of Foreign Languages and Literatures
 RALPH ALBANESE, Ph.D., *Chair*
Room 375, Dunn Hall

LATN 1101. Elementary Latin. (3). Elements of grammar; practice in Latin composition and translation.

LATN 1102. Elementary Latin. (3). Completion of elementary Latin grammar, with additional readings. **PREREQUISITE:** LATN 1101 or equivalent college level credit.

LATN 2201. Intermediate Latin. (3). Review of basic Latin grammar with reading selections from The Golden Fleece and Roman history. **PREREQUISITE:** LATN 1102 or the equivalent.

LATN 2202. Intermediate Latin. (3). More advanced readings from major authors. **PREREQUISITE:** LATN 2201 or equivalent.

LATN 3111. Roman Historians. (3). Readings and analysis of selections from Caesar, Livy, Tacitus, and

Suetonius; emphasis on nature of Roman historiography.

LATN 3211. Vergil. (3). Reading and analysis of the Aeneid.

LATN 3912. Cicero. (3). Reading and analysis of *De Amicitia* and *De Senectute*.

LATN 4411. Roman Letter Writers. (3). Reading and analysis of Cicero's Letters.

LATN 4711. Elegy, Lyric, and Epigram. (3). Reading and analysis of selections from Catullus, Horace, Tibellus, Propertius, and Martial.

(LBRY) UNIVERSITY OF MEMPHIS LIBRARIES

LESTER POURCIAU, Ph.D., *Director*

Room 203, McWhorter Library

LBRY 2010. Introduction to the Use of Library Resources. (3). Introduction to organization of academic library material; emphasis on bibliographic access to information; Lectures and assigned research problems to acquaint student with general and specialized methods of access to library material.

LBRY 3900-09. Special Topics in Library Information. (3). Topics varied and announced in *Schedule of Classes*. May be repeated when topic varies.

(LEAD) LEADERSHIP

BARBARA K. MULLLINS, PH.D., *Interim Chair*

Room 113, Patterson Hall

<http://www.coe.memphis.edu/coe/LEAD/leadership.html>

The Department of Leadership offers only graduate level degree programs but does provide courses as part of undergraduate degree programs offered by other departments in the college and university.

LEAD 2010. Teaching and Schools in Urban Settings. (3). (EDUC 4601). Introduction to roles and responsibilities of teachers in urban school settings; evolution of educational policies and practices; organization and structure of schools; examination of schools as cultural systems; philosophical, historical, and legal approaches; field experience (5 hours). PREREQUISITE: sophomore standing.

LEAD 4000-6000. Foundational Studies: Education, Schooling and American Society. (3). Interdisciplinary study of educational policies and practices in American society; role and function of school and teachers; analysis of major problems and issues facing contemporary public education. PREREQUISITE: upper division standing or bachelor's degree.

LEAD 4400-6400. Leadership and Reform in American Schools. (3). Concepts of leadership in reform context of contemporary social and educational policy; examination of major legal, political, economic, organizational, and philosophical issues; role of teacher-leader explored. PREREQUISITES: senior standing and LEAD 2010.

(LEGL) PARALEGAL STUDIES

BRODERICK NICHOLS, J.D., *Assistant Dean for Paralegal Studies*

Room G-1 Johnson Hall

LEGL 2400. Legal Ethics. (3). (UNIV 2400). Introduction to paralegal profession; organization of legal institutions; role of attorneys and paralegals in legal system; regulation, ethics, and professional responsibility. PREREQUISITE; ENGL 1101.

LEGL 2410. Introduction to Law. (3). (UNIV 2410, UNIV, ADOS, OFAD 2210). Introduction to American substantive and procedural law; origins and applications of legal theories and processes; case law analysis. PREREQUISITE: ENGL 1101.

LEGL 2420. Legal Research and Writing I. (3). (UNIV 2420, UNIV, ADOS, OFAD 2213). Research methods using legal encyclopedias, annotations, form books, reporters, codes, regulations, digests, and citators; style of legal memorandum and uniform citation. PREREQUISITE: ENGL 1101.

LEGL 3410. Contracts and Commercial Law. (3). (UNIV 3410, UNIV, ADOS, OFAD 3218). Survey of law affecting the formation, performance, and enforcement of contracts; the Uniform Commercial Code; consumer protection; debtor-creditor relations; and bankruptcy; emphasis on paralegal's role in contract and commercial cases. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3420. Torts. (3). (UNIV 3420). Survey of state and federal law treating civil injury to persons or property; common law and statutory torts, worker's compensation, and insurance; emphasis on paralegal's role in preparing personal injury and compensation cases. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3430. Business Associations. (3). (UNIV 3430, UNIV, ADOS, OFAD 2219). Legal aspects of formation and operation of proprietorships, agencies, partnerships, and corporations; emphasis on paralegal's role in drafting business documents and maintaining corporate records. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3440. Civil Procedure. (3). (UNIV 3440, UNIV, ADOS, OFAD 3220). Application of Rules of Civil Procedure to civil litigation in federal and state courts; jurisdiction; pleadings; discovery requests; trial and appellate practices; judgments; emphasis on paralegal's role in civil litigation. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3450. Legal Research and Writing. II. (3). (UNIV 3450, UNIV 2214). Advanced study of legal research and writing methods; computerized legal research; format and style of trial memorandum and appellate brief. PREREQUISITE: 15 hours in LEGL paralegal courses including LEGL 2420. [W]

LEGL 3481. Family Law. (3). (UNIV 3481, UNIV, ADOS, OFAD 2216). Substantive and procedural law affecting the family; marriage; procreation; divorce; child custody and support; emphasis on Tennessee law and paralegal's role in family cases. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3482. Labor Law. (3). (UNIV 3482, UNIV, ADOS, OFAD 3219). Law affecting employment relations; NLRB and EEOC procedures; OSHA and ADA issues in the workplace.; emphasis on paralegal's role in labor law cases. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3483. Computers in the Law. (3). (UNIV 3483). Detailed examination of practical, technical, and theoretical aspects of computer systems as applied in the modern law office; includes docket control, billing, communications, litigation support, and legal document production. PREREQUISITES: ISDS 2749.

LEGL 3484. Bankruptcy Practices. (3). (UNIV 3484). Intensive study of substantive and procedural law of bankruptcy; emphasis on applications and processes used by the paralegal when assisting in bankruptcy cases. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3485. Real Estate Practices. (3). (UNIV 3485). Substantive law of real property; acquisitions, characteristics, and transfer of interests in real estate; particular emphasis on the role of paralegals assisting real estate attorneys with realty transfers and closings in Shelby County, Tennessee. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 3486. Criminal Law and Procedure. (3). Advanced approach to understanding substantive and procedural criminal law with emphasis on practical application; prima facie elements of substantive criminal offenses, defenses to specific crimes, constitutional limits on police and other governmental entities, probation and parole, and the juvenile justice system. PREREQUISITES: LEGL 2400, 2410, 2420.

LEGL 4410. Paralegal Internship. (3). Supervised work experience in appropriate legal setting; individual progress conferences arranged and evaluative reports developed. PREREQUISITES: LEGL 2420, 3450 and approval of paralegal internship contract. (S/U)

LEGL 4450. Legal Research and Writing III. (3). Advanced legal research and writing involving development of offensive and defensive litigation strategies and preparation of state and federal trial court pleadings which utilize these strategies; survey of appellate process and preparation of appellant and appellee briefs. PREREQUISITES: LEGL 2420, 3450.

[Last Updated: 6/12/15](#)

(MATH) MATHEMATICS**Department of Mathematical Sciences**JOHN R. HADDOCK, Ph.D., *Chair**Room 373, Dunn Mathematics & Foreign Languages Building*◆ <http://www.msci.memphis.edu/>

MATH 0990. Foundations of Geometry. (3). Axiomatic development of plane geometry; emphasis on concepts of symmetry, congruence and similarity, Pythagorean Theorem and special right triangle properties, area and volumes of special right triangle properties; area and volumes of special two- and three-dimensional figures. NOTE: will not count toward the 132-semester hour degree requirement for any degree. PREREQUISITE: two units of high school algebra or TRAC 0821.

MATH 1181. Foundations of Mathematics I. (3). Introduction to logic; set theory: development and applications of numeration systems, mathematical systems and algorithms. PREREQUISITE: two units of high school algebra or TRAC 0821. [G]

MATH 1182. Foundations of Mathematics II. (3). Algebraic structures, combinations, statistics, mathematical proof, problem solving. PREREQUISITE: MATH 1181. [G]

MATH 1211. College Algebra. (3). Analysis of functions (linear, quadratic, polynomial, root, rational, exponential, logarithmic) using graphing calculators; partial fractions; synthetic division; conic sections; theory of equations; inequalities; applications. NOTE: Only one of MATH 1211 or MATH 1213 may be used to satisfy degree requirements. PREREQUISITE: Two years of high school algebra or TRAC 0821.

MATH 1212. Trigonometry. (3). Circular functions; inverse circular functions, graphs of circular and inverse functions, identities, equations, angles, trigonometric functions, solution of triangles, elementary application of vectors; trigonometric form of complex numbers. NOTE: MATH 1212 and MATH 1213 will not satisfy a six semester hour Mathematics requirement. PREREQUISITE: placement test recommended but not required; MATH 1181.

MATH 1213. College Algebra and Trigonometry. (4). Exponents, radicals, quadratic functions, inequalities; relations and functions; inverse, exponential and logarithmic functions; solution of algebraic systems; trigonometric functions, identities, equations and graphs; angle measurements; sum, difference, half-angle and double-angle formulas; solution of triangles, laws of sines and cosines. NOTE: MATH 1211 and 1213, or 1212 and 1213 will not satisfy a six semester hour Mathematics requirement. PREREQUISITE: two units of high school algebra or R&DS 0821.

MATH 1312. Elementary Calculus. (3). Introduction to concepts and methods of elementary calculus of one real variable as related to rational, exponential, and logarithmic functions; nature of derivatives; differentiation; application of derivative; nature of integration: definite integral; applications of definite integral. NOTE: Only one of the courses MATH 1312 or 1321 may be used to satisfy degree requirements. PREREQUISITE: MATH 1211. [G]

MATH 1321. Calculus I. (4). Introduction to calculus of one real variable; limits; continuity; derivatives; applications of derivatives including Newton's method, graphing techniques, optimization, indeterminate forms and l'Hospital's rule; antiderivatives; includes transcendental functions. NOTE: Only one MATH 1312 or MATH 1321 may be used to satisfy degree requirements. Students may not receive credit for both MATH 1321 and MATH 1421. PREREQUISITE: MATH 1212 or MATH 1213. [G]

MATH 1421. Honors Calculus I. (4). (1401). Concepts of differential calculus with emphasis on theory; limits, continuous functions, applications of the derivative. NOTE: Students may not receive credit for both MATH 1401 and 1321. PREREQUISITE: permission of instructor

MATH 2000. Experiences in Mathematics. (3). Introduction to selected areas of mathematical sciences through application to modeling and solution of problems involving networks, circuits, trees, linear programming, random samples, regression, probability, inference, voting systems, game theory symmetry and tilings, geometric growth, conics, comparison of algorithms, codes and data management. PREREQUISITE: three years of high school mathematics, including two years of algebra and one year of geometry. [G]

MATH 2010-2019. Special Topics in Mathematics. (1-3). Topics are varied and announced in the Schedule of Classes. PREREQUISITE: permission of instructor.

MATH 2321. Calculus II. (4). Integration and applications of the definite integral; techniques of integration and improper integrals; curves defined by Parametric equations; arc length and surface area; polar coordinates; infinite series, Taylor and McLaurin series.. NOTE: Students may not receive credit for both MATH 2321 and

MATH 24212. PREREQUISITE: MATH 1321.

MATH 2322. Calculus III. (4). Multivariable calculus including three-dimensional analytic geometry and vectors, quadratic surfaces, arc length and curvature, limits and continuity, partial derivatives and their applications, tangent planes, optimization problems and Lagrange multipliers, multiple integrals, vector fields, line and surface integrals, Green's theorem, Stokes theorem, the divergence theorem.. PREREQUISITE MATH 2321.

MATH 2421. Honors Calculus II. (4). (1402). Differential and integral calculus with emphasis on theory; anti-derivatives, definite integrals, techniques of integration, sequences, and series. NOTE: Students may not receive credit for both MATH 1402 and 2321. PREREQUISITES: MATH 1421 or MATH 1321 and permission of instructor.

MATH 2422. Honors Calculus III. (4). Multivariable calculus; vectors and matrices, partial derivative and applications, multiple integrals, line and surface integrals, Green's and Stokes' theorem. NOTE: Students may not receive credit for both MATH 2401 and 2322. PREREQUISITE: MATH 2421.

MATH 2581. Concepts of Geometry. (3). Introduction to idea of proof in postulational system; development of geometric relationships independent of number, including congruent triangles, similar triangles, parallelograms, and circles; applications of number in geometry including coordinate geometry, lengths areas, and volumes. PREREQUISITE: MATH 1182.

MATH 2701. Discrete Structures. (3). Elementary logic; sets, relations, functions, orderings, equivalence relations, partitions: finite sets, modular arithmetic; natural numbers, mathematical induction, strings, string programs, connectedness, traversals, graph algorithms. PREREQUISITE: MATH 1321.

MATH 3221. Elementary Number Theory. (3). Divisibility properties of integers; prime numbers; congruences; Diophantine equations; quadratic residues; number theoretic functions; Fermat's theorem and Euler's generalization; applications to cryptography; quadratic reciprocity law. PREREQUISITE: MATH 3242 (formerly MATH 4241); or MATH 2701 ; or permission of instructor.

MATH 3242. Introduction to Linear Algebra. (3). (4241). Systems of linear equations, matrices, elementary row and column operations, determinants; vector spaces and subspaces; linear transformations. PREREQUISITE: MATH 2322; or MATH 2321 and MATH 2701; or permission of instructor. [C]

MATH 3391. Differential Equations. (3). Ordinary differential equations including series solutions. PREREQUISITE: MATH 2322.

MATH 3402. Honors Mathematics IV. (4). (2402). Linear algebra and differential equations; vector spaces, bases, linear transformations, matrices, first and second order ordinary differential equations, systems, phase plane methods. NOTE: Students with credit for this course cannot receive credit for MATH 3242 or 3391. PREREQUISITE: MATH 2401.

MATH 3581. College Geometry. (3). Axiomatic systems; methods of proof; major results from plane geometry; affine, projective, elliptic, and hyperbolic geometry; applications of differential calculus. PREREQUISITE: MATH 2321.

MATH 4010-19-6010-19. Special Topics in Mathematics and Statistics. (1-3). Topics are varied and announced in Schedule of Classes. PREREQUISITE: permission of instructor.

MATH 4151-6151. History of Mathematics. (3). Development of mathematics from earliest times to present; problem studies; parallel reading and class reports. PREREQUISITE: 21 hours in MATH courses including MATH 2322 and MATH 2701.

MATH 4171-6171. Special Problems In Mathematics. (1-3). Directed individual study in selected area of mathematics chosen in consultation with instructor. Repeatable by permission of chair. PREREQUISITE: permission of instructor.

MATH 4240-6240. Matrix Algebra. (3). (3241). Elementary operations, special classes of matrices, determinants, eigenvalues and eigenvectors, canonical forms, and elementary computer implementation. PREREQUISITE: knowledge of Fortran and MATH 1321 or 1312. NOTE: Credit may not be obtained for both MATH 3242 and MATH 4240.

MATH 4242-6242. Linear Algebra. (3). Linear transformations, polynomials, determinants, direct-sum decompositions, diagonalizable operators, rational and Jordan forms, inner product spaces, the spectral theorem. PREREQUISITE: MATH 3242.

MATH 4261-6261. Abstract Algebra. (3). Groups. homomorphisms; rings; integral domains; polynomials; fields. PREREQUISITE: MATH 3242 or permission of instructor.

MATH 4350-6350. Introduction to Real Analysis I. (3). (3111). Real number system, functions and

sequences, limits, continuity, differentiation; Riemann-Stieltjes integration, series of functions.

PREREQUISITES: MATH 2322 and 3242. [W]

MATH 4351-6351. Introduction to Real Analysis II. (3). Integration theory; Riemann and Lebesgue integrals; partial differentiation, implicit function theorem. PREREQUISITE: MATH 4350 or permission of instructor.

MATH 4361-6361. Complex Variables. (3). Complex numbers; analytic functions; Cauchy-Riemann conditions; Taylor and Laurent series; integration. PREREQUISITE: MATH 2322.

MATH 4390-6390. Ordinary Differential Equations. (3). Existence and uniqueness, linear autonomous and linear non-autonomous systems, stability, classification of linear flows, boundary value problems, and numerical applications. PREREQUISITES: MATH 3391, 3242.

MATH 4391-6391. Partial Differential Equations I. (3). Laplace transforms; Fourier series; introduction to partial differential equations. PREREQUISITE: MATH 3391.

MATH 4392-6392. Partial Differential Equations II. (3). Methods of characteristics, Green's functions, existence and regularity of solutions of boundary value and Cauchy problems. PREREQUISITE: MATH 4391.

MATH 4402. Senior Honors Seminar. (3). In-depth study of one or more topics in mathematical sciences; emphasis on individual research and problem solving techniques; student writes and presents an Honors Thesis. PREREQUISITE: open only to senior Honors Students in mathematical sciences with permission of instructor.

MATH 4411-6411. Topology. (3). Introductory set theory; metric spaces; topological spaces; continuous functions; separation axioms; separability and countability axioms; connectedness and compactness. PREREQUISITE: MATH 4350 or 3242.

MATH 4701-6701. Mathematics for Computer Scientists. (4). Basic mathematical concepts applied to problem solving in computer science: (di)graphs, trees; enumeration; recurrence relations; induction; basic probability and distributions; integer and modular arithmetic; random number generators; state sets and transition functions, finite-state machines; boolean algebra, and elementary logic. NOTE: Credit may not be obtained for both 2701 and 4701. COREQUISITE: MATH 1321.

MATH 4711. Introduction to Mathematical Logic. (3). (Same as COMP 4711). Propositional logic and truth table algorithms, first order calculus: terms, formulas, sentences, models, satisfaction, truth and logical validity; proof procedures and natural deduction; completeness and incompleteness theorems; applications to artificial intelligence, computer theorem proving, and verification of computer programs. PREREQUISITES: MATH 2701 or MATH 4701 or PHIL 3621 or permission of instructor.

MATH 4721-6721. Numerical Analysis. (3). Derivation and application of computer-oriented, numerical methods for functional approximation, differentiation, quadrature, and solution of ordinary differential equations. PREREQUISITE: MATH 2321 and knowledge of some structured programming language.

MATH 4741-6741. Linear Programming Methods. (3). Theory of linear programming methods, problem formulation; convex sets; simplex and revised simplex methods; matrix games and linear programming. PREREQUISITES: MATH 4240 or 3242 and knowledge of Fortran.

MATH 4999. Investigations in Mathematics. (3). Series of seminars that studies interrelationships among diverse areas of mathematical sciences covered in undergraduate program and how they developed. Emphasis on independent work, class discussions, and student projects. PREREQUISITE senior standing in mathematical sciences. [I]

(MATH) STATISTICS

Department of Mathematical Sciences

JOHN R. HADDOCK, Ph.D., *Chair*

Room 373, Dunn Mathematics & Foreign Languages Building

<http://www.msci.memphis.edu/>

MATH 1601. Statistical Reasoning. (3). Introduction to statistics, probability and their applications; probability models; Mendel's models in genetics; normal approximation; importance of randomization and blocking; double blind experiments; the Gallop poll; measurements error; correlation and regression analysis; tests of significance. NOTE: MATH majors may not use this course as part of the major. PREREQUISITE: Two years of high school algebra or TRAC 0821.

MATH 4607-6607. Introduction to SAS Programming. (3). SAS program statement syntax and flow control; selecting and summarizing observations; combining, dividing and updating SAS dataset; input tailoring and

output customization; SAS built-in functions SAS Macro Language Programming and other SAS packages such as SAS/GRAPH and SAS/IML. PREREQUISITE: Introductory course in statistics.

MATH 4611-6611. Introduction to Applied Statistics. (3). Binomial, hypergeometric, Poisson, multinomial and normal distributions, test of hypotheses, chi-square test, t-test. F-test, etc, nonparametric tests; correlation analysis. Credit earned for this course may not be applied toward requirements for the Mathematical Sciences major. Students who have a calculus background are encouraged to take MATH 4635 instead of this course. PREREQUISITE: 6 hours in mathematics at level of MATH 1211 or above (except MATH 1601).

MATH 4614-6614. Applied Probability and Queueing Theory. (3). Probability and random variables, discrete and continuous probability distributions, stochastic processes, queueing theory, applications of probability and queueing theory to computer systems. NOTE: Students may not receive credit for both MATH 4614 and MATH 4635. PREREQUISITES: MATH 2321, 2701, and COMP 1900 or its equivalent.

MATH 4631-6631. Probability. (3). Basic concepts in probability; probability models; applications. NOTE: Students majoring in Mathematical Sciences may not take MATH 4631 for credit. PREREQUISITES: 6 hours in mathematics at level of MATH 1211 or above (except MATH 1601).

MATH 4635-6635. Introduction to Probability Theory. (3). Basic probability theory, random variables, expectation, variance, covariance, moment generating functions; binomial, hypergeometric, Poisson, geometric, negative binomial, uniform, normal, exponential, Cauchy. chi-square, t, and F distributions; central limit theorem. functions of a random variable; bivariate, marginal, and conditional distributions. NOTE: Students may not receive credit for both MATH 4614 and MATH 4635. PREREQUISITE: MATH 2321.

MATH 4636-6636. Introduction to Statistical Theory. (3). (4613). Functions of two random variables, Gamma, beta, multinomial, and bivariate normal distributions; bayesian estimators, Maximum likelihood and method of moments estimators; sufficient statistics, unbiasedness, confidence intervals, and hypothesis testing. PREREQUISITE: MATH 4635. COREQUISITE: MATH 2322.

MATH 4637-6637. Statistical Methods. (3). Basic concepts of hypothesis testing; comparisons of two population means, proportions, and variances; analysis of variance; completely randomized designs, randomized block designs, Latin square designs; multiple comparisons; simple linear model and multiple regression; analysis of covariance. PREREQUISITE: MATH 4611 or 4635.

MATH 4640-6640. Introduction to Probability Models. (3). Basic concepts of discrete Markov chains; branching processes; Poisson processes; applications to modelling of population growth; applications to modelling of spread of infectious disease. PREREQUISITE: MATH 4635.

(MECH) MECHANICAL ENGINEERING

JOHN I. HOCHSTEIN, Ph.D., *Chair*

Room 312A, Engineering Building

<http://www.me.memphis.edu/default.htm>

MECH 1307. Mechanical Engineering Computing I. (3). Introduction to computing techniques used in engineering today; general problem solving and graphing techniques, word processing fundamentals, the World Wide Web, and introduction to elementary computer programming.

MECH 1309. Mechanical Engineering Computing II. (3). Introduction to computer aided engineering tools, engineering applications of spreadsheet programs, and computer aided drawing. PREREQUISITE: MECH 1307.

MECH 1395. Honors Studies. (1). Participation in scholarly activities such as research and design programs within the college under the supervision of a faculty mentor. Successful completion requires the mentor's acceptance of a report documenting the student's accomplishments. PREREQUISITES: Admission to the Honors Program. Note: This course is intended for students in their first year of academic study and may be repeated for a maximum of three credits.

MECH 2308. Engineering Graphics. (3). (1308, ENGR 1021). Drafting techniques as used in engineering practice. Introduction to AutoCAD. Not credited toward degree in Mechanical Engineering. COREQUISITE: MECH 1307.

MECH 2332. Dynamics. (3). Kinematics and kinetics of particles and rigid bodies. PREREQUISITE: CIVL 2131. COREQUISITE: MATH 3391.

MECH 2395. Honors Studies. (1). Participation in scholarly activities such as research and design programs within the college under the supervision of a faculty mentor. Successful completion requires the mentor's

acceptance of a report documenting the student's accomplishments. **PREREQUISITES:** Admission to the Honors Program. Note: This course is intended for students in their second year of academic study and may be repeated for a maximum of three credits.

MECH 3301. Engineering Analysis. (3). Mechanical Engineering applications of first and second order ordinary differential equations, Laplace transforms, and Fourier series to problems in the areas of heat transfer, vibrations, and fluid mechanics. **PREREQUISITE:** MATH 3391.

MECH 3310. Introduction to Thermal Systems. (3). Introduction to First and Second Laws of Thermodynamics and to conduction, convection, and radiation heat transfer with particular emphasis on engineering applications. Mechanical Engineering majors may not use MECH 3310 to fulfill B.S.M.E. degree requirements. **PREREQUISITES:** MATH 2322, PHYS 2004, 2520.

MECH 3311. Engineering Thermodynamics I. (3). Laws of thermodynamics and their applications to engineering problems. **PREREQUISITES:** MATH 2322; PHYS 2004, 2520.

MECH 3312. Engineering Thermodynamics II. (3). Applications of thermodynamics laws; emphasis on real gases, real gas mixtures, combustion, gas cycles and vapor cycles. **PREREQUISITES:** MECH 3311, CHEM 1122, 1132.

MECH 3320. Engineering Materials. (3). (3361). Nature of six main classes of materials: metals, polymers and elastomers, ceramics and glasses, semiconductors, superconductors and composites; mechanical, thermal, electrical and electronic, magnetic and optical properties of materials; environmental effects on performance of materials: creep, corrosion, oxidation; methodology for selection of materials for named applications. **PREREQUISITES:** CHEM 1122, 1132. **COREQUISITE:** PHYS 2004, 2520.

MECH 3321. Kinematics and Dynamics of Machines. (3). Velocity and acceleration analysis of linkages and mechanisms; force analysis of linkages and mechanisms and machinery such as IC engines; gyroscopic forces and moment-of-inertia determination; dynamic balance of rotors and reciprocating masses. **PREREQUISITES:** MECH 2332, 3341; MATH 3391.

MECH 3322. Mechanics of Materials. (3). (Same as CIVL 3322). Analysis of components subjected to tension, compression, bending moment, torque; combined loading; Mohr's stress circle; deflection of beams; simple treatment of column buckling. **PREREQUISITE:** CIVL 2131.

MECH 3323. Mechanical Design and Analysis. (3). Methodology and practice in designing machine components by integrating principles from mechanics of materials, failure theory, fatigue, economics and other principles. **PREREQUISITE:** MECH 3322.

MECH 3325. Materials Laboratory. (1). Materials testing and evaluation. *Three laboratory hours per week.* **PREREQUISITE:** MECH 3320; **PREREQUISITE or COREQUISITE:** MECH 3322.

MECH 3331. Mechanics of Fluids. (3). Statics and dynamics of fluids; applications to measurement of properties of water and air flows. **PREREQUISITE:** MECH 2332, 3311.

MECH 3335. Fluids Laboratory. (1). Principles of fluid mechanics are demonstrated and verified; familiarization with instrumentation and techniques in organizing and reporting results of experimental investigations. *Three laboratory hours per week.* **COREQUISITE:** MECH 3331.

MECH 3341. Mechanical Engineering Analysis. (3). Engineering methods, classical analysis, computer techniques, and their interactions with mechanical engineering problems. **COREQUISITE:** MATH 3391. [C]

MECH 3395. Honors Studies. (1). Participation in scholarly activities such as research and design programs within the college under the supervision of a faculty mentor. Successful completion requires the mentor's acceptance of a report documenting the student's accomplishments. **PREREQUISITES:** Admission to the Honors Program. Note: This course is intended for students in their third year of academic study and may be repeated for a maximum of three credits.

MECH 4300. Senior Seminar. (1). Ethics and professionalism, literature searching, proposal writing, technical paper presentations and other selected topics. Oral and written reports required. Taking the EIT exam is recommended. **PREREQUISITE:** senior status or consent of instructor.

MECH 4305-6305. Intermediate Fluid Mechanics. (3). Continuation of MECH 3331; introduction to various topics in advanced fluid mechanics, including: flow over immersed bodies; open channel hydraulics; compressible fluid flow; turbomachinery; measurements in fluid mechanics; and, inviscid flow. **PREREQUISITE:** MECH 3331.

MECH 4309-6309. Gas Dynamics. (3). Concepts in compressible flow, emphasis on real and ideal gas dynamic effects and non-equilibrium flow; application of numerical methods. **PREREQUISITES:** MECH 3312, 3331.

MECH 4311. Heat Transfer I. (3). Fundamentals of conduction, convection, and radiation heat transfer with emphasis on conduction and convection; introduction to heat exchanger design. PREREQUISITES: MECH 3312, 3331, 3341.

MECH 4312. Power Generation. (3). Application of thermodynamics, fluid mechanics and heat transfer to design and operation of power plants; economic operation of power generation, optimization of resources, and technical report writing. PREREQUISITE: MECH 3312. [W]

MECH 4313-6313. Heat Transfer II. (3). Principles of boiling, condensing, and radiation heat transfer; fundamentals of heat exchanger design. PREREQUISITE: MECH 4311.

MECH 4314. Fluid/Thermal Systems Designs. (4). Design of piping systems; pipe size selection using economics; fluid meter selection; prime movers and piping systems; heat exchanger analysis, selection and design; economics of heat exchanger selection; analysis of fluid/thermal components as a system. Group project required. PREREQUISITE: MECH 4311. [I]

MECH 4315-6315. Heating, Ventilation and Air Conditioning. (3). Psychrometric analyses, heating and cooling loads of buildings and analysis of air conditioning systems. PREREQUISITE: MECH 4311.

MECH 4320. Mechanics of Materials II. (3). Stress-strain analyses of thin-walled cylinders and spheres, springs, laterally-loaded struts, struts with initial curvature, rotating disks and cylinders; plastic yielding of beams and shafts; introduction to energy methods. PREREQUISITES: MECH 3320, 3322.

MECH 4322. Mechanical Design. (3). Analytical treatment of methods used in design process including creativity, probability, and optimization as applied to design process, from concept through preliminary design to final design. PREREQUISITE: MECH 3323.

MECH 4323. Machine Design. (4). Mechanical concepts and analysis applied to machine design. Integrating finite element method, statistical analysis and computer-aided design into design projects. Design projects accomplished through individual, team and class approaches. COREQUISITE: MECH 4322.

MECH 4324-6324. Computer Methods in Design. (3). Application of computer aided drafting packages to design of mechanical components and systems. Introduction to fundamental concepts and principles of finite element methods and design optimization. Design project assignments using computer-aided engineering software for analysis and design solution. PREREQUISITES: MECH 3323, 3341.

MECH 4325-6325. Advanced Mechanics of Materials. (3). Beams on elastic foundations, experimental stress analysis, torsion of non-circular sections, curved beam theory, unsymmetrical bending. PREREQUISITE: MECH 3322.

MECH 4326-6326. Biomedical Systems Analysis-Mechanical. (3). (3326). Introduction to concepts used in analyzing living systems. Simulation of body functions with mechanical and computer models. Familiarization with design of mechanical bioengineering devices such as heart valves, heart-lung machines, renal dialysis machines. PREREQUISITES: MECH 2332, 3322.

MECH 4330-6330. Introduction to Composite Materials. (3). Introduction to fiber reinforced composite materials. Includes mechanical behavior, strength, design methodology, and implementation of computer aided design. PREREQUISITES: MECH 3320, 3322, 3341.

MECH 4331. Turbomachinery. (3). Basic principles of fluid mechanics and thermodynamics with application to rotating devices; ideal and actual operating characteristics of pumps, fans, turbines and compressors; constraints on design of real systems. PREREQUISITE: MECH 3331.

MECH 4333-6333. Aerospace Propulsion Systems. (3). Fundamentals of air breathing and rocket propulsion devices; principles of combustion thermodynamics, gas turbine operation, solid and liquid propellants, performance evaluation, and atmospheric and space mission propulsion requirements. PREREQUISITE: MECH 3331.

MECH 4335. Thermodynamics and Heat Transfer Laboratory. (1). Instrumentation and measurement techniques used in thermodynamics and heat transfer studies; experimental verification of basic principles with emphasis on organizing and reporting of results. *Three laboratory hours per week.* COREQUISITE: MECH 4311.

MECH 4337-6337. Internal Combustion Engines. (3). Principles of Otto and Diesel cycle engines; effects of various fuels and fuel delivery systems, air induction systems, ignition systems, and pollution control techniques on engine performance. PREREQUISITES: MECH 3312, 3331.

MECH 4340-6340. Manufacturing Processes. (3). Introduction to manufacturing processes: fundamentals of mechanical behavior of materials, manufacturing properties of materials; casting, bulk deformation, sheet-metal forming, material removal processes; processing of polymers, ceramics and glasses, composite materials;

powder metallurgy; fastening and joining processes; nontraditional manufacturing processes; economics of integrated design and manufacturing; recent developments in manufacturing. PREREQUISITES: MECH 3320, 3322.

MECH 4344. Mechanical Controls. (3). Fundamental classical control concepts; modeling of linear mechanical control systems; transient, accuracy and performance analyses and design of control systems using root locus sketch, Nyquist diagrams and Bode plots. PREREQUISITE: MECH 3321.

MECH 4345-6345. Design of Mechanisms. (3). Graphical and analytical mechanism synthesis techniques for path generation, function generation, rigid body guidance and optimization of force transmission characteristics. PREREQUISITES: MECH 3321, 4322.

MECH 4346-6346. Advanced Mechanical Controls. (3). Advanced design and modeling of mechanical control systems; review of digital and optimal control systems and simulation of control systems. PREREQUISITE: MECH 4344.

MECH 4350-6350. Mechanics for Biomedical Engineers. (4). Analysis of the bone and joint structure of the body related to the basic mechanical equations and properties; mathematical modeling of bone structure, mechanical properties, static loading, dynamic loading, fatigue, wear, corrosion. PREREQUISITES: MECH 3320, 3322.

MECH 4360. Selection of Engineering Materials. (3). Detailed study of main classes of materials and their properties and uses; design criteria for various failure modes and selected environment case studies, technical tutorials and design exercises. PREREQUISITES: MECH 3320, 3322.

MECH 4365. Biomaterials. (3). Biocompatibility and biofunctionality; materials for bone and joint replacement; materials for the cardiovascular system; materials and artificial organs; dental restorative materials; materials for drug delivery; materials for ophthalmology. PREREQUISITES: MECH 3320, 3322.

MECH 4369. Process Heat Transfer. (3). Engineering concepts and fundamental principles dealing with single and two phase fluid dynamic and heat transfer to design and analysis of process heat transfer equipment. PREREQUISITE: MECH 4311.

MECH 4371-6371. Mechanical Vibrations. (3). Kinematics of harmonic and non-harmonic vibrations; system of one and several degrees of freedom, free and forced vibrations; self-excited vibrations. PREREQUISITES: MATH 3391; MECH 3321, 3341.

MECH 4391. Mechanical Engineering Projects. (1-3). Independent investigation of mechanical engineering problems in consultation with instructor. PREREQUISITE: senior standing.

MECH 4395. Honors Thesis Proposal. (3). Scholarly work in engineering requires advanced understanding in a particular field of study as well as the foundation in fundamental principles provided by the undergraduate curriculum. The student will work with an Honors Thesis advisor to identify a suitable thesis topic and to develop the advanced understanding required for scholarly study of that topic. A formal written and oral proposal must be accepted by the departmental honors committee for the successful completion of this course. PREREQUISITES: senior standing and approval by the departmental honors committee.

MECH 4396. Honors Thesis. (3). Original scholarly work is performed under the direction of an Honors Thesis advisor and reported in a thesis. Successful completion of this course requires an oral defense of the thesis and acceptance of the thesis by the departmental honors committee. PREREQUISITES: MECH 4395 and approval by the departmental honors committee.

◆(METH) MANUFACTURING ENGINEERING TECHNOLOGY

Department of Engineering Technology

RONALD LEE DAY, M.A., *Chair*

Room 203, Engineering Technology Building

<http://www.people.memphis.edu/~engtech/home.html>

METH 1711. Manufacturing Processes I. (3). Metal manufacturing processes, including traditional machining, computer numerical control, and thermal metal cutting/joining; measurement, layout, and inspection techniques as applied to integrated manufacturing systems; coverage of threads, fasteners, and geometric dimensioning and tolerancing. *Two lecture hours, three laboratory hours per week.*

METH 3386. Occupational Safety. (3). (3387). Hazards and safety procedures for general industry and construction.

METH 3401. Strength of Materials. (3).◆ (Same as ARCH 3401). Force systems and their solution; that

branch of mechanics dealing with forces and effects of forces acting upon rigid and deformable bodies at rest; analysis of structural materials. COREQUISITES: TECH 3044, PHYS 2001, 2110.

METH 3408. Industrial Materials (4). (Same as ARCH 3408). Material properties and the methods and standards used in testing these properties are introduced for metals, ceramics, polymers, and composites; emphasis on their mechanical properties and reinforced by testing in the laboratory. *Three lecture hours, three laboratory hours per week.* PREREQUISITE or COREQUISITE: METH 3401.

METH 3421. Manufacturing Processes II. (3). Processes and techniques used to fabricate industrial materials into useful products; techniques covered include casting and molding, forming, separating, conditioning, assembling, finishing, and process design and control. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: METH 1711.

METH 3440. Project Cost Evaluation. (3). Industrial as well as personal financial situations and how they are affected by interest rates and ♦ Time Value ♦ of money; investigation of economic alternatives including applications of existing formulas, techniques, and methods.

METH 3462. Industrial Statistics. (3). Procedures for collecting, describing, presenting and statistically analyzing industrial data; basic probability theory; hypothesis testing and basic concepts of analysis of variance; introduction to Taguchi methods; spreadsheet software used for statistical analysis. PREREQUISITE: MATH 1211 or higher (except MATH 1601) and TECH 1010.

METH 3573. Dynamics and Design for Automation. (3). Analysis of rectilinear and curvilinear motion; kinematic analysis of mechanisms; mechanical, hydraulic, and pneumatic systems; product design techniques as applied to integrated manufacturing systems. Laboratory exercises include applications of programmable logic controllers and fluid power circuits. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: TECH 3044, METH 3401.

METH 4381. Principles of Supervision. (3). Functions of supervisory personnel.

METH 4460. Work Design, Improvement and Measurement. (3). Elimination of waste in production or service environment; continuous improvement and Single- Minute Exchange of Die (SMED) systems; fundamentals of human factors and ergonomics; work measurement by stop-watch, standard data, basic motion times and work sampling.

METH 4462. Statistical Quality Control. (3). Statistical methods for analyzing quality problems including control charts for variables and attributes and industrial sampling; defect prevention using the Poka-Yoke System; computer applications to quality assurance. [C]

METH 4464. Production Control Systems. (3). Functions of controlling production using Manufacturing Resource Planning (MRP II) and Just-in-Time (JIT) techniques; basics of computer simulation for operations analysis. COREQUISITE: METH 4460.

METH 4466. Facility Design. (3). Integrated approach to design and layout of industrial facility with respect to workstation location and material handling; design considerations include project planning, costs, automation, quality, work measurement, safety, materials, processes, and production control and tool design; use of Computer Aided Design and simulation software. PREREQUISITE: METH 4464.

METH 4472-6472. Computer Aided Drafting and Design. (3). Overview of CADD technology, hardware and software options, two and three dimensional principles, and applications to produce computer generated design and working drawings. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: TECH 1521 or equivalent.

METH 4474-6474. Automation and Robotics. (3). (4476). Concepts of factory automation and industrial robotics. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: TECH 1010 or 1210.

METH 4476-6476. Computer Aided Manufacturing. (3). (4474). Computer numerical control programming by manual data input and distributed numerical control by computer assistance; system assessment of CNC machines and components for integrated manufacturing environment. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: CETH 3281 or METH 4472.

METH 4571. Tool Design. (3). Design of tooling systems for the integrated manufacturing environment; emphasis on geometric dimensioning and tolerancing, fast change-over techniques, and achieving world class quality through tooling design. *Two lecture hours, three laboratory hours per week.* PREREQUISITES: METH 3421, 4472.

METH 4944. Senior Thesis. (3). ♦ (Same as ♦ ARCH 4944, CETH 4944, EETH 4944). Study and research in specific area culminating in an integrating experience through individual and/or group projects and technical reports. (A-F, IP). [W, I]

◆(MGMT) MANAGEMENT

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*
 CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*
Room 114, Fogelman College of Business and Economics Building

Students must have junior standing and have met specific course prerequisites with a grade of C (2.0) or better to be eligible for all 3000- and 4000-level courses. In addition to these requirements, students seeking a degree in the Fogelman College of Business and Economics must have (1) completed all required lower division business courses with a minimum grade of C (2.0) in each; (2) minimum of 2.25 GPA in all required lower division business courses and MATH 1312, and (3) 55 hours of course work including MATH 1312 and 9 hours of English (See B.B.A. Degree Requirements-General Requirements).

MGMT 1010. Introduction to Business. (3). Acquaintance with major institutions and practices in business and coverage of elementary concepts of business; survey of functional areas of business and the activities of management; orientation for selection of major and information on business career opportunities. NOTE: If taken by students with 25 hours or more, credit will not count for BBA degree.

MGMT 3110. Organization and Management. (3). Comprehensive survey of management functions, basic concepts, and management principles; coverage of planning and decision making, organizing, directing, and controlling; coordination of organizational resources to achieve objectives.

MGMT 3215. Management of Human Resources. (3). Personnel functions and basic concepts; human resource planning, job analysis, staffing, development, compensation, employee/labor relations, health and safety, industrial employee union representation, and impact of the Equal Employment Opportunity Act.

MGMT 3510. Business Communication. (3). Communication theory applied to business and the professions; emphasis on effective writing; presentation of written and oral case solutions, letters, memoranda, reports, and employment applications; selection and use of research sources; consideration of business ethics, technology, and intercultural communication. [W]

MGMT 4110-19. Special Topics in Management. (3). Topics varied and announced in Schedule of Classes. PREREQUISITE: consent of instructor.

MGMT 4240. Compensation and Performance Appraisal. (3). Systematic examination of administration of wage and salary as tool of management; use of job descriptions, job analysis, and job evaluation methods, instruction in techniques of rationalizing wage structures; analyses of some outstanding considerations that must be taken into account in installing and administering wage programs are made. PREREQUISITES: MGMT 3110, 3215.

MGMT 4251. Labor Relations. (3). Examination of historical, legal, and institutional relationship between labor and management; negotiating/collective bargaining process, administration of contract, establishment and utilization of grievance procedures, and current issues in labor management relations. PREREQUISITE: MGMT 3110, 3215.

MGMT 4260. Employee Staffing and Development. (3). Examination of processes related to recruiting, selecting, and developing qualified persons for employment in organizations; determination of staffing needs, recruitment of a sufficient applicant pool, utilization of selection tools, and offering orientation training programs for employee development; emphasis on legal context of selection decisions. PREREQUISITES: MGMT 3110, 3215.

MGMT 4410-6410. Office Management. (3). (ADOS 4410). Modern methods in office organization and management; office systems and procedures, office layout and design, and ergonomic considerations.

MGMT 4420. Organizational Behavior in Business. (3). Human relations as applied to people at work in all kinds of organizations; emphasis on understanding of human behavior and motivation of employees to work together in greater harmony; fundamentals of organizational behavior, leadership and its development, organizational environment, and communication and group processes. PREREQUISITE: MGMT 3110.

MGMT 4510. International Business Communication and Negotiation. (3). Importance of business communication in conducting global business effectively; emphasis on organizational and interpersonal communication and negotiation skills needed in an integrated world economy; culture-based assumptions, contrasting cultural values, communication and negotiation strategies, verbal and nonverbal patterns, culture shock, and country-specific information. PREREQUISITE: MGMT 3510.

MGMT 4710. Strategic Management. (3). Advanced problems in determination, execution, and control of

strategic management process in light of changing environments in which organizations operate. PREREQUISITES: MGMT 3110 and senior standing in The Fogelman College of Business and Economics. Enrollment limited to graduating seniors. [I]

MGMT 4810. International Management. (3). Introduction to issues in international business and exploration of environment facing firms in international arena; problems in planning, implementing, and controlling activities such as choosing foreign associates, selecting plant location, and dealing with labor, structure, legal constraints, and trade problems. PREREQUISITE: MGMT 3110.

MGMT 4820. Entrepreneurship. (3). Initiation process of new business venture. Participants as teams develop detailed development plan covering all phases of business initiation and development. PREREQUISITE: MGMT 3110.

MGMT 4910. Management Problems. (1-3). Student carries on approved research projects in his major area under supervision of staff members. PREREQUISITES: senior standing and permission of Director of Undergraduate Programs.

MGMT 4911. Internship in Management. (1-6). Internship in business organization to gain on-the-job experience. Project to be approved and supervised by area faculty. Credit allowed only after acceptance of report. PREREQUISITES: senior standing and a minimum GPA of 2.75.

MGMT 4996. Senior Honors Thesis in Management. (3). Independent research open only to those students enrolled in the honors program. Thesis supervised by area faculty member. PREREQUISITES: senior standing and permission of the Director of the Honors Program.

(MKTG) MARKETING

JAMES LUKAWITZ, Ph.D., C.P.A., *Faculty Director of Academic Programs*
 CRAIG LANGSTRAAT, L.L.M., C.P.A., *Interim Dean for Academic Programs*
Room 114, Fogelman College of Business and Economics Building

Students must have junior standing and have met specific course prerequisites with a grade of C (2.0) or better to be eligible for all 3000- and 4000-level courses. In addition to these requirements, students seeking a degree in the Fogelman College of Business and Economics must have (1) completed all required lower division business courses with a minimum grade of C (2.0) in each; (2) minimum of 2.25 GPA in all required lower division business courses and MATH 1312, and (3) 55 hours of course work including MATH 1312 and 9 hours of English (See B.B.A. Degree Requirements-General Requirements).

MKTG 3010. Principles of Marketing (3). Comprehensive study of structure and functions of marketing system in the firm, economy, and society. Includes analysis of target markets, environments, and managerial aspects of marketing practices.

MKTG 3012. Consumer Behavior. (3). Why consumers behave as they do; psychological and sociological theories and principles applied to current marketing problems. PREREQUISITE: MKTG 3010.

MKTG 3140. Advertising and Sales Promotion. (3). Introduction to field of advertising including agencies, media, layout, copy, typography; emphasis on various media associated with sales promotion and on need to coordinate entire promotional mix. PREREQUISITE: MKTG 3010.

MKTG 3170. Promotion Management. (3). Case study of advertising functions, emphasizing determination of advertising strategy; planning of creative strategy; planning of media strategy; evaluation of advertising results and introduction to organization and management of advertising function. PREREQUISITE: MKTG 3140.

MKTG 3320. Retailing Fundamentals. (3). Changing concepts of retailing from management viewpoint; principles that underlie successful operation of enterprises distributing products and services to ultimate consumers. PREREQUISITES: MKTG 3010.

MKTG 3410. Sales Fundamentals. (3). Basics of personal selling: preparation, personality development, communications, sales interview techniques, ethics, and career opportunities; selling skills developed via sales presentations, role playing, audio-visual self-observation, and use of sales aids. PREREQUISITE: MKTG 3010.

MKTG 3610. Distribution Concepts. (3). Distribution system within an organization; emphasis on transportation, customer service, inventory, warehousing and packaging functions. PREREQUISITE: MKTG 3010.

MKTG 3620. Logistics Management. (3). Economic, social and political aspects of transportation system of

the United States; interrelationships among transportation, physical distribution, logistics, marketing, production, and financial management as they affect flow of raw materials and finished goods through the firm. PREREQUISITE: MKTG 3610.

MKTG 3630. Transportation Management. (3). Detailed analysis of freight traffic function within firm's logistics system. Includes rate and classification systems, claim liability, shipping document procedures, carrier selection, and other aspects associated with organizing and operating traffic department. PREREQUISITE: MKTG 3610.

MKTG 4080. Marketing Research. (3). Research methods and procedures used in field of marketing to help solve business problems. PREREQUISITES: ISDS 3711, 2749, 2755, and MKTG 3010.

MKTG 4220. Purchasing. (3). Policies for effective and efficient procurement of goods and services for today's industry; close attention to measurement and evaluation of purchasing performance. PREREQUISITE: MKTG 3010.

MKTG 4230. Services Marketing. (3). Broadens and applies marketing concepts and techniques in services industries and compares to tangible goods marketing-all within the framework of total quality management.

MKTG 4240. Relationship Marketing. (3). Topics dealing with implementation of a direct marketing program, including telemarketing, cataloging, direct mail, electronic media, and direct response advertising, and how it fits into overall marketing strategies. PREREQUISITE: MKTG 3010.

MKTG 4410. Sales Management. (3). Sales management functions of recruiting and hiring, training and assimilating, planning, controlling and motivating, and sales analysis; role of personal selling in promotional mix and sales objectives of management. PREREQUISITE: MKTG 3010.

MKTG 4470. Negotiation Skills. (3). Emphasis on fundamental skills in negotiation across a variety of settings, including business, law, health care, and public administration; basics of both collaborative and competitive approaches, including planning tools and techniques; will address international focus.

MKTG 4490. Sales Technology Applications. (3). In-depth course in various technologies and systems used in sales planning and control; computer-based applications in sales call planning, territory and time management, prospect planning, and account management; emphasis on use of interactive video technologies in training and account management. PREREQUISITE: MKTG 3410.

MKTG 4530. International Marketing. (3). Bases and promotion of foreign trade; international marketing organizations and methods; technical and financial features of international marketing. PREREQUISITE: MKTG 3010.

MKTG 4570. Import/Export Marketing. (3). In-depth course in international data sources, market analysis, and export mechanics; emphasis on current international business practices and market conditions. PREREQUISITE: MKTG 3010.

MKTG 4620. Carrier Management. (3). Problems confronting managers of transportation companies; carrier organization, operations, marketing strategies, finance, control, sales, labor relations, and shipper-carrier interaction. PREREQUISITE: MKTG 3610.

MKTG 4790. Ethics in Marketing. (3). Survey of concepts, issues, and decisions fundamental to ethical decision making in marketing; issues and decisions related to strategy planning and implementation in marketing organizations.

MKTG 4800. Electronic Commerce and Marketing Strategy. (3). Concepts of marketing in an electronic commerce environment; concepts in relationship marketing, promotions on the internet, direct and database marketing, and web page marketing. PREREQUISITE: MKTG 3010.

MKTG 4901. Management of Marketing Strategies. (3). Comprehensive study of marketing strategies and how implemented; computer games and cases as well as real-world problems to illustrate application of marketing concepts in practical manner. PREREQUISITES: MKTG 4080. Student must take in senior year.

MKTG 4910. Problems in Marketing. (1-3). Students carry on approved research projects in their major area under supervision of staff member. PREREQUISITES: senior standing and permission of Director of Undergraduate Programs..

MKTG 4911. Marketing Internship. (1-6). Internship in business organization to gain on-the-job experience. Project to be approved and supervised by area faculty member. Credit allowed only after acceptance of student's written report. PREREQUISITES: senior standing and minimum GPA of 2.75.

MKTG 4920-29. Special Topics in Marketing. (3). Topics are varied and announced in Schedule of Classes. May be repeated once with change in topic. PREREQUISITE: consent of department chair.

MKTG 4996. Senior Honors Thesis in Marketing. (3). Independent research open only to those students

enrolled in the honors program. Thesis supervised by area faculty member. PREREQUISITES: senior standing and permission of the Director of the College Honors Program.

(MMCS) MICROBIOLOGY AND MOLECULAR CELL SCIENCES

DELANO BLACK, ◆ Ph.D., *Interim Chair Room 201, Life Sciences*

◆ <http://www.people.memphis.edu/~microcell/mmcs.html>

Students must earn at least a C in BIOL 1151, 1152, 1161, and 1162 before enrolling in any upper division MMCS course.

MMCS 1451. Microbiology. (3). (BIOL 1451, 1400). Microorganisms and their basic characteristics, with emphasis on relationship to pathogenesis and disease prevention. Credit not acceptable for BIOL or MMCS major or minor. *Three lecture hours per week.*

MMCS 1452. Microbiology Laboratory. (1). (BIOL 1452, 1400 lab). Laboratory observations, demonstrations and experiments designed to apply scientific methods to lecture subjects. Credit not acceptable for BIOL or MMCS major or minor. *Two laboratory hours per week.* PREREQUISITE OR COREQUISITE: MMCS 1451.

MMCS 3130. Cell Biology. (3). (BIOL). Introduction to principles of cell and molecular biology as they relate to eukaryotic cells with emphasis on functions common to most cell types. *Three lecture hours per week.* PREREQUISITE: CHEM 1132.

MMCS 3500. Microbiology I: Fundamental Aspects. (3). (BIOL 3551, 3500). Origins, anatomy, composition, physiology, reproductive mechanisms, growth and diversity of microorganisms. *Three lecture hours per week.*

MMCS 3550. Microbiology II: Human and Applied Aspects. (3). Interactions of microorganisms with each other, with higher organisms, including humans, and with abiotic systems. Symbiosis, pathogenesis, micro- to planetary-scale ecology, and biotechnology. *Three lecture hours per week.* PREREQUISITE: MMCS 3500.

MMCS 3600. General Microbiology Laboratory. (2). (BIOL 3555, 3500 lab). Essential microbiological laboratory skills such as aseptic technique, microscopy, and bacterial culture and characterization. *Four laboratory hours per week.* PREREQUISITES or COREQUISITES: MMCS 3500 and CHEM 1122.

MMCS 4000. Research. (1-4). Independent laboratory or field research with faculty supervision; formal paper required if taken for 3 or 4 credits. *Three to twelve laboratory hours per week.* May be repeated for a maximum credit of four hours. ◆ [W] (S/U)

MMCS 4090-99-6090-99. Special Topics in Microbiology and Molecular Cell Sciences. (1-3). Topics are varied and announced in Schedule of Classes. May be repeated with different topics for a maximum of four hours. PREREQUISITE: Junior standing and consent of instructor.

MMCS 4150-6150. Developmental Biology. (3). (BIOL 4150, 4151). Introduction to study of developing biological systems at cellular and molecular level. *Three lecture hours per week.* PREREQUISITES: BIOL 3072 and CHEM 3312.

MMCS 4200. Cell and Developmental Biology Laboratory. (2). (BIOL 4152, 4151). Application of modern laboratory techniques and instrumentation to experiments in cell and developmental biology. *Four laboratory hours per week.* PREREQUISITES: BIOL 3072, MMCS 3600 and CHEM 3312.

MMCS 4300. Microbial Physiology. (3). (BIOL 4430). Cell structure and function; biosynthesis, degradation and metabolic regulation; regulation of growth. *Three lecture hours per week.* PREREQUISITES: MMCS 3550 and CHEM 3312.

MMCS 4325. Microbial Genetics. (3). Introduction to the principles of microbial genetics with emphasis on bacteriophage, prokaryotic and yeast genetics. Mutation, conjugation, transformation, transduction, recombination, plasmids, gene mapping and applications of genetic modifications are covered. *Three lecture hours per week.* PREREQUISITES: BIOL 3072, CHEM 1132 AND MMCS 3550.

MMCS 4350-6350. Microbial Biotechnology. (3). (BIOL 3560). Principles underlying practical applications of microorganisms, including synthesis of commercial products, vaccines and antibodies, bioremediation and biomass utilization, plant biotechnology and food production. *Three lecture hours per week.* PREREQUISITES: MMCS 3550 and CHEM 3312.

MMCS 4375-6375. Molecular Biology of Parasites and their Vectors. (3). Emphasis on molecular and immunological aspects of parasites of humans, companion animals and livestock. The biology, treatment and prevention of parasitic diseases will be discussed. *Three lecture hours per week.* PREREQUISITE: MMCS

3130 or 3550.

MMCS 4400-6400. Plant Cell and Molecular Biology. (3). The cellular and molecular basis of plant development, including plant hormones, signal transduction, regulation by light, plant-microbe interactions and plant transformation. *Three lecture hours per week.* PREREQUISITES: MMCS 3130 and BIOL 3072.

MMCS 4440-6440. Pathogenic Bacteriology. (3). (BIOL). Survey of pathogenic bacteria, human and veterinary, diseases they cause, and methods of diagnosis; molecular basis of pathogenesis; introduction to immunological principles and immunity. *Three lecture hours per week.* PREREQUISITES: MMCS 3550 and organic chemistry.

MMCS 4445-6445. Immunology. (3). (BIOL 4445, 4444). Antigens, immunoglobulin classes, cells and cytokines of immune response, complement system, hypersensitivities, blood groups, vaccines and immunity. *Three lecture hours per week.* PREREQUISITES: MMCS 3550 and CHEM 3311.

MMCS 4450-6450. Microbial Ecology. (3). (BIOL). Roles of microorganisms in the environment; microbial processes, interactions with the environment and biota, population ecology, community ecology, and biodegradation. *Three lecture hours per week.* PREREQUISITES: MMCS 3550, 4511 and 4512, or consent of instructor.

MMCS 4460-6460. Advanced General Microbiology Laboratory. (2). Application of modern laboratory techniques and instrumentation to experiments in microbial physiology, genetics, ecology and biotechnology. *Four laboratory hours per week.* PREREQUISITES: MMCS 3550 and 3600.

MMCS 4465-6465. Advanced Medical Microbiology Laboratory. (2). Application of modern laboratory techniques and instrumentation to experiments in pathogenic bacteriology, immunology, virology and parasitology. *Four laboratory hours per week.* PREREQUISITES: MMCS 3550 and 3600.

MMCS 4470-6470. Molecular Genetics. (4). (BIOL). Structure, function and replication of DNA, recombination, colinearity of DNA with genetic map, mutagenesis, plasmids, genetic code, protein synthesis, suppression, regulation of gene expression, genetic engineering and immunogenetics. For students without formal training in molecular genetics. *Four lecture hours per week.* PREREQUISITES: MMCS 3130 or 3500 and BIOL 3072.

MMCS 4501-6501. Virology. (3). (BIOL). Introductory study of viruses of human and veterinary significance and methods of cultivation, isolation and characterization; study of pathogenic mechanisms. *Three lecture hours per week.* PREREQUISITE: MMCS 3550.

MMCS 4503-6503. Biochemistry Laboratory I. (2). (BIOL). (Same as CHEM 4501-6501). Survey of common biochemical techniques and the properties of biological molecules; emphasis on purification and assay of enzymes and on enzyme kinetics. *Six laboratory hours per week.* PREREQUISITES: CHEM 3302, or CHEM 3201 and 3301. PREREQUISITE OR COREQUISITE: MMCS 4511 or CHEM 4511.

MMCS 4504-6504. Biochemistry Laboratory II. (2). (BIOL). (Same as CHEM 4502-6502). Biochemical laboratory techniques; emphasis on nucleic acids and recombinant DNA techniques. *Six laboratory hours per week.* PREREQUISITES: MMCS 4511 or CHEM 4511, MMCS 4325 or 4470, or consent of instructor.

MMCS 4511-6511. Biochemistry 1. (3). (BIOL). (Same as CHEM 4511-6511). Chemistry of amino acids and proteins related to their properties in biochemical systems; enzymology, including kinetics and conformation studies; coenzymes and their functions; importance of pH; bioenergetics; chemistry of carbohydrates, lipids, and nucleotides. *Three lecture hours per week.* PREREQUISITE: CHEM 3312.

MMCS 4512-6512. Biochemistry II. (3). (BIOL) (Same as CHEM 4512-6512). Metabolism of carbohydrates, amino acids and nucleotides, with emphasis on mammalian systems; biochemistry of DNA and RNA, including their relationship to biosynthesis of proteins, DNA and RNA. *Three lecture hours per week.* PREREQUISITE: MMCS 4511 or CHEM 4511.

MMCS 4570. Practicum in Microbiology and Molecular Cell Sciences. (1-4). Directed extradepartmental studies in microbiology and molecular cell sciences. A maximum of four hours credit may be applied to degree requirements. PREREQUISITE: MMCS major and permission of department chair. (S/U)

MMCS 4580/6580-99. Special Topics in Biochemistry. (1-3) (Same as CHEM 4580/6580-99). Topics of current interest in biochemistry. ♦ Topics are varied and announced in Schedule of Classes. ♦ PREREQUISITE: CHEM 4512 and permission of instructor.

MMCS 4900. Honors Thesis Research. (1-3). Independent research conducted under direction of a faculty member in the department and culminating ♦ in an acceptable thesis. ♦ Must be repeated in four consecutive semesters for a total of eight credit hours. ♦ A maximum of four credit hours may be applied to the major. PREREQUISITE: Admission to MMCS Honors Program.

MUSIC

◆ B. GLENN CHANDLER, Ph.D., *Chair Room 123B, Music Building*
[http://www.people.memphis.edu/~music/home.html/](http://www.people.memphis.edu/~music/home.html)

APPLICATION AND AUDITION PROCEDURES: Special application and audition procedures are required. See the description of the music programs in Colleges and Degree Programs.

PIANO PROFICIENCY: All undergraduate music majors must take a piano placement evaluation before enrolling in applied music courses. This evaluation will place students in the appropriate piano class (MUAP 1105, 1106, 2107, 2108) to develop skills necessary to pass the Piano Proficiency Examination. All students in the Bachelor of Music (in Music) degree program must pass the Piano Proficiency Examination before the beginning of the senior year. This may be done in either of two ways: (1) by completing MUAP 2108, or (2) by passing, without credit, the Piano Proficiency Examination given once each semester. Piano proficiency requirements vary according to the area of concentration. A verification will be mailed to the student and appropriate officials upon completion of the examination. After successful completion of this examination, music students whose major instrument is not piano may audition for introductory instruction or private piano instruction.

COMMERCIAL MUSIC PIANO PROFICIENCY: In lieu of the above piano proficiency, all Bachelor of Music commercial music majors, with the exception of keyboard students and students with a concentration in Music Business or Recording Technology must pass the commercial music piano proficiency examination before their final semester in the program.

PATTERNS OF COURSE OFFERINGS: Patterns of course offerings are indicated in some course descriptions. (F) indicates the course is offered during the Fall Semester; (SP) indicates Spring. Courses with no indications of offering are offered either every semester or as needed. There is no guarantee that courses will always be offered as indicated. Always check the Schedule of Classes for availability.

(MUAP) APPLIED MUSIC

Department of Music

B. GLENN CHANDLER, Ph.D., *Chair Room 123B, Music Building*
[http://www.people.memphis.edu/~music/home.html/](http://www.people.memphis.edu/~music/home.html)

Applied music courses are divided into two broad categories: (1) small group or individual lessons in vocal or instrumental performance and (2) musical ensembles.

Individual lessons, vocal or instrumental performance are offered as INTRODUCTORY INSTRUCTION, LOWER DIVISION, AND UPPER DIVISION applied music (see explanation below).◆ Individual lessons in vocal or instrumental performance are given by university faculty who are members of the relevant Applied Music Division.

All students who wish to enroll in applied vocal or instrumental performance must perform an audition for the members of the appropriate Applied Music Division or for a designate of the appropriate division. Because the number of students who can be accepted is limited, it is advisable that the student audition as early as possible to be assured a place with the requested teacher. Practice facilities are provided without charge, but there are additional fees for the individual lessons (see the explanation below under FEES), and a fee is required for certain practice room keys.

Examinations for courses in which the student is to receive credit for applied music in vocal or instrumental performance are called Board Exams. For Board Exams, each student performs musical selections and/or technical exercises of a grade of difficulty appropriate to the level of instruction in which the student is enrolled. The board hearing the exam is made up of the members of the appropriate Applied Music Division (for further information, see the explanation below under EXAMINATIONS).

Music majors at The University of Memphis are expected to participate in Music Department ensembles; each degree program has specific or general ensemble requirements (see above under the various degree requirements). Non-music majors enrolled at The University of Memphis as degree-seeking students may audition and, if accepted, enroll for applied instruction where staff time is available. If accepted at the Lower Division or Upper Division level for applied instruction, non-music majors must simultaneously enroll and participate in an ensemble sponsored by the Department of Music.

Harp	1560
1561	4561-6561
Viola da Gamba	1570
4571-6571	1571
Voice	1610
1611	4611-6611
Flute	1710
1711	4711-6711
Oboe	1720
1721	4721-6721
Clarinet	1730
4731-6731	1731
Saxophone	1740
Bassoon	1750
4751-6751	1751
Recorder	1760
6761	1761
Jazz Trumpet	1112
4112	
Jazz	Piano
1312	4312
Jazz Percussion	1412
Jazz	Bass
1542	4542
Jazz	Guitar
1552	4552
Jazz	Voice
1612	4612

REGISTRATION: Students will register for lessons in the same manner and at the same time as they register for other courses; however, students may not be assigned to a course number until they have auditioned. Auditions are held in the Music Building during the pre-college counseling, advising and registration periods before each semester. Auditions may be scheduled in the Music Office, Room 123, Music Building. Any inquiries concerning credits or course numbers should be directed to the chair of the Department of Music.

CREDITS AND GRADES: Students may register for one or two hours credit per semester and will be assigned to individual lessons, a master class, or a combination of the two, commensurate with their level of performance. Additional credit may be earned at the lower division and upper division level. Students earning more than two credits per semester will be assigned additional practice and will be expected to perform at a higher level than those students registered for fewer credits. Grades are awarded on the same basis and have the same significance as in other subjects.

REPETITION OF COURSES: MUAP courses in individual lessons and major group instruction, small ensembles, and large ensembles may be repeated for credit but not for the purpose of improving the grade originally earned.

EXAMINATIONS: For an examination in applied music, students will prepare and perform for members of the faculty of the Department of Music suitable musical selections and technical exercises of a grade of difficulty appropriate to their standing. Examinations are held in designated rooms on days set aside for this purpose near the end of each semester. Credit for the course will not be awarded to any student who fails to take the examination.

MUAP 1100. Class Piano for Non-Music Majors. (1). Beginning instruction in piano for non-music majors; development of basic reading and performance skills.

MUAP 1105. Class Instruction in Piano I. (1). Basic technique, with emphasis on sight-reading. PREREQUISITE: MUTC 1001 or permission of instructor.

MUAP 1106. Class Instruction in Piano II. (1). Playing of songs used in school music teaching; community songs, and hymns. PREREQUISITE: MUAP 1105; MUTC 1108,1010.

MUAP 2107. Class Instruction in Piano III. (1). Simpler Bach chorales, more difficult songs and

accompaniments, appropriate to the student's major field; memorization optional. PREREQUISITE: MUAP 1105; MUTC 1009, 1011.

MUAP 2108. Independent Studies in Piano Proficiency. (1). Piano repertoire and technique, accompaniments, harmonization, transposition, and sight reading to satisfy the core requirements of the piano proficiency exam. Requirements vary according the student's concentration area and the degree emphasis. PREREQUISITES: MUAP 2107; MUTC 1009, 1011. (T grade allowed).

MUAP 3301. Chamber Music for Keyboard. (1). Collaborative performance for pianist, harpsichordists, and organists with keyboard, brass, winds, strings, percussion, and vocalists; open to students in keyboard concentration and others through audition.

MUAP 3999. Junior Recital. (1).

MUAP 4260-69-6260-69. Special Topics in Applied Music. (1-3). Topics are varied and announced in Schedule of Classes.

MUAP 4799. Conducting Recital. (1).

MUAP 4801-6801. Individual Studies in Applied Music. (1-3). Directed individual instruction in applied area not listed under MUAP. May be repeated, not to exceed 6 semester hours credit. PREREQUISITE: permission of department chair.

MUAP 4998. Senior Performance Project. (3). Integration course in which knowledge and skills developed in music history, music theory, applied music, and music education courses are utilized systematically in the preparation and presentation of a public musical performance and of an accompanying descriptive paper; one of the compositions presented in the format of a lecture-demonstration. Taught as applied music, individual instruction. PREREQUISITE: minimum of 2 hours in upper division applied lessons; permission of the instructor. [I]

MUAP 4999. Artist Recital. (4). Integration course in which knowledge and skills developed in music history, music theory, and applied music courses are utilized systematically in the preparation and presentation of a public musical performance and of an accompanying descriptive paper. Taught as applied music, individual instruction. PREREQUISITE: a minimum of 4 hours upper division lessons; permission of the instructor. [I]

INTRODUCTORY INSTRUCTION: Any student may audition for lessons at the one-hour level except in organ; organ students must have the ability to play the piano before beginning organ instruction. A student may not receive more than four hours credit in any one area of major group instruction. The fee for major group instruction will be the same as for one half-hour lesson per week: \$45.00 per semester.

LOWER DIVISION COURSES: Applied music courses in the lower division include the study normally carried out during the freshman and sophomore years. Piano or instrumental students at this level should have had several years of intensive study prior to university entrance so that they have a secure, reliable, and well-grounded technique on the instrument. Organ students may begin at this level provided that they play the piano well and have reasonable ability in sight-reading. Those who do not meet this requirement will register for MUAP 1310. To be admitted to lower division study a student must first pass a qualifying examination.

Students who fall short of the requirements for admission to the lower-division courses will be advised to register for major group instruction until deficiencies are eliminated. Course numbers will be repeated for each semester of study.

UPPER DIVISION COURSES: Promotion to the upper division does not follow automatically after the completion of four semesters of courses in the lower division but is made only on the recommendation of the upper division examining committee; such a recommendation will be made only if the student's proficiency as a performer bears promise of future artistic and professional qualities as a soloist. It is at this level that the student normally begins preparation for a recital.

JUNIOR RECITAL, ARTIST RECITAL, and SENIOR PERFORMANCE PROJECT: The Junior Recital is required for the Performance Concentration under the Bachelor of Music in Music degree. The Artist Recital is required for the Performance Concentration and the Sacred Music Concentration. The Senior Performance Project is required under the School of Music Concentration. The Artist Recital and the Senior Performance Project are integration courses for which the student must prepare both a public recital and a paper. To register for the Junior Recital and the Senior Performance Project, students must have successfully completed at least two years of credit in upper division lessons in their applied area. To register for the Artist Recital, students must have successfully completed at least four hours of credit in upper division lessons in their applied area. The Junior Recital must be approved by the appropriate applied music faculty through a hearing. Both the musical and the written portions of the Artist Recital and the Senior Performance Project must be approved by

the appointed faculty committee through a reading and a hearing. Upon approval, the student may schedule a date for the public performance and make arrangements for the printing of the program. The public performance must be presented no later than two weeks after the date of the hearing.

SMALL, CHAMBER, AND SPECIALIZED ENSEMBLES: Advanced students are encouraged (and for certain degree plans are required) to participate in the following groups. Selection for membership is based on audition; courses may be repeated with the approval of the student's advisor. *Three one-hour meetings per week.*

MUAP 3101. Brass Ensemble. (1). Practical applications of brass performance techniques for a small chamber ensemble, one performer to a part; survey of brass chamber music. **PREREQUISITE:** permission of instructor.

MUAP 3104. Collegium Musicum. (1). Use of early musical instruments and voice in performance of early music; primary sources used in preparation of performances. **PREREQUISITE:** permission of instructor.

MUAP 3401. Percussion Ensemble. (1). Study and performance of selected traditional, contemporary, avant garde and pops percussion literature. Open to students in percussion concentration and others through audition.

MUAP 3402. Contemporary Chamber Players. (1). Ensemble of mixed and variable instrumentation; performance of repertoire written since 1900 and little known works of other periods. Primary goal of ensemble: to provide experiences in solving unique performance problems of contemporary music. **PREREQUISITE:** permission of instructor.

MUAP 3403. Orff Ensemble. (1). Study and performance of literature written for Orff instruments, including barred percussion, unpitched percussion, and recorder.

MUAP 3501. Chamber Music for Strings. (1). Study and performance of string chamber music repertory. Coaching sessions weekly with a member of music faculty. Open to music majors and non-majors through audition.

MUAP 3503. Double Bass Ensemble. (1). Study and performance of works for bass ensemble. Open to music majors and non-majors through audition.

MUAP 3504. Guitar Ensemble. (1). Study and performance of works for guitar ensemble. Open to majors and non-majors through audition.

MUAP 3505. Cello Ensemble. (1). Study and performance of works for cello ensemble. Open to music majors and non-majors through audition.

MUAP 3601. Camerata Singers. (1). Small vocal ensemble of varying sizes and resources specializing in performance of music from Medieval through Baroque periods. Open to music majors and non-music majors through audition.

MUAP 3602. Opera Workshop. (1-6).

MUAP 3603. Opera Soloists. (1). Preparation and performance of role in major production of University Opera Theater. Audition required.

MUAP 3604. Opera Production Laboratory. (1-6).

MUAP 3701. Woodwind Ensemble. (1). Study and performance of original and transcribed works for varied combinations of woodwind instruments. Audition required.

LARGE MUSICAL ORGANIZATIONS

All music students must take a minimum of eight (8) semesters of ensemble. The exact number of large ensembles and other (or small) ensembles is determined by each division and major concentration. In addition, the designations of which ensembles will satisfy large ensemble requirements are determined by each division. Therefore, it is necessary to consult with your advisor for the specific outline for your applied area and degree program. Transfer students lacking sufficient large ensemble credits should consult with their advisor and/or the department chair to determine a method of rectifying the situation. Ensemble assignments are based on audition and may be repeated. Any exception to this general ensemble assignment policy may be made after a review of petitions by the department chair, the appropriate ensemble director, and the applied studio teacher.

MUAP 2001. University Concert Band. (1). (2001001). Performance of traditional and contemporary wind compositions. Participants chosen from this ensemble for basketball pep-bands. Open to music majors and non-music majors.

MUAP 2002. Marching Band. (2). Selected ensemble that performs at all home football games and occasional out-of-town games in each season. Rehearsal approximately ten hours weekly. Open to music majors and non-music majors. [G].

MUAP 2003. Varsity Band. (1). (2001002). Concert performance of traditional and contemporary wind compositions. Participants are chosen from this ensemble for basketball pep-bands and usually have participated in Fall marching band. Open to music majors and non-music majors.

MUAP 2004. University Gospel Choir. (1). Ensemble open to all students. Music includes contemporary gospel, spirituals, and gospel hymns. Serves as outlet for students interested in developing musical and personal capacities. Open to music majors as elective. Two class meetings per week.

MUAP 3004. University Wind Ensemble. (1). Select ensemble of instrumentalists. Study and performance of outstanding repertory for wind ensembles. Open to music majors and non-music majors through audition.

MUAP 3005. University Orchestra. (1). Study and performance of major orchestral literature. Additional opportunities for opera, chamber-orchestral and chamber ensemble performance. Audition required.

MUAP 3006. University Singers. (1). Study and performance of choral works from broad spectrum of choral literature; sacred, secular, accompanied and a cappella. Open to music majors and non-music majors through audition.

MUAP 3007. Opera Chorus. (1). Choral ensemble for opera productions with exploration of related stage techniques. Extra rehearsals at discretion of conductor. Audition required.

MUAP 3008. Oratorio Chorus. (1). Study and performance of major works primarily oratorio in nature. Open to music majors, non-music majors and the off-campus community. Audition required.

JAZZ AND STUDIO ENSEMBLES

Department of Music

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MUAP 3012. University Instrumental Jazz Ensemble.(1). (3010-001). Study and performance of varied jazz styles, including repertory from standard big band literature and studio ensembles. Open to music majors and non-majors through audition. This course will meet large ensemble requirements for Commercial Music majors only.

MUAP 3013. University Vocal Jazz Ensemble. (1). (3010-002). Study and performance of varied jazz styles, including repertory from standard big band literature and studio ensembles. Open to music majors and non-majors through audition. This course will meet large ensemble requirements for Commercial Music majors only.

MUAP 3014. Recording Studio Instrumental Ensemble. (1). (3011-001). Ensemble performs and records works written by students in the Commercial Music program. This course will meet large ensemble requirements for Commercial Music majors only.

MUAP 3015. Recording Studio Vocal Ensemble. (1). (3011-002). Ensemble performs and records works written by students in the Commercial Music program. This course will meet large ensemble requirements for Commercial Music majors only.

MUAP 3103. Jazz Combo. (1). Practical application of basic jazz improvisatory skills; combo experiences in all jazz styles; traditional, bop, contemporary. Audition required.

(MUHL) MUSIC HISTORY, LITERATURE, AND APPRECIATION

Department of Music

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<http://www.people.memphis.edu/~music/home.html/>

MUHL 1101. Music Appreciation. (3). Music of various Western and non-Western cultures and historical periods, including the creative process, the formal elements of music and musical styles, genres, and media. Attendance at some concerts required. NOTE: May not be used to satisfy requirements for degrees in Music. [G]

MUHL 3301. History of Music to 1700. (3). Development of significant musical styles; attention to individual contribution of major composers. PREREQUISITE: MUTC 2008 or permission of instructor. (F) [W]

MUHL 3302. History of Music Since 1700. (3). Continuation of MUHL 3301. PREREQUISITE: MUTC 2008 or permission of instructor. (SP). [W]

MUHL 4001-6001. Piano Repertory. (3). Survey of stringed keyboard repertory from Bach and his

contemporaries to the present. Representative works analyzed regarding historical, stylistic, formal and aesthetic features. PREREQUISITE: junior standing in music or permission of instructor. (F)

MUHL 4002-6002. Song Repertory I. (3). Survey of solo literature from the Italian, British Isles, and German Schools of song.

MUHL 4003-6003. Song Repertory II. (3). Survey of solo literature from the French, Russian and Slavic, Scandinavian, and American Schools of song.

MUHL 4005-6005. History and Literature of the Organ. (3). Literature for the organ and its effect on and interaction with organ design.

MUHL 4006-6006. Classical Guitar Literature I. (3). Study of the basic repertoire from the medieval period through the pre-classical period.

MUHL 4007-6007. Classical Guitar Literature II. (3). Study of the basic repertoire from the classical period to the present.

MUHL 4259. Studies in Bibliography. (3). Bibliographic techniques in music history; study and cataloguing of standard reference materials; research practices and ethics. Preparation of the Senior Project prospectus.

MUHL 4260-69-6260-69. Special Topics in Music History. (1-3). Topics are varied and announced in Schedule of Classes.

MUHL 4401. Medieval Music. (3). (4408-001). Advanced study of music in its historical context from Gregorian Chant through 1400.

MUHL 4402. Renaissance Music. (3). (4408-002). Advanced study of music in its historical context from 1400 through 1600.

MUHL 4403. Baroque Music. (3). (4408-003). Advanced study of music in its historical context from 1600 through 1750.

MUHL 4404. Classical Music. (3). (4408-004). Advanced study of music in its historical context from 1725 through 1810.

MUHL 4405. Nineteenth Century Music. (3). (4408-005). Advanced study of music in its historical context from 1790 through 1900.

MUHL 4406. Twentieth Century Music. (3). (4408-006). Advanced study of music in its historical context from 1900 to the present.

MUHL 4407-6407. The Opera and Music Drama. (3). Survey of opera before Richard Wagner; Wagner's music dramas and operas of his contemporaries; dramatic and musical significance of each phase of development of two forms. PREREQUISITE: MUHL 3301, 3302; or permission of instructor.

MUHL 4500-6500. String Repertory. (3). Histories, texts, methods, periodicals, orchestral studies, and solo and ensemble literature of the individual string instruments.

MUHL 4601. Comparative Arts. (3). Cultural activities in their interrelation with each other and with corresponding historic and economic events. Open without prerequisite to non-music majors of junior and senior standing.

MUHL 4800-6800. World Musical Styles. (3). Musical styles and role of music performance in preliterate and folk societies throughout world. (SP)

MUHL 4801-6801. American Folk and Popular Music. (3). Folk and popular elements in American music; role of mass media, especially phonograph record, in utilizing and changing folk music; historical development and interrelationships of various musical styles ranging from 19th century minstrelsy to roots of rock and roll; emphasis on southern Anglo-American and Afro-American folk and popular musical styles. (F)

MUHL 4803. Individual Studies in Music History. (1-3). Directed individual study in selected areas of music history chosen in consultation with instructor. May be repeated for credit with permission of department chair. May not exceed 6 hours credit.

MUHL 4804-6804. Blues. (3). (4802-002). Stylistic development of blues music from its beginnings; its relationships to African-American and American culture and history. (F)

MUHL 4805-6805. History of Rock and Roll. (3). (4802-006). Stylistic origins and development of rock and roll music from its beginnings to the present.

MUHL 4806-6806. History of Jazz. (3). (4802-007). Stylistic origins and development of jazz; interaction of jazz and Western classical music styles.

MUHL 4807-6807. Memphis Music. (3). (4802-009). Most distinctive forms of folk and popular music in Memphis in the twentieth century; relationships to history, culture, and social patterns of the city and mid-south region; folk music background; blues, jazz, country music, gospel music, and rock and roll emphasized. (Sp)

MUHL 4999. Senior Project in Music History. (3). Integration course in which knowledge and skills developed in music theory, performance practice studies, and music history are utilized systematically in the preparation of a public presentation of musical and musicological interest and of accompanying descriptive paper. Taught as applied music, individual instruction. **PREREQUISITE:** a minimum of 6 hours in advanced music history courses; permission of the instructor. **[I]**

(MUSA) SACRED MUSIC

Department of Music

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MUSA 4104-6104. Sacred Music in History and Practice I. (3). Survey of Jewish and Christian sacred music, exploring origins of styles, traditions, and current practices. *(F-alternate years)* **PREREQUISITE:** MUTC 2008.

MUSA 4105-6105. Sacred Music in History and Practice II. (3). *(SP - alternate years)* **PREREQUISITE:** MUTC 2008.

MUSA 4106-6106. Children's Choirs in the Church. (3). Organization and development of a children's choir program in the church; rehearsal techniques; literature; vocal development; recruiting; contemporary approaches. **(F)**

MUSA 4107-6107. Service Playing for Organists. (3). Playing of hymns and accompaniments, adaptation of piano and orchestra accompaniments, basic improvisation. *(SP-alternate years)* **PREREQUISITE:** Upper division standing in organ or permission of instructor.

MUSA 4260-69-6260-69. Special Topics in Sacred Music. (1-3). Topics are varied and announced in Schedule of Classes.

MUSA 4801-6801. Individual Studies in Sacred Music. (1-3). Directed individual study in selected areas of music chosen in consultation with instructor. May be repeated for credit with permission of department chair. May not exceed 6 hours credit.

(MUSE) MUSIC EDUCATION

Department of Music

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FIELDS OF ENDORSEMENT FOR TEACHING: For students in the School Music Concentration of the Bachelor of Music in Music degree, endorsement may be obtained in Instrumental Music and in Vocal Music. Normally, a student can expect to be recommended in only one of these areas. Vocal Music applicants should be able to play piano accompaniments of moderate difficulty, should possess an adequate solo voice for school music purposes, and should schedule a variety of large choral ensembles. Instrumental Music applicants should study one instrument of major emphasis and participate in large instrumental ensembles. Students in either area may satisfactorily meet piano and voice requirements with completion of MUSE 2108 and MUSE 1113 and their prerequisites. A graduation recital is required in both areas.

MUSE 1101. Class Instruction in Brass Instruments. (1). Basic performance skills and teaching techniques on trumpet, trombone, French horn, baritone horn and tuba for those who intend to teach instrumental music in schools. **(SP)**

MUSE 1103. Class Instruction in Percussion Methods. (1). Basic performance skills and teaching techniques on snare drum, timpani, and keyboard percussion instruments for those who intend to teach instrumental music in schools. **(F)**

MUSE 1104. Class Instruction in Woodwind Instruments. (1). Basic performance skills and teaching techniques on clarinet, flute, saxophone, oboe, and bassoon for those who intend to teach instrumental music in schools. **(SP)**

MUSE 1112. Class Instruction in Voice. (1). Fundamentals of vocal production useful for all music teachers.

MUSE 1116. Class Instruction in Stringed Instruments. (1). Basic performance skills on violin, viola, cello, or double bass. Emphasis on principles of sound production, intonation, and bow strokes; various published methods examined and compared; orchestral and chamber music literature for string players. **(F)**

MUSE 1118. Class Instruction in Guitar for Non-music Majors. (2). Beginning instruction in classical guitar for non-music majors; development of basic reading and performance skills.

MUSE 3101. Functional Keyboard Skills. (1). Functional keyboard harmony and sight reading skills designed for keyboard majors.

MUSE 3700. Basic Conducting. (2). Development of conducting skills; basic baton principles, rhythmic analysis, expressive techniques, phrasing, and multimetered problems; class meetings require performing as instrumentalist or vocalist as well as conductor. *Three class hours per week.* (F). PREREQUISITE: Completion of MUTC 3008.

MUSE 3702. Score Reading. (3). Realization of open score at the keyboard; vocal scores, small orchestra and large orchestra scores; clefs, transpositions, etc.; employing literature from various periods of music history.

MUSE 4001-6001. Orff-Schulwerk for Classroom Teachers. (3). Broad, practical introduction to use of Orff-Schulwerk approach to elementary music teaching; development of performance leadership skills emphasized. Not open to music majors.

MUSE 4201-6201. Individual Studies in Music Education. (1-3). Individual study of problems and opportunities faced by person who teaches music in schools; for classroom teachers, music teachers, supervisors, principals, and administrators. May be repeated, but not for the purpose of changing a previous grade, for maximum of 6 semester hours credit.

MUSE 4205-6205. Marching Band Techniques. (2). Organizing and conducting the marching band, gridiron charting and marching procedures with a study of precision drill, formations and pageantry. (SP) PREREQUISITE: permission of the instructor.

MUSE 4208-6208. Band Literature. (3). History and evolution of wind instruments and wind instrument playing and the history and development of the wind band and its literature, with general background material on the specific composers involved. (SP)

MUSE 4209. Piano Tuning and Repair. (2). Concentrated study of basic techniques involved in piano tuning and adjustment. Some basic tools required.

MUSE 4211. Vocal Diction I. (2). Phonetic study of Latin, English and German languages in detail. Introduction and basic rules of Italian pronunciation; International Phonetic Alphabet transcription of songs and arias and class performance. (Alternate years)

MUSE 4212. Vocal Diction II. (2). Phonetic study of Italian, French, and Spanish in detail, including IPA transcription of songs and arias and class performance. Other languages (Russian, Hebrew, etc.) may be covered as time permits. (Alternate years)

MUSE 4213. Materials and Methods of General Music. (2). (4203). Philosophy, methods and materials for teaching non-performance music classes in secondary schools, grade 7-12. Includes demonstration and simulation of classroom teaching at this level. (F) COREQUISITE: MUSE 4214.

MUSE 4214. Clinical Experience in Materials and Methods of General Music. (1). (4204). Observation and teaching of mini-lessons for teaching non-performance music classes in secondary schools, grade 7-12. (F). COREQUISITE: MUSE 4213.

MUSE 4260-69-6260-69. Special Topics in Music Education. (1-3). Topics are varied and announced in Schedule of Classes.

MUSE 4303. Materials and Methods of Instrumental Music, K-8. (2). Designed to prepare the school instrumental music teachers to teach basic music concepts to beginners in mixed instrumental group settings. Instruction methodologies and materials, simple instrumental arranging, instrument assignment, and instrument maintenance stressed. (SP) PREREQUISITE: Junior standing in music. COREQUISITE: MUSE 4304.

MUSE 4304. Clinical Experience in Materials and Methods of Instrumental Music, K-8. (1). Observation and teaching of mini-lessons in music to beginners in a mixed instrumental group settings. (SP) ♦ PREREQUISITE: Junior standing in music. COREQUISITE: MUSE 4303.

MUSE 4305. Materials and Methods of Choral Music, K-6. (2). Aims and principles of music and of traditional and contemporary methods of teaching in elementary schools; creative approach to rhythm, listening, instrumental and singing activities; contemporary systems of music teaching for elementary grades surveyed. (SP) ♦ PREREQUISITE: Junior standing. COREQUISITE: MUSE 4306.

MUSE 4306. Clinical Experience in Materials and Methods of Choral Music, K-6. (1). Observation and teaching of mini-lessons in music in an elementary school setting. (SP) ♦ PREREQUISITE: Junior standing in music. COREQUISITE: MUSE 4305.

MUSE 4403. Materials and Methods of Instrumental Music, 9-12. (2). Designed to prepare the instrumental

music teacher to teach music concepts to intermediate and advanced players in mixed instrumental group settings. Instruction methodologies and materials, objectives, evaluation, motivation, and administration stressed. (F) ♦ PREREQUISITE: Junior standing in music. COREQUISITE: MUSE 4404.

MUSE 4404. Clinical Experience in Materials and Methods of Instrumental Music, 9-12. (1). Observation and teaching of mini-lessons in music to intermediate and advanced player in mixed instrumental group settings. (F) ♦ PREREQUISITE: Junior standing in music. COREQUISITE: MUSE 4403.

MUSE 4405. Materials and Methods of Choral Music, 7-12. (2). Selected materials and methods of practical concern to the vocal-choral music specialist; consideration of music series, scheduling techniques, voice class development, choral publishers, units of study. (F) ♦ PREREQUISITE: Junior standing in music. COREQUISITE: MUSE 4406.

MUSE 4406. Clinical Experience in Materials and Methods of Choral Music, 7-12. (1). Observation and teaching of mini-lessons in music in a secondary school setting. (F). PREREQUISITE: Junior standing in music. COREQUISITE: MUSE 4405.

MUSE 4501-6501. Piano Pedagogy I. (3). Training teachers for beginning through intermediate level piano instruction. Establishing strong artistic, musical and technical foundations. (F) ♦ PREREQUISITE: permission of instructor.

MUSE 4503-6503. Piano Pedagogy II. (3). Training teachers for advanced piano instruction; extensive readings from renowned artist-teachers and performers; development of ideation and memorization skills; observations and supervised practice teaching. (SP) ♦ PREREQUISITE: MUSE 4501 or permission of instructor.

MUSE 4505-6505. Principles of Accompanying. (3). Performance class involving practical study of instrumental and vocal standard repertory and the problems of ensemble playing; facility in sight-reading and ability to assimilate music rapidly; score-reading, transposition, and figured bass realization introduced as skills necessary to well rounded musicianship. (SP) PREREQUISITE: permission of instructor.

MUSE 4506. Introduction to Suzuki Talent Education for Strings. (3). Required of students who plan to serve as apprentice string teachers in U of M Suzuki Talent Education program. Basic instruction in Suzuki philosophy; participation with parents and children in Suzuki string classes.

MUSE 4508-6508. Principles of Suzuki Piano. (3). Suzuki philosophy applied to development of the child's abilities and role of teacher and parent. Students will analyze technical and musical instruction of beginning piano student. (F) PREREQUISITE: upper division piano skills.

MUSE 4509. Suzuki Violin Literature and Techniques. (3). Literature and technique taught in Suzuki Violin School; fundamental technique, development of posture, tone and listening ability in beginning students; analysis of pedagogical material. Required of students who plan to serve as apprentice teachers in U of M Suzuki String Program. PREREQUISITE: MUSE 4506.

MUSE 4510. Advanced Suzuki String Pedagogy. (3). Literature and technique taught in Suzuki Violin School; emphasis on development of advanced student; laboratory experience in U of M Suzuki String Program. Required of students planning to be apprentice teachers in U of M Suzuki String Program. PREREQUISITE: MUSE 4509.

MUSE 4511-6511. Class Piano Pedagogy. (3). Group instruction techniques in teaching of beginning, intermediate, and early advanced piano. Emphasizes observation and practical application. For the piano major and/or prospective piano teacher. (SP) PREREQUISITE: upper division level in keyboard or permission of instructor.

MUSE 4512-6512. Jazz Pedagogy for Music Educators. (3). Design and implementation of a comprehensive jazz curriculum, either at secondary or college level; teaching methodology in all disciplines of the jazz idiom. PREREQUISITES: advanced standing, permission of instructor.

MUSE 4700. Instrumental Conducting. (2). (3701). Various problems encountered in preparation and conducting of instrumental scores; individual practice with opportunity for each student to conduct instrumental groups. *Three class hours per week.* PREREQUISITE: MUSE 3700.

MUSE 4701. Choral Conducting. (2). Various problems encountered in preparing and conducting traditional and contemporary vocal scores; rehearsal techniques; individual practice with laboratory groups. *Three class hours per week.* PREREQUISITE: MUSE 3700.

MUSE 4801-6801. Teaching Music Comprehensively. (3). Methods course to bring music theory, history, literature, performance, composition, and analysis to bear on teaching of music at any level-elementary, junior high, high school, college, and private studio.

MUSE 4802-6802. Level I Orff-Schulwerk. (1-3). Basic Orff-Schulwerk techniques including body movement, soprano recorder, percussion, vocal performance, improvisation and arranging. **PREREQUISITE:** junior standing in music education or equivalent experience.

(MUTC) MUSIC THEORY AND COMPOSITION

Department of Music

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<http://www.people.memphis.edu/~music/home.html/>

Placement in the Music Theory sequence for undergraduates will be determined through examination. **NOTE:** Courses in Composition and Electronic Music may be repeated for credit but not for the purpose of improving the grade originally earned.

MUTC 1001. Basic Music Theory. (2). For students who plan to major in music but do not meet minimum standards for MUTC 1008. Not allowable as credit toward the satisfaction of requirements for the major or minor. *Two laboratory hours per week.*

MUTC 1008. Music Theory I. (3). (1004). Basic notation, scales, intervals, triads, key signatures; analysis and exploration of technical material and written exercises in historical areas of plain chant through late 16th century. **COREQUISITE:** MUTC 1010. **PREREQUISITE:** Theory placement exam.

MUTC 1009. Music Theory II. (3) (1005). Four part structures, all seventh chords, chorale harmonization figured bass realization; analysis and written exercises from historical area of early 17th century through J. S. Bach. **COREQUISITE:** MUTC 1011. **PREREQUISITES:** MUTC 1008, 1010.

MUTC 1010. Aural Theory I. (1) (1004). Beginning ear training; scales, intervals, triads, simple melodic lines and simple two part examples, sightsinging of combination of tonal and modal materials. **COREQUISITE:** MUTC 1008. **PREREQUISITE:** Theory placement exam. **(S/U)**

MUTC 1011. Aural Theory II. (1). (1005). Ear training involving triads in sequence, two part examples, modulatory melodies; sightsinging of 17th and 18th century melodic examples. **COREQUISITE:** MUTC 1009. **PREREQUISITES:** MUTC 1010, 1008. **(S/U only).**

MUTC 2008. Music Theory III. (3). (1006). Continuation of four part structure, part writing and figured bass; expanded harmonic materials from ninth chords through chordal mutation; formal and chordal analysis from Bach through mid-19th century. **COREQUISITE:** MUTC 2010. **PREREQUISITES:** MUTC 1009, 1011.

MUTC 2010. Aural Theory III. (1). (1006). Ear training involving expanded harmonic materials, modulatory melodies, two part examples with modulation; sightsinging of 18th and 19th century melodic examples. **COREQUISITE:** MUTC 2008. **PREREQUISITES:** MUTC 1011, 1009. **(S/U)**

MUTC 2501. Composition. (2). Class instruction in free composition; emphasis on smaller forms. May be repeated for additional credit. **PREREQUISITE:** MUTC 1008. **NOTE:** Composition taught as applied music. Students receive the equivalent of one half-hour lesson per week. Fee for this instruction is \$45.00 per semester.

MUTC 2502. Composition. (2). Works for piano, voice, chorus, and small ensembles; study of style and analysis of works from music literature. May be repeated for additional credit. **PREREQUISITE:** MUTC 2501 or permission of instructor. **NOTE:** Composition is taught as applied music. Students receive equivalent of one hour lesson per week. Fee for this instruction is \$90 per semester.

MUTC 2511. Introductory Electronic Music. (2). Basic concepts of contemporary digital electronic music techniques including synthesizer operation, MIDI sequencing, and sampling and music notation by computer. **PREREQUISITE:** MUTC 2008 or permission of instructor. **FEE:** \$45.

MUTC 3008. Music Theory IV. (3). (3001). Continuation of late 19th century harmonic structures; introduction of popular music and its notational symbols; introduction and use of 20th century techniques analysis and written examples from 20th century. **COREQUISITE:** MUTC 3009. **PREREQUISITES:** MUTC 2008, 2010. **[C]**

MUTC 3009. Aural Theory IV. (1). (3001). Ear training involving expanded 19th century harmonic considerations, 20th century chromaticism and pandiatonicism, two part examples from both 19th and 20th centuries; sight-singing emphasizing melodies of 20th century. **COREQUISITE:** MUTC 3008. **PREREQUISITES:** MUTC 2010, 2008. **(S/U)**

MUTC 3010. Aural Theory V. (1). (3002). Aural exploration of basic forms, cadences and styles of music; detailed aural analysis of modulatory elements within a piece. **(F).** **PREREQUISITES:** MUTC 3008, 3009.

(S/U)

MUTC 3101. Orchestration. (3). (3002). Basic study of instruments of orchestra and band, terminology and techniques pertaining to that study; practical application by scoring for small and large instrumental combinations (F) PREREQUISITES: MUTC 3008, 3009, or permission of instructor.

MUTC 3102. Advanced Musical Analysis I. (3). (3003). Advanced theoretical analysis of large-scale compositions from late Medieval through early Classic periods; in-depth study of stylistic characteristics and theoretical techniques used in pieces studied PREREQUISITES: MUTC 3008, 3009. (F-even years) [W]

MUTC 3109. Advanced Musical Analysis II. (3). Advanced theoretical analysis of large-scale compositions from late Classic period through very recent works in last decade of twentieth century; in-depth study of stylistic characteristics and theoretical techniques used in pieces studied. PREREQUISITES: MUTC 3008, 3009. (S-odd years)

MUTC 4106. (4101). Compositional Processes of the Twentieth Century. (3). Analysis and imitative writing of major composers of the twentieth century, from Debussy through the present. (S-even years)

MUTC 4202-6202. Seminar: Music Theory and Analysis. (3). Advanced course in theory, counterpoint, and analysis of literature. Contrapuntal and harmonic techniques. Research; theoretical problems from pedagogical point of view; writing in strict and free styles. Recommended as review course for graduate students. PREREQUISITE: permission of instructor. (F)

MUTC 4204. Individual Studies in Music Theory and Composition. (1-3). (4201-001). Directed individual study in selected areas of music theory and composition chosen in consultation with instructor. May be repeated for credit but not for the purpose of changing a grade.

MUTC 4205. Sixteenth Century Counterpoint. (3). (4201-002). Study of contrapuntal techniques of the sixteenth century. (S-odd years)

MUTC 4206. Eighteenth Century Counterpoint. (3). (4201-003). Study of contrapuntal techniques of the eighteenth century. (F-even years)

MUTC 4207. Twentieth Century Counterpoint. (3). (4201-004). Study of contrapuntal techniques of the twentieth century. (F-odd years)

MUTC 4208. Analytical Techniques. (3). (4201-006). Techniques of analysis of styles and structure of music from all periods of history of music. (S-odd years)

MUTC 4209. Advanced Orchestration. (3). (4201-007). Continuation of MUTC 3101. Orchestration of works from nineteenth and twentieth centuries for full orchestra; study of representative orchestral scores from romantic and contemporary periods. PREREQUISITE: MUTC 3101.

MUTC 4260-69-6260-69. Special Topics in Theory and Composition. (1-3). Topics are varied and announced in Schedule of Classes.

MUTC 4501-6501. Composition. (4). Composition in varied forms for large and small ensembles and solo instruments; analysis of contemporary works and practical application of techniques. May be repeated for additional credit. PREREQUISITE: recommendation of upper division examining committee. NOTE: Composition taught as applied music. Students receive equivalent of one hour lesson per week. Fee for this instruction is \$90.00 per semester.

MUTC 4502. Composition for Non-Composition Majors. (3). Class instruction in free composition for students not majoring in composition. Practical experience in idea generation, form, development, and instrumentation. PREREQUISITE: MUTC 3008. NOTE: Composition taught as applied music. Students receive equivalent of one half-hour lesson per week. Fee for this instruction is \$45 per semester.

MUTC 4511. Intermediate Electronic Music. (2). Concepts of contemporary digital electronic music techniques including synthesizer operation, MIDI sequencing, and sampling as well as music notation by computer. The two hours credit earned from this course may be used as composition credit towards the composition concentration. PREREQUISITE: MUTC 2008 or permission of instructor. FEE: \$90.

MUTC 4512. Advanced Electronic Music. (2). Continuation of MUTC 4511. Emphasis on individual compositional projects. Includes investigation of electronic music possibilities of the Internet. PREREQUISITE: MUTC 4511. May be repeated for credit, but only two hours may be used as composition credit in composition concentration. FEE: \$90.

MUTC 4599. Senior Composition Recital. (3). Integration course for which students prepare and present a concert of their music and an accompanying descriptive paper. Taught as applied music, individual instruction. PREREQUISITES: a minimum of 4 hours in MUTC 4501; permission of the instructor. [I]

[Last Updated: 6/12/15](#)

(NAVY) NAVAL SCIENCE

CAPTAIN RANDY L. ETTER, USN, *Chair Room 120A, Hayden Hall Annex*

<http://www.people.memphis.edu/~navallib/>

◆ **NAVY 1100. Navy Laboratory. (1).** Two laboratory hours per week. [G]

NAVY 1101. Introduction to Naval Science. (2). Orientation and concepts of seapower; mission, organization, and warfare components of the Navy and Marine Corps. COREQUISITE: NAVY 1100.

NAVY 1104. Navy Laboratory. (1). (2203). *Two laboratory hours per week.* [G]

NAVY 1105. Seapower and Maritime Affairs. (3). (2202). U.S. naval history from the Revolution to the present with emphasis on major developments; present day concerns in seapower and maritime affairs. COREQUISITE: NAVY 1104.

NAVY 2204. Navy Laboratory. (1). (1103). *Two laboratory hours per week.* [G]

NAVY 2205. Naval Ships Systems I-Engineering. (3). (1102). Ship characteristics and types including ship design, hydrodynamic forces, stability, compartmentation, propulsion, electrical and auxiliary systems, interior communications, ship control, and damage control. COREQUISITE: NAVY 2204.

NAVY 2206. Navy Laboratory. (1). (2200). *Two laboratory hours per week.* [G]

NAVY 2401. Naval Leadership and Management. (2). Advanced study of organizational behavior and management in the context of the naval organization. Practical applications are explored by the use of experiential exercises, case studies, and laboratory discussions. COREQUISITE: NAVY 2206.

NAVY 3000. Naval Science Institute (NSI). (8). Intensive six-week professional academic and training program conducted each summer at a naval installation by the Chief of Naval Education and Training for students entering the two-year NROTC Programs. The Naval Science Institute is the equivalent of the NROTC Basic Course. [G]

NAVY 3301. Navigation and Naval Operations I. (3). Piloting and celestial navigation including theory, principles, and procedures, use of charts, visual and electronic aids, and the theory and operation of magnetic and gyro compasses. *Three class hours and two hours of Navy Laboratory* per week.*

NAVY 3302. Navigation and Naval Operations II. (3). International and inland rules of the nautical road, relative-motion vector-analysis theory, relative motion problems, formation tactics, and ship employment. *Three class hours and two hours of Navy Laboratory* per week.*

NAVY 3310. Evolution of Warfare. (3). Historical development of warfare from the beginning of recorded history to the present focusing on the impact of major military theorists, strategists, tacticians, and technological developments. *Three class hours and two hours of Navy Laboratory* per week.*

NAVY 4000. Marine Corps Leadership Training. (6). Summer instruction (◆Bulldog◆) conducted at the Marine Corps Officer Candidate School, Quantico, Virginia. Intensive six-week professional training program for Marine Option Junior Midshipmen; Marine Corps history and tradition, leadership under high stress situations, and effective management of men and materials in simulated combat conditions.

NAVY 4207. Naval Ships Systems II-Weapons. (3). (2201). Theory and employment of weapons systems. Processes of detection, evaluation, threat analysis, delivery, guidance, and explosives. *Three class hours of Navy Laboratory* per week.*

NAVY 4402. Naval Leadership and Ethics. (2). Naval junior officer responsibilities in naval administration; builds on and integrates the professional competencies developed in prior course work and professional training. *Two class hours and two hours of Navy Laboratory* per week.*

NAVY 4410. Amphibious Warfare. (3). Historical survey of the development of amphibious doctrine and the conduct of amphibious operations. Emphasis is placed on the evolution of amphibious warfare in the 20th century, especially during World War II. *Three class hours and two hours of Navy Laboratory* per week.*

***Navy Laboratory.** Focuses on the requisite moral, leadership and physical qualities for becoming a commissioned officer.

(NURS) NURSING

TONI BARGAGLIOTTI, D.N.Sc., *Dean*

* NOTE: In the repetition of NURS courses for the purpose of achieving a satisfactory grade, the theory and corequisite practicum courses are treated as one course. Both must be taken to improve the grade in either or both of the two courses. A maximum of one nursing course may be repeated. A student who drops or

withdraws from a nursing course may re-enter that course only once.

Additional fees are charged for some Nursing courses. See the Schedule of Classes.

NURS 2217. Foundations of Nursing. (3). (2010). Introduction to nursing process and concepts basic to practice of professional nursing; theory focus on development of nursing knowledge necessary for promotion of health and prevention of illness in individual. *Three lecture hours per week.* PREREQUISITE: admission to the Loewenberg School of Nursing. COREQUISITES: NURS 2218, *2219, 2220, 3000, 3101, 3400; HMSE 1100.

NURS 2218. Integrative Skills I. (1). (2010). Laboratory experiences focus on development of competency in performing basic clinical nursing procedures. *Three laboratory hours per week.* PREREQUISITE: admission to the Loewenberg School of Nursing. COREQUISITES: NURS 2217, 2219, 2220, 3000, 3101, 3400; HMSE 1100.

NURS 2219. Foundations of Nursing Practicum. (2). (2010 lab). Clinical experiences include provision of direct care of adult clients in secondary care and/or extended care settings. *Six clinical laboratory hours per week.* PREREQUISITE: admission to the Loewenberg School of Nursing. COREQUISITES: NURS *2217, 2218, 2220, 3000, 3101, 3400; HMSE 1100. (S/U).

NURS 2220. Dosage Calculation. (1). Introduction to systems of measurement used in medication administration; ability to determine safe dosages for all types of medications and intravenous fluids. *One lecture hour per week.* PREREQUISITES: Math Requirement; CHEM 1101, 1102.

NURS 3000. Pharmacology in Nursing. (3). Basic pharmacology of drugs in the major classifications; emphasis on action of a prototype on organ systems, its mechanisms of action, pharmacokinetics, toxicology and clinically important interactions with other drugs. PREREQUISITES: BIOL 1751/1752, 1761/1762, 1451/1452, CHEM 1101, 1102.

NURS 3001. Individualized Study. (1-3). Directed individualized approach to increase nursing knowledge, understanding, and skills according to student's needs and level objectives. Assessment of student determines content areas and clinical experience needed. May be repeated for a maximum of 6 credit hours. Credit not applied toward B.S.N. degree.

NURS 3003. Computers and Nursing. (3). Introduction to history of computers and information systems; emphasis on nursing practice and patient care applications; social, ethical, and legal issues; use and evaluation of software relevant to nursing; beginning programming.

NURS 3101. Health Assessment. (3). (3100). Comprehensive health assessment of clients across life span. Expands interviewing and history taking. Health assessment skills emphasized. *Two lecture hours, three laboratory hours per week.* COREQUISITES: NURS 2217, 2218, 2219.

NURS 3117. Adult Health Nursing. (3). (3010). Application of nursing process to adults experiencing problems of adaptation requiring nursing intervention in acute and/or chronic illness; role of nurse in health promotion, restoration, and rehabilitation is emphasized. *Two lecture hours per week.* PREREQUISITES: NURS 2217, 2218, 2219, 2220, 3000, 3101, 3400. COREQUISITES: NURS 3118, *3119.

NURS 3118. Integrative Skills II. (1). (3010). Laboratory experiences focus on development of competency in performing complex clinical nursing procedures. *Three laboratory hours per week.* PREREQUISITES: NURS 2217, 2218, 2219, 2220, 3000, 3101, 3400. COREQUISITES: NURS 3117, 3119.

NURS 3119. Adult Health Nursing Practicum. (2). (3010 lab). Clinical experiences include provision of direct care of adult clients and their families in secondary and rehabilitative care settings. *Six clinical hours per week.* PREREQUISITES: NURS 2217, 2218, 2219, 2220, 3000, 3101, 3400. COREQUISITES: NURS *3117, 3118. (S/U).

NURS 3127. Psychiatric Mental Health Nursing. (2). (3040). Theory and principles of nursing practice with clients experiencing psychosocial problems of adaptation. *Two lecture hours per week.* PREREQUISITES: NURS 2117, 2118, 2119, 2220, 3000, 3101, 3400. COREQUISITE: *NURS 3129.

NURS 3129. Psychiatric Mental Health Nursing Practicum. (3). (3040 lab). Use of nursing process for clinical application of theories and principles of psychiatric mental health nursing to acutely ill clients. *Nine clinical laboratory hours per week in health care setting.* PREREQUISITES: NURS 2117, 2118, 2119, 2220, 3000, 3101, 3400. COREQUISITE: *NURS 3127. (S/U).

NURS 3217. Nursing Care of the Expanding Family. (2). (3030). Theory and principles of nursing practice with childbearing individuals and families to assist perinatal clients and families with problems of adaptation. *Two lecture hours per week.* PREREQUISITES: NURS 2117, 2118, 2119, 2220, 3000, 3101, 3400. COREQUISITE: *NURS 3219.

NURS 3219. Nursing Care of Expanding Family Practicum. (3). (3030 lab). Use of nursing process for

clinical application of theories and principles of nursing and family theory to childbearing families; health promotion, prevention and adaptation. *Nine clinical laboratory hours per week in health care setting.* PREREQUISITES: NURS 2117, 2118, 2119, 2220, 3000, 3101, 3400. COREQUISITE: *NURS 3217. (S/U).

NURS 3227. Child Health Nursing. (2). (3020). Theory and principles of nursing practice with children experiencing health problems requiring short-term and/or long-term intervention; expansion of nursing role to include health maintenance and restoration of health. *Two lecture hours per week.* PREREQUISITES: NURS *3117, 3118, 3119. COREQUISITE: *NURS 3229.

NURS 3229. Child Health Nursing Practicum. (3). (3020 lab). Use of nursing process for clinical application of theories and principles of nursing of children and their families. Focus on health promotion, prevention, and adaptation. *Nine clinical laboratory hours per week in health care setting.* PREREQUISITES: NURS *3117, 3118, 3119. COREQUISITE: *NURS 3227. (S/U).

NURS 3317. Perioperative Nursing (1). Theoretical foundation for perioperative practice during the intraoperative phase. PREREQUISITES: NURS *3117, 3118, 3119. COREQUISITE: NURS 3319.

NURS 3319. Perioperative Nursing Practicum (2). Application of perioperative nursing process with clinical practice in both the scrub/circulating nursing roles. *Six clinical laboratory hours per week.* PREREQUISITE: NURS *3117, 3118, 3119. COREQUISITE: NURS 3317.

NURS 3400. Clinical Pathophysiology. (3). Overview of specific interruptions in normal function of selected human physiological systems, including disease processes, their manifestations, and therapeutic principles underlying treatment. *Three lecture hours per week.* PREREQUISITES: BIOL 1751/1752, 1761/ 1762, 1451/1452, CHEM 1101/1102.

NURS 4110. Nursing Research. (3). Overview of nursing research. Components of research studied; critiques of existing studies; emphasis on interpretation and application of research findings. PREREQUISITES: NURS 3117, 3118, 3119, 3127, 3129, 3217, 3219, 3227, 3229. For RN students: admission to the Loewenberg School of Nursing; EDPR 4541 or PSYC 3110 or SOCI 3311. [W]

NURS 4117. Advanced Adult Health Nursing. (2). (4010). Application of nursing process with adult clients, families, and groups experiencing complex problems of adaptation; role of nurse expanded to include health maintenance, restoration, and rehabilitation of clients experiencing problems of adaptation requiring higher acuity levels of care. *Two lecture hours per week.* PREREQUISITES: NURS 3117, 3118, 3119, 3127, 3129, 3217, 3219, 3227, 3229. COREQUISITE: *NURS 4119.

NURS 4119. Advanced Adult Health Nursing Practicum. (3). (4010 lab). Clinical experiences include direct care to adult clients, families, and groups in high acuity care settings. *Nine laboratory hours per week.* PREREQUISITES: NURS 3117, 3118, 3119, 3127, 3129, 3217, 3219, 3227, 3229. COREQUISITE: *NURS 4117. (S/U).

NURS 4120. Contemporary Issues and Trends in Nursing and Health Care. (2). ♦ Factors which influence nursing and health care; promotes integration and synthesis of knowledge from previous nursing and general education courses to explore societal and political components that affect delivery of health care. *Three lecture hours per week.* PREREQUISITES: NURS 3117, 3118, 3119, 3127, 3129, 3217, 3219, 3227, 3229. For RN students: admission to the Loewenberg School of Nursing.

NURS 4127. Community Health Nursing. (3). (4020). Overview of community based health care delivery system at local, state, and national levels; theories and principles of nursing care of communities and aggregates in public health and home health care settings; expands nursing role to coordinator of care. *Three lecture hours per week.* PREREQUISITES: NURS 3117, 3118, 3119, 3127, 3129, 3217, 3219, 3227, 3229. COREQUISITE: *NURS 4129.

NURS 4129. Community Health Nursing Practicum. (2-3). (4020). Use of nursing and public health theories and principles to provide nursing care to families and communities. *Nine laboratory hours per week.* PREREQUISITES: NURS 3117, 3118, 3119, 3127, 3129, 3217, 3219, 3227, 3229. COREQUISITE: *NURS 4127 (S/U).

NURS 4137. Emergency/Trauma Nursing. (3). Application of nursing process with adult clients, significant others, and group experiencing emergency/trauma situations; resuscitation, health maintenance, restoration, and rehabilitation of clients experiencing problems of adaptation requiring acute emergency/trauma levels of care in Emergency Department setting.

NURS 4139. Emergency/Trauma Nursing Practicum. (2). ♦ Provides students with opportunity to directly care for adult clients and their significant other(s) in emergency settings.

NURS 4227. Nursing Leadership and Management. (3). (4100). Theories of leadership, management, and

change basic to functioning within economic, social and political realities of health care settings/systems; organizational assessment, decision making, collaboration, coordination, and evaluation emphasized.

PREREQUISITES: NURS 4117, 4119. COREQUISITE: *NURS 4229.

NURS 4229. Nursing Leadership and Management Practicum. (4). (4030). Precepted experience using nursing leadership management theories and principles to coordinate nursing care of groups of patients. *Fifteen laboratory hours per week in hospital setting.* PREREQUISITES: NURS 4117, 4119. COREQUISITE: *NURS 4227. (S/U). [I]

NURS 4327. Nursing Leadership and Management for RNs. (4). (4100). Theories of leadership, management, and change basic to functioning within existing systems. Applications of conceptual models of nursing to contemporary practice. PREREQUISITE: Restricted to senior RN students. COREQUISITE: NURS 4329.

NURS 4329. Nursing Leadership and Management Practicum for RNs. (3). Percepted experience in selected roles using appropriate theories and models to guide practice. *Nine laboratory hours per week in clinical setting.* PREREQUISITE: Restricted to RN students. COREQUISITE: NURS 4327. (S/U).

NURS 4335. Ethical Dialogs. (3). Bioethical principles used to analyze ethical health care problems of the individuals, providers of care and coordinators of care; allocation of scarce health resources examined in contexts of delivery of care, institutional management and policy development. PREREQUISITE: all provider courses or permission of faculty.

NURS 4300-09. Special Topics in Nursing. (3). Topics are varied and announced in the Schedule of Classes.

NURS 4800. Independent Study. (1-3). Directed study and/or research in selected areas of nursing. May be repeated for maximum of 7 semester hours of credit. PREREQUISITE: senior standing and permission of faculty.

◆(PHED) PHYSICAL EDUCATION

Department of Human Movement Sciences and Education

RALPH C. WILCOX ,Ph.D., *Chair Room 106, Fieldhouse*

<http://www.hmse.memphis.edu/>

PHED 1001. Figure Control and Conditioning. (2). May be repeated once for credit. [G]

PHED 1003. Aerobics. (2). May be repeated once for credit. [G]

PHED 1004. Jogging. (2). May be repeated once for credit. [G]

PHED 1005. Conditioning for Varsity Sports. (2). (1001003). Open only to varsity athletes, cheerleaders, and members of the pom pon squad. May be repeated once for credit. [G]

PHED 1006. Water Aerobics. (2). May be repeated once for credit. [G]

PHED 1007. Yoga, Stretching and Relaxation. (2). May be repeated once for credit. [G]

PHED 1008. Walking for Health and Fitness (2). May be repeated once for credit. [G]

PHED 1009. Fitness through Cross Training. (2). May be repeated once for credit. [G]

PHED 1010-19. Selected Physical Education Activities. (1-3). Current activities in physical education. See Schedule of Classes for specific activity. May be repeated with a change in topic. [G]

PHED 1107. Yoga II: Stretching and Relaxation- Therapeutic Approaches.◆ (2). [G]

PHED 1301. Nautilus. (2). [G]

PHED 1302. Free Weights and Machines. (2). (1301001) [G]

PHED 1331. Camping. (2). [G]

PHED 1332. Advanced Camping. (2). [G]

PHED 1333. Backpacking.(2). (1331001).[G]

PHED 1334. Advanced Camping. Rock Climbing. (2). (1332001). [G]

PHED 1340. Introduction to Fly Fishing. (2). [G]

PHED 1361. Horseback Riding. (2). (1361001). [G]

PHED 1412. Judo. (2). [G]

PHED 1413. Self Defense Techniques. (2). (1412001). [G]

PHED 1441. Karate. (2). [G]

PHED 1442. Advanced Karate. (2). [G]

PHED 1443. Aikido. (2). [G]

PHED 1444. Kickboxing (2). [G]

- PHED 1445. Tae Kwon Do. (2). [G]**
PHED 1461. Fencing. (2). [G]
PHED 1501. Tennis. (2). [G]
PHED 1502. Intermediate Tennis. (2). [G]
PHED 1503. Advanced Tennis. (2). (1502). [G]
PHED 1521. Racquetball. (2). [G]
PHED 1522. Intermediate Racquetball. (2). [G]
PHED 1523. Advanced Racquetball. (2). (1522). [G]
PHED 1541. Badminton. (2). [G]
PHED 1561. Bowling. (2). [G]
PHED 1562. Intermediate Bowling. (2). [G]
PHED 1571. Golf. (2). [G]
PHED 1572. Intermediate Golf. (2). [G]
PHED 1581. Recreational Games. (2). [G]
PHED 1711. Beginning Swimming I. (2). [G]
PHED 1712. Beginning Swimming II. (2). [G]
PHED 1713. Intermediate Swimming. (2). [G]
PHED *1722. Swimming - Lifeguarding. (2). [G]
PHED *1741. Advanced Swimming. (2). (1741001). [G]
PHED 1742. Conditioning Through Swimming. (2) (1741001). [G]
PHED *1771. Scuba. (2). [G]
PHED *1772. Advanced Scuba. (2). [G]
PHED 1782. Kayaking. (2). (1781001). [G]
PHED 1783. Canoeing. (2). (1781002). [G]
PHED 1811. Rhythms for Elementary School. (2). [G]
PHED 1812. Square and Round Dance. (2). American square, round and contra dance. [G]
PHED 1813. Folk and Social Dance. (2). International folk dance and American ballroom and social dance. [G]
PHED 1921. Basketball. (2). [G]
PHED 1923. Volleyball. (2). [G]
PHED 1924. Intermediate Volleyball. (2). [G]
PHED 1931. Soccer and Field Sports. (2). [G]
PHED 1941. Track and Field Events. (2). [G]
PHED 2703. Water Safety Instructor. (3). (PHED 2703, SAFE 2703). Analysis, practice, and teaching of swimming and lifesaving skills and general water safety practice. Variable hours of supervised laboratory/field experience will be required. **PREREQUISITE:** experienced swimmer. ♦ Variable hours of supervised laboratory/field experience may be required.
PHED 3406. Lifeguarding and Pool Management. (3). (PHED 3406, SAFE 3406). Theory and application of lifeguarding skills, pool management, records/reports and pool maintenance and sanitation. **PREREQUISITES:** PHED 1722 or Red Cross Lifesaving certificate; HMSE 2102 or Red Cross or Heart Association CPR/Basic Life Support.
*The prerequisite for these courses is Physical Education skills 1713.

(PHIL) PHILOSOPHY

NANCY D. SIMCO, Ph.D., *Chair*

♦ *Room 327, Clement Humanities Building*

<http://www.people.memphis.edu/~philos/phil.html>

- PHIL 1101. Classical Issues In Philosophy. (3). (1111).** Introduction to philosophical thought focused on emergence of philosophical inquiry in Classical period; examines influence of classical philosophical issues on science, religion and society, and their relevance to modern culture. **[G]**
PHIL 1102. Values and the Modern World. (3). Discussion of nature of value, development of traditional values in East and West, criticisms of traditional values and comparative assessment of most widely accepted value philosophies of modern world. **[G]**

PHIL 1611. Elementary Logic. (3). Formal and informal reasoning emphasizing logic as practical method for problem solving. PREREQUISITE: two units of high school algebra or one unit algebra and one unit geometry.

PHIL 3001. Foundations of Western Philosophy: Classical Period. (3). History of philosophy from 7th century B.C. through early Middle Ages structured around major themes that shaped classical period, attention to cultural and historical settings in which they arose and to which they contributed. Readings from philosophical and nonphilosophical sources. PREREQUISITES: PHIL 1101 or 1102, or permission of instructor.

PHIL 3002. Foundations of Western Philosophy: Modern Period. (3). History of philosophy from late Middle Ages through 19th century structured around major themes that shaped the modern period; attention to cultural and historical setting in which they arose and to which they contributed. Readings from philosophical and nonphilosophical sources. NOTE: While this is a continuation of PHIL 3001, it may be taken separately. PREREQUISITES: PHIL 1101 or 1102, or permission of instructor.

PHIL 3411. Contemporary Moral Problems. (3). Such important contemporary moral issues as pornography and obscenity, capital punishment, abortion, human rights, ♦reverse discrimination,♦ and civil disobedience; underlying philosophical ideas for each issue considered and discussed.

PHIL 3451. Existentialism. (3). Historical and comparative study of different existentialist writers and their relation to literature, religion, and psychology. Readings from such writers as Kierkegaard, Nietzsche, Jaspers, Heidegger, Sartre, and Camus.

PHIL 3452. Feminist Theory. (3). Selected ideas from the history on women from the Greeks to the present; developing methods and ideologies within contemporary theoretical approaches to feminist studies. Diversity, equality and difference will be discussed by drawing on different epistemologies, such as existentialism and post-structuralism.

PHIL 3460. Nature, Mind, Knowledge. (3). The nature of mind, free will vs. determinism, personal identity and immortality, and the nature and possibility of knowledge.

PHIL 3511. Ethics. (3). Critical analysis of classical ethical theories and their application to problems of individual and society. PREREQUISITES: PHIL 1101, 1102, or permission of instructor. [W]

PHIL 3512. Science, Technology and Human Values. (3). Ethical problems growing out of development of modern science and technology; of such issues as relation of science to society, dehumanization of individual, impact of technology on environment, and modern warfare. Specific content of course varies each semester.

PHIL 3514. Biomedical Ethics. (3). Discussion of ethical problems raised by contemporary medical practices and biological innovations from standpoint of contemporary ethical theories including abortion, euthanasia, behavior modification, human experimentation and genetic engineering.

PHIL 3621. Intermediate Logic. (3). Symbolic logic, including propositional calculus, lower functional calculus, and related topics. PREREQUISITE: PHIL 1611 or permission of instructor. [C]

PHIL 3662. Philosophy of Science. (3). Basic features of science; detailed analysis of problems of scientific procedure, theory construction, and verification both in physical and social sciences. PREREQUISITES: PHIL 1611 or permission of instructor.

PHIL 3671. Aesthetics. (3). Introduction to philosophical theories and assumptions concerning nature and role of art and possibility of aesthetic evaluation.

PHIL 3701. The Human and the Divine. (3). Examination of one or more major religious movements with regard to their origins, doctrines, and philosophical significance; contrasting conceptions of deity, worship, and role of religion in how we think about ourselves and our roles in society.

PHIL 3721. Chinese Philosophy. (3). Introduction to Chinese philosophy; ♦readings from primary source of Confucianism, Taoism, and Buddhism, supplemented by commentary from contemporary scholarship.

PHIL 3741. African American Philosophy. (3). Philosophical investigation of social and political themes which have developed historically in African American culture such as theories of social elevation, civil disobedience, race and racism, and black feminism.

PHIL 3771. Philosophy In Literature. (3). Expression of philosophical ideas in literature; readings from philosophers, playwrights, novelists and poets.

PHIL 3880. Problems In Philosophy. (3). An intensive study of selected philosophical problems. May be repeated for up to 6 hours credit. PREREQUISITE: PHIL 1101 or 1102, or permission of instructor.

PHIL 4211-6211. Studies In Ancient Philosophy. (3). Readings from primary sources, supplemented by commentary from antiquity and modern scholarship, including Pre-Socratics, Plato, Aristotle, and Hellenistic period. May be repeated for a maximum of 9 hours credit with permission of the Departmental Undergraduate

Advisor. PREREQUISITE: PHIL 3001 or permission of instructor.

PHIL 4311-6311. Studies in Modern Philosophy. (3). Readings from major philosophers of 17th to early 19th centuries, supplemented by commentaries from modern and contemporary sources. May be repeated for a maximum of 9 hours credit with permission of the Departmental Undergraduate Advisor. PREREQUISITE: PHIL 3002 or permission of instructor.

PHIL 4421-6421. Philosophy of Mind. (3). Major issues and positions in recent philosophy of mind. Behaviorism; reductive, non-reductive, and eliminative versions of materialism; functionalism; mental causation; phenomenal consciousness; psychoanalysis and the unconscious; computational and connectionist models of mind. PREREQUISITE: PHIL 1101, 1102, or 1611, or permission of instructor.

PHIL 4422-6422. Recent Anglo American Philosophy. (3). Major developments in philosophy in England and United States from 1900 to present, reading from such philosophers as Russell, Moore, Ayer, Wittgenstein, James, Dewey, Lewis, Quine and other contemporary authors. PREREQUISITE: PHIL 3002 or 4311 or permission of instructor.

PHIL 4441-6441. Recent Continental Philosophy. (3). Major figures in 20th Century European thought; phenomenology, existentialism, structuralism, critical theory, and hermeneutics. May be repeated for a maximum of 9 hours credit with permission of the Departmental Undergraduate Advisor.

PHIL 4551-6551. Social and Political Philosophy. (3). (3351). Major philosophical theories of man and the state; emphasis on concepts of society, culture, institutions, government, law, power, authority, rights, and obligation. Selected readings. PREREQUISITE: PHIL 1101 or 1102, or permission of instructor.

PHIL 4632-6632. Advanced Logic. (3). Nature of axiomatic systems, techniques of formalization, and logical foundations of mathematics. PREREQUISITE: PHIL 3621 or permission of instructor.

PHIL 4662-6662. Philosophy of the Social Sciences. (3). Consideration of the scientific character peculiar to social (rather than natural) sciences by virtue of their special subject matter, human beings and society; meaning, understanding vs. explanation, rationality and the nature of social institutions. Selected readings. PREREQUISITE: PHIL 1101 or 1102, or permission of instructor.

PHIL 4711-6711. Philosophy of Religion. (3). (3711). Philosophical issues raised by religious experience including classical and contemporary arguments for and against existence of God, meaningfulness of religious language, and concepts of faith, evil and immortality. PREREQUISITE: PHIL 1101 or 1102, or permission of instructor.

PHIL 4801-20-6801-20. Special Topics In Philosophy. (3). Epistemology, metaphysics, philosophy of language, philosophy of mind, logical theory, and axiology. Area to be covered appears in Schedule of Classes semester it is taught. May be repeated for maximum of 15 hours credit without changing an earlier grade if different areas are treated. PREREQUISITE: two courses in philosophy or permission of instructor.

PHIL 4891. Senior Honors Thesis. (3). Directed reading and research culminating in a Senior Thesis. Thesis topic to be selected by student with approval of thesis director before honors students in philosophy. May be repeated in successive semesters for up to 6 hours credit.

PHIL 4994. Reading end Research. (1-3). Individual directed study in area of special interest. May be repeated in successive semesters for up to 6 hours credit.

(PHYS) PHYSICS

SHAH JAHAN, Ph.D., *Chair*

◆ *Room 216, Manning Hall*

<http://www.people.memphis.edu/~physics>

PHYS 1001. Introductory Laboratory. (1). (1101 lab). Laboratory experiments and techniques to accompany PHYS 1010. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: PHYS 1010. [G]

PHYS 1002. Astronomy Laboratory. (1). (1102 lab). Laboratory experiments and techniques to accompany PHYS 1020. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: PHYS 1020. [G]

PHYS 1010. Introductory Physics. (3). (1101). Phenomenological introduction to physics for non-technical students, providing an understanding of natural laws of motion, structure of matter, heat, sound, electromagnetics, light, atomic and nuclear physics. NOTES: Credit will not apply toward major or minor in the sciences, nor will it satisfy any part of science requirements in pre-professional curricula. PHYS 1001 must be taken concurrently to satisfy the General Education requirement. *Three lecture hours per week.* [G]

PHYS 1020. Survey of Astronomy. (3). (1102). Motions of earth and moon; apparent motion of stars and

planets; orbits and properties of bodies in the solar system; stellar distances, properties, and evolution; our galaxy and others. NOTE: PHYS 1002 must be taken concurrently to satisfy the General Education requirement. *Three lecture hours per week.* PREREQUISITE: PHYS 1010. [G]

PHYS 2001. General Physics Laboratory I. (1). (2111 lab). Laboratory experiments and techniques to accompany PHYS 2110. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: PHYS 2110.

PHYS 2002. General Physics Laboratory II. (1). (2112 lab). Laboratory experiments and techniques to accompany 2120. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: PHYS 2120.

PHYS 2003. Physics for Science and Engineering Laboratory I. (1). (2511 lab). Laboratory experiments and techniques to accompany PHYS 2510. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: PHYS 2510. [G]

PHYS 2004. Physics for Science and Engineering Laboratory II. (1). (2512 lab). Laboratory experiments and techniques to accompany 2520. *Two laboratory hours per week.* PREREQUISITE or COREQUISITE: PHYS 2520. [G]

PHYS 2110. General Physics. (3). (2111). Mechanics, heat, and sound. This course is recommended for students in pre-medical programs. NOTE: For first-time enrollees, PHYS 2001 must be taken concurrently. *Three lecture hours per week.* PREREQUISITE: MATH 1212 or equivalent.

PHYS 2120. General Physics. (3). (2112). Continuation of PHYS 2110. Includes magnetism, electricity, light, and modern physics. Recommended for students in pre-medical programs. NOTE: For first-time enrollees, PHYS 2002 must be taken concurrently. *Three lecture hours per week.* PREREQUISITE: PHYS 2110.

PHYS 2510. Physics for Science and Engineering I. (3). (2511). Treatment of mechanics, heat, and sound, using methods of calculus. NOTE: For first-time enrollees, PHYS 2003 must be taken concurrently. *Three lecture hours per week.* PREREQUISITE: MATH 1321. [G]

PHYS 2520. Physics for Science and Engineering II. (3). (2512). Continuation of PHYS 2510. Treatment of electromagnetism, optics, atomic and nuclear physics using methods of calculus. NOTE: For first-time enrollees, PHYS 2004 must be taken concurrently. *Three lecture hours per week.* PREREQUISITE: PHYS 2510 and MATH 2321. [G]

PHYS 3010. Introduction to Modern Physics. (3). Principles of relativity, quantum mechanics and atomic physics; selected topics in solid state, nuclear, and molecular physics. *Three lecture hours per week.* PREREQUISITE: PHYS 2004/2520. [C]

PHYS 3011. Theoretical Physics I. (3). (4810). Special mathematical techniques in solution of physical problems. Emphasis on vector calculus, boundary value problems, eigen-value problems, and Fourier series. *Three lecture hours per week.* PREREQUISITE: PHYS 2004/2520. [C]

PHYS 3012. Theoretical Physics II. (3). Continuation of PHYS 3011 covering complex variables, partial differential equations and special functions of physics. *Three lecture hours per week.* PREREQUISITE: PHYS 3011.

PHYS 3111. Mechanics. (3). Advanced classical mechanics; includes statistics, dynamics of particles, rigid bodies, fluid flow, work, energy, momentum, force fields, and harmonic motion. *Three lecture hours per week.* PREREQUISITE: PHYS 2004/2520, MATH 3391.

PHYS 3112. Mechanics. (3). Continuation of PHYS 3111. *Three lecture hours per week.* PREREQUISITE: PHYS 3111.

PHYS 3211. Electricity and Magnetism. (3). Electromagnetic fields and waves, including such topics as dielectrics, induced electromotive force, magnetic energy, magnetic materials, Maxwell's equations, and reflection and refraction. *Three lecture hours per week.* PREREQUISITE: PHYS 2004/2520. MATH 3391.

PHYS 3212. Electricity and Magnetism. (3). Continuation of PHYS 3211. *Three lecture hours per week.* PREREQUISITE: PHYS 3211.

PHYS 3410. Environmental Physics. (3). Application of gas laws, transport laws, and heat transfer in environmental processes; environmental radiation (solar and terrestrial), energy system of atmosphere and hydrosphere, and energy resources and their impact upon environment. *Three lecture hours per week.* PREREQUISITE: PHYS 2510/2003 and 2520/2004.

PHYS 3510. Electronics. (4). Theory and application of electronic devices; emphasis on scientific instrumentation. Laboratory oriented course including basic semiconductors, integrated circuits, and microprocessors. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: PHYS 2004/2520 or 2002/2120 or equivalent.

PHYS 3610. Experimental Techniques. (1). Introduction to independent experimentation and data analysis. Includes experiments in mechanics, electricity and magnetism, optics and modern physics. *Three laboratory hours per week.* PREREQUISITE: PHYS 2004, 2520.

PHYS 3611. Experimental Techniques. (1). Continuation of PHYS 3610. *Three laboratory hours per week.*

PHYS 3720. Intelligent Systems-Human and Machine. (3). Intelligence and artificial intelligence, the brain, the computer, limits of computation, knowledge representation, deductive and inductive reasoning, problem solving and theorem proving, learning, language, and communications, expert systems, vision, machine vision, connectionist models. PREREQUISITES: MATH 1321 or 2701, and programming experience in some high level computer language.

PHYS 4000-09-6000-09. Special Topics in Physics. (3). Selected topics of current interest in physics not otherwise included in the curriculum. *Three lecture hours or equivalent laboratory hours per week.* PREREQUISITE: permission of instructor.

PHYS 4021. Applied Radiation Physics. (3). Applied radiation and radioactivity. Includes types of radiation, radiation measurement interaction with matter, and biological effects. Radiation safety aspects emphasized. *Three lecture hours per week.* PREREQUISITE: PHYS 2002/2120 or 2004/2520 and MATH 1321.

PHYS 4040. Medical Physics. (3). Physics of sensory, respiratory, and circulatory systems; physical basis of radiology and nuclear medicine. *Three lecture hours per week.* PREREQUISITE: PHYS 2002/2120 or 2004/2520, and college level course in physiology.

PHYS 4051-6051. Astrophysics. (3). Application of radiation laws to interpretation of stellar structure; radiative transfer in atmospheres; spectral and luminosity classification of stars; stellar populations and evolution. *Three lecture hours per week.* PREREQUISITE: PHYS 2004, 2520. PHYS 3010 is recommended.

PHYS 4110-6110. Nuclear Physics. (3). Properties of atomic nuclei, radioactive transitions, alpha, beta, and gamma decay; binding energy, nuclear forces and nuclear models. *Three lecture hours per week.* PREREQUISITE: PHYS 2004, 2520. PHYS 3010 is recommended.

PHYS 4211-6211. Optics. (3). Brief review of geometrical optics; concentration on wave optics. Includes polarization phenomena, interference, diffraction, coherence, holography, and scattering. *Three lecture hours per week.* PREREQUISITE: PHYS 3211 or equivalent.

PHYS 4410-6410. Introduction to Quantum Theory. (3). Experimental basis of quantum theory; development of Schrodinger equation and its solution of simple systems; selected applications in atomic and molecular structure. *Three lecture hours per week.* PREREQUISITE: PHYS 3111, 3211 or equivalent.

PHYS 4510-6510. Thermodynamics. (3). Mathematical treatment of thermodynamics, including such topics as work, energy, enthalpy, entropy, reversible and irreversible processes, equilibria, specific heats, and phase transitions. *Three lecture hours per week.* PREREQUISITE: PHYS 2004/2520, MATH 3391. [W]

PHYS 4610-6610. Solid State Physics. (3). Such topics as lattice vibrations, specific heats, electrical and thermal conductors in solids, magnetism. *Three lecture hours per week.* PREREQUISITE: PHYS 3010 or equivalent. [I]

PHYS 4910. Seminar. (1). Special projects, reports and investigation of current literature and research. May be repeated for maximum of 2 semester hours credit. PREREQUISITE: permission of instructor. (S/U).

PHYS 4990. Research in Physics. (1-4). Collaboration with faculty member on problem of mutual interest. Two to eight laboratory or equivalent hours per week. May be repeated for maximum of 4 hours credit. PREREQUISITE: PHYS 3010 and permission of instructor. Students expected to complete prospectus in collaboration with faculty member before registering.

(POLS) POLITICAL SCIENCE

PAUL R. HAGNER, Ph.D., *Chair*

Room 427, Clement Humanities Building

<http://www.people.memphis.edu/~polisci/hpage.html>

◆ **POLS 1100. American Government. (3). (2211).** Development, structure, and processes of American system of government, including framing principles of U.S. Constitution and Bill of Rights; structure and roles of President, Congress, and Supreme Court, and citizen participation in governing. [G]

POLS 1101. Introduction to Ancient Political Thought. (3). Inquiry into fundamental questions of ancient political thought, such as: Who should rule? What is justice? What is a good political order? What are the duties of citizens? What is the foundation of morality? [G]

POLS 1102. Introduction to Modern Political Thought. (3). Inquiry into fundamental questions of modern political thought, such as origin of political society, proper rights of citizens, legitimate purposes of government, meaning of justice and good society. [G]

POLS 2301. Comparative Politics. (3). Comparison of institutions, issues, processes and policies in a variety of political systems ranging from European to Asian or African countries. [G]

POLS 2501. International Relations. (3). Consideration of all major forms of political interaction (conflict competition, and cooperation) between and among global actors in world arena. [G]

POLS 3100. Political Inquiry. (3). Major approaches used in study of political science, major theoretic movements in social science and social theory reviewed; principles of social research emphasizing movement from theory to hypothesis formation to methods of testing.

POLS 3102. Religion and Politics. (3). Survey of role of religion and religious belief in politics; emphasizes role of religious institutions in international arena and national politics and effects of religion on behavior and political beliefs.

POLS 3211. State and Local Governments. (3). Role of state governments in Federal System, political institutions, elections; organization, functions, and problems of state government; emphasis on Tennessee government.

POLS 3213. Introduction to the Study of Public Policy. (3). Public policy formulation process and some of the major substantive areas of policy concern in America; emphasis on framework for identifying and analyzing substance of public problems, policy making and policy administration.

POLS 3216. Political Parties and Elections. (3). Political parties and elections in the American political system; emphasis on party organization and activities, campaign strategies and techniques, voting behavior, and two-party system.

POLS 3217. The Political Media. (3). Interactions between the political world and the commercial media, emphasizing the variety of methods used by political elites to influence political perceptions.

POLS 3302. Western European Government and Politics. (3). Comparative study of selected political systems of Western European States.

POLS 3304. African Politics. (3). Comparative study of politics in Africa; emphasis on current problems, with attention to historical, political, and socioeconomic dimensions.

POLS 3306. Latin American Government and Politics. (3). Forms of organization, functions and operations of government in Latin America; emphasis on development of political institutions and present day trends.

POLS 3309. Government and Politics of Middle East. (3). Analysis of organization and functions of governments in area dominated by tenets of Islam; examination of origin and development of Arab-Israeli conflict.

POLS 3401. Legal/Political Thought: Classical. (3). Question of justice and its relation to law and politics; emphasizes confrontation between classical and modern views.

POLS 3402. Legal/Political Thought: Modern. (3). Question of justice and its relation to law and politics; emphasizes confrontation between early and recent modernity.

POLS 3405. Introduction to Law and Jurisprudence. (3). Sources, functions, and processes of law.

POLS 3505. International Organizations. (3). Theories and concepts of organization of international policy focused on the institutions, both formal and informal, through which much international interaction occurs.

POLS 3506. American Foreign Policy. (3). Domestic sources, implementation, and content of U.S. foreign policy.

POLS 3508. American National Security Policies. (3). Institutions, organizations, and policies charged with maintenance of peace and security; issues, problems, and paradoxes underlying current national security policies; arms-control proposals and objectives; political and ethical dilemmas caused by nuclear strategies and desire to avoid nuclear war.

POLS 3601. Public Administration. (3). Concepts and practices of organization and management in executive departments, national, state, and local; analysis of bureaucracy, administrative theory, budgeting, personnel, and administrative leadership. [W]

POLS 3700-09. Special Topics in Contemporary Politics. (3). Topics of contemporary significance in politics.

POLS 4101-6101. Political Statistics. (3). Introduction to analysis of quantitative data, and statistical hypothesis testing in the fields of political science and public and health administration. PREREQUISITE: POLS 3100. [C]

POLS 4200-6200. Environmental Law, Policy and Regulation. (3). Survey of the principal federal laws, policies and regulations concerning environmental use and protection.

POLS 4207-6207. Health Politics and Policy. (3). Introduction to the political, economic, and social forces affecting the health care system in the United States; emphasis on the development and comparison of health policies within the context of the stages of American policy making.

POLS 4208-6208. Mental Health Policy and Law. (3). Mental health systems, including voluntary and involuntary hospitalization, incompetence and guardianship, and mental health issues in criminal process; legal and policy concerns for mental health professionals, including regulation, malpractice, informed consent, and record confidentiality.

POLS 4209-6209. Aging Policy and Law. (3). Social control and social justice considerations in such policy areas of protective services, Social Security, Medicare and Medicaid, long-term care, age discrimination, and death with dignity.

POLS 4210-6210. Constitutional Principles in Loss of Liberty. (2). Constitutional law principles associated with loss of liberty for such populations as the homeless, vagrants, criminals, alcoholics, addicts, mentally ill, and children.

POLS 4211-6211. Constitutional Law: National Powers. (3). Relationships and controls of three branches and nature of division of power between nation and states; emphasis on role of Supreme Court as arbiter in constitutional system. [W]

POLS 4212-6212. Constitutional Law: The Origins and Evolution of Civil Liberties in the United States. (3). Background, role, and legitimate extent of civil rights and liberties in the United States. [G]

POLS 4216-6216. Interest Groups in American Politics. (3). Role and impact of interest groups within American political system, including group theory, tactics, and group relationships with various governmental institutions.

POLS 4217-6217. The Legislative Process. (3). Origins, organization, functions, and activities of the U.S. Congress.

POLS 4219-6219. The American Presidency. (3). Contemporary American presidency; Constitutional roots for growth of presidential power; roles of persuasion, reputation, and prestige in shaping foreign and domestic policy; presidential elections; conflicts between executive, legislative, and judicial branches.

POLS 4220-6220. The Judicial Process. (3). Judicial selection, civil and criminal trial procedure, organization of state and federal courts, U.S. Supreme Court decision making process; issues surrounding judicial review.

POLS 4221-6221. Urban Administration. (3). Politics, administration, and public policy in urban context; administrative aspects of selected governmental policy-making processes; interrelationships of governments at various levels; urban challenges facing modern public administrators.

POLS 4222-6222. Urban Politics. (3). Roles and processes of politics and governance in urban America in contest of global, social; economic influences on cities and suburbs.

POLS 4224-6224. Urban Problems. (3). Selected problems in urban administration, politics, and policies.

POLS 4226. Introduction to Nonprofit Organizations. (3). Critical understanding of historical development and impact of public sector, dynamic environment of nonprofit organization and current issues of importance to nonprofit decision makers.

POLS 4230-6230. Legislative Internship. (3-12). Supervised internship working with Tennessee General Assembly or other legislative bodies on current legislative programs. Seminar sessions to discuss and analyze problems with which interns are working. May be repeated for total of 12 credits. (S/U) PREREQUISITE: permission of department.

POLS 4231. Administrative Internship. (3-12). Supervised internship working with administrative branches of national, state, or local governments. Seminar sessions to discuss and analyze problems with which interns are working. May be repeated for total of 12 credits. PREREQUISITE: permission of department

POLS 4305-6305. Post-Soviet Governments and Politics. (3). Analysis of institutions, issues, processes and domestic policies of states comprising the former Soviet territory, with special emphasis on Russia and Ukraine.

POLS 4307-6307. Government and Politics of Communist China. (3). Institutions of government, political process, political elites, political groups and political socialization in Communist China.

POLS 4312-6312. Government and Politics of Japan. (3). Analysis of the political culture, government institutions, political processes and developmental changes on contemporary Japan.

POLS 4399. Research and Studies Abroad. (1-6). Supervised field research and studies in selected foreign countries. May be repeated up to 6 hours. PREREQUISITE: permission of the department.

POLS 4401-6401. Modern Political Ideologies. (3). Major ideologies affecting modern politics. Includes ideologies of democracy, communism, and fascism as well as capitalism and socialism, racism, and nationalism, and ideologies of developing or ♦third♦ and ♦fourth world♦ nations.

POLS 4405-6405. Origin and Development of American Political Thought. (3). Origin and development of political thought in United States from colonial to present time; emphasis on relation between political thought and political institutions and practices. [G]

POLS 4406. Strategies in Politics. (3). Study of politics and political strategy through use of social choice and game theories. PREREQUISITES: 15 hours of political science courses, including POLS 3100. [I,C]

POLS 4415. African-American Political Thought to 1900. (3). Thought of representative African-Americans upon fundamental questions of justice, right, persuasion, power and accommodation prior to the twentieth century.

POLS 4416. African-American Political Thought from 1900. (3). (4414). Thought of representative African-Americans upon fundamental questions of justice, right, persuasion, power and accommodation in the twentieth century.

POLS 4501-6501. Contemporary Problems in International Relations. (3). Studies or problems in area of world politics. May be repeated for maximum of 6 hours credit with permission of instructor. [W]

POLS 4502-6502. Post-Soviet Foreign Policies. (3). Basic concepts and methods of analyzing the international relations and foreign policies of post Soviet territory, with special emphasis on Russia and Ukraine.

POLS 4504-6504. International Law. (3). Nature, scope, duties, rights, and evolutionary trends of international law.

POLS 4506-6506. Problems of American Foreign Policy. (3). Studies or problems of American foreign policy. May be repeated for a maximum 6 credit hours with permission of instructor.

POLS 4508-6508. Theories and Concepts in International Relations. (3). Theoretical approaches to study of international politics; consideration of various schools of thought, methods, and substantive literatures.

POLS 4510-6510. International Political Economy. (3). Consideration of manner in which political processes affect and are affected by economic processes at global level.

POLS 4601-6601. Political Psychology. (3). Impact of psychological dynamics and states, including socialization, cognition, attitude, and motivation on political outcomes such as voting behavior, ethnocentrism, and decision making; emphasis given to application of social psychological concepts and theories as well as to experimental methods.

POLS 4701. Policy Perspectives. (3). Senior capstone seminar requiring students to analyze and solve series of problems in public policy. Students draw upon each subfield of discipline and utilize variety of skills and methods in addressing issues of domestic, foreign and comparative policy. PREREQUISITE: 15 hours of political science courses. [W,I]

POLS 4702. Independent Study. (1-3). Independent investigation of research problem or directed reading in selected area of political science under tutorial supervision of member of political science faculty. May be repeated for maximum of 6 hours credit. PREREQUISITE: permission of chairman.

POLS 4710-19-6710-19. Special Topics in Political Science. (3). Intensive study of selected topics in political science.

♦(OLFSP) OPEN LEARNING FIRE SERVICES PROGRAM

PAUL R. HAGNER, Ph.D., *Chair*

♦Room 427, Clement Humanities Building

<http://www.people.memphis.edu/~polisci/hpage.html>

Admission to POLS 3610, 3611, 3612, 3613, 3614, and 3615 is restricted to students seeking the Bachelor of Professional Studies degree in Fire Administration or Fire Prevention Technology through the University College.

POLS 3610. Personnel Management for the Fire Service. (3). Personnel practices and management procedures. Included are manpower planning, labor relations recruitment, selection, testing, performance appraisals, classification, motivation, politics, and management.

POLS 3611. Disaster and Fire Defense Planning (3). Concepts and principles of community risk assessment, regional and cooperative procedures and plans, relationship of structural, climatic and topographical variables

to group fires, conflagrations, and natural disasters, pre- and post-occurrence factors, communications, planning, organizing, coordination, command and logistics.

POLS 3612. Fire Prevention Organization and Management. (3). Examines and evaluates techniques, procedures, programs and agencies involved with fire prevention. Includes public and private fire prevention functions, licenses, permits, zoning, legal aspects, inspection, investigations, planning, arson, and incendiary analysis.

POLS 3613. Advanced Fire Administration. (3). Overview of organization and management in modern fire service. Includes management of equipment and personnel, fire department functions, planning, resource development, labor relations.

POLS 3614. Political and Legal Foundations of Fire Protection. (3). Legal basis for police power of government related to public safety; legal limitations and responsibility. Liability of fire prevention organizations and personnel; review of judicial decisions. [W]

POLS 3615. The Community and The Fire Threat. (3). Sociological, economic and political characteristics of communities and their influence on fire problem. How to study community profiles and structures with consideration of economic, geographic, and sociological variables of fire threat. Examination of functional basis of community, diverse social roles of community agencies, and study of fire services as complex organization in community.

(PSYC) PSYCHOLOGY

ANDREW MEYERS, Ph.D., *Chair Room 202, Psychology Building*

<http://www.psyc.memphis.edu/psych.htm>

PSYC 1101. General Psychology I. (3). Introduction to social aspects of psychology as a science of behavior; personality, emotion, abnormal behavior, treatment of psychological disorders, social and developmental psychology, psychological testing and applied psychology. Honors sections of this course are frequently available. [G]

PSYC 1102. General Psychology II. (3). Introduction to the biological aspects of psychology as a science of behavior; learning, sensation and perception, physiological and comparative psychology and psychopharmacology. Honors sections of this course are frequently available.

PSYC 2201. Deviance: Its Role in History and Culture. (3). Introduction to concept of deviance from prehistory to present; emphasis on vilification and glorification of deviant behavior according to time, place and customs. [G]

PSYC 3001. Psychological Statistics. (4). (2301). Introduction to use of statistics in psychology, with emphasis on elementary theory of measurement and computation; measures of central tendency and variability, tests of significance, correlation procedures, and an introduction to multivariate analyses, analysis of variance, and nonparametric procedures. *Three lecture hours, two laboratory hours per week.* [C]

PSYC 3002. Introduction to Psychological Research. (4). (2302). Survey of logical and methodological considerations common to all research and an overview of the range of observation, measurement and laboratory procedures employed, and presentations of their own research by various members of the faculty. *Three lecture hours, two laboratory hours per week.* PREREQUISITE: PSYC 3001. [W]

PSYC 3101. Psychology of Personality. (3). Introduction to development and functioning of normal person; variety of representative theoretical orientations examined; emphasis on psychoanalytic theories and other 20th century theoretical viewpoints.

PSYC 3102. Abnormal Psychology. (3). Basic concepts of psychopathology with emphasis on the development of behavior deviations, description of various neurotic and psychotic reactions, and an introduction to methods of psychotherapy.

PSYC 3103. Child Psychology. (3). Patterns of cognitive, interpersonal, and behavioral development from birth through early adolescence; psychological effects of genetic, organic and environmental influences as the child matures.

PSYC 3104. Adult Psychology. (3). Patterns of cognitive, interpersonal and behavioral development from late adolescence to old age; theoretical and empirical literature pertaining to such topics as marital and vocational choices, parenting, the midlife crises, and death.

PSYC 3106. Social Psychology. (3). (3302). Analysis of behavior and experience of individuals in group settings, examining such topics as leadership, social influence, and intergroup and intragroup relations.

PSYC 3303. Thinking and Cognitive Processes.(3). Overview of fields of cognitive psychology and cognitive science, including perception and attention, short and long-term memory, language, problem solving, reasoning, and decision making.

PSYC 3304. Perceptual Psychology. (3). (4203). Introduction to empirical and theoretical issues in perception; emphasis on classical and contemporary issues and approaches to perception pertaining to how information from environment is transformed, organized, represented and used by the perceiver in adapting to physical world.

PSYC 3305. Learning and Memory. (3). (4204). Survey and analysis of basic processes involved in acquisition and retention of new behaviors and alteration of existing behaviors in animals and humans; examination of central theoretical concepts and issues in learning.

PSYC 3306. Physiological Psychology. (3). (4201). Survey of physiological processes underlying sensation, perception, motivation and emotion, motor systems, unlearned and learned behavior patterns, memory and other psychological functions.

PSYC 3307. Animal Behavior. (3). (4202). Synthesis of comparative psychological and ethological approaches to study of animal behavior; behavior genetics, species specific behaviors, behavior as a basis for phyletic classification, and major behavioral dimensions related to phylogenesis.

PSYC 3501. Behavior and Environmental Survival. (3). Role that techniques and content of behavior science has in helping address environmental problems facing mankind.

PSYC 3502. Environmental Behavior Modification. (3). Application of behavioral-change techniques for purpose of environmental preservation. Emphasis upon behavior-analysis approach to assessment and modification of behavior. Examination of this and other approaches to problems such as resource conservation, pollution, and population.

PSYC 3505. Psychological Tests and Measurement. (3). Introduction to psychometric concepts, statistics, principles, and practices of test and scale construction, evaluation, use, and interpretation.

PSYC 3506. Human Sexuality. (3). (3105). Survey of existing knowledge of human sexual behavior; physiological, anatomical, psychological and cultural components; normative sexual functioning; such topics as sexual deviation, sexual dysfunctions, and types of treatment are also considered. PREREQUISITES: PSYC 1101 and 1102.

PSYC 3507. Alcohol, Drugs and Behavior. (3). Survey of major drugs of abuse, their mode of action, and their behavioral effects, both acute and chronic; etiology and maintenance of drug abuse and review of prominent strategies for prevention, intervention and treatment.

PSYC 3508. Industrial and Organizational Psychology. (3). (3301). Application of psychological concepts and methods to phenomena in industrial and organizational settings, with emphasis on personnel selection, classification and evaluation, employee attitudes, morale and motivation, and psychological analysis of the condition of work.

PSYC 3509. Applying Psychology in the Community. (3). Principles of psychology applied to real-life, community issues; methodologies and techniques, with emphasis upon the behavior analytic approach; descriptions and discussions of actual programs addressing a variety of community issues such as youth violence, traffic safety, and productivity in the workplace.

PSYC 4010-29. Special Topics in Psychology. (1-3). Topics varied and announced in Schedule of Classes.

PSYC 4030. Issues in Psychotherapy Research. (3). Examination of research evidence pertaining to basic questions about psychotherapy and its effectiveness. Readings include both classic contributions and current research findings.

PSYC 4032. Research Methodology. (3). Discussion of advanced topics in methodology. In addition, student completes all phases of a research project, including question formulation, literature review, design, data analysis, and report writing. Research projects evolve from individual student interests. PREREQUISITE: PSYC 3002 or permission of the instructor.

PSYC 4033. Language Development. (3). An examination of the theories and research in the area of language acquisition. Particular emphasis is on all aspects of language development in the preschool years, including phonology, syntax, semantics, and pragmatics. PREREQUISITE: PSYC 3103 or permission of the instructor.

PSYC 4034. Children's Social Relationships. (3). Examines children's social relationships, particularly peer relationships; social cognitive processing; developmental implications of group status and dyadic friendships; behavioral interactions among peers; impact of reputation on peer group status; gender differences in peer relations; parent management of peer activities; and analyses of conflict and of aggressors and their

victims. PREREQUISITES: Successful completion of a course in child psychology and permission of instructor.

PSYC 4040-49. Honors Special Topics. (3). Topics varied and announced in Schedule of Classes.

PSYC 4101. History of Psychology. (3). Comprehensive survey and critical analysis of the philosophical and scientific antecedents of contemporary psychology. PREREQUISITE: PSYC 3001, 3002, and three hours in 3100 series and three hours in 3300 series. Enrollment preference granted to seniors in their final semester. [I]

PSYC 4305. Mind, Brain, and Intelligence, Honors. (3). Interdisciplinary studies of cognition, behavior, emotion, intelligence, and brain mechanisms; synthesis of research contributions from cognitive science, neuroscience, artificial intelligence, and philosophy. This course is cross-listed with UNHP 4302 and UNIV 4520.

PSYC 4503. Special Problems in Psychology. (1-3). Student, under faculty supervision, may read intensively in specialized area, conduct psychological research and/or, obtain field experience in community institutions where psychological principles are applied. NOTE: 4503 and 4504 may be taken for a combined total of 9 hours, no more than 6 of which may be with the same faculty member. PREREQUISITE: permission of the department. (S/U).

PSYC 4504. Directed Research. (3). Majors receive first hand research experience under tutorship of individual faculty member. Students may work individually or in small groups depending upon project. Projects conform to set of guidelines available from department. NOTE: PSYC 4503 and 4504 may be repeated for a combined total of up to 9 hours, 6 with any one faculty member. PREREQUISITE: permission of department. (S/U).

PSYC 4996. Honors Senior Thesis. (3). Original research conducted under direction of faculty supervisor, and with approval of Honors Committee. PREREQUISITE: Admission to Honors Program.

[Last Updated: 6/12/15](#)

(RECR) RECREATION

Department of Human Movement Sciences and Education

◆RALPH C. WILCOX, Ph.D., *Chair Room 106, Fieldhouse*

<http://www.hmse.memphis.edu/>

RECR 3102. Introduction to Therapeutic Recreation. (3). Theoretical and philosophical foundations of therapeutic recreation, history of therapeutic recreation, concerns of illness and disability, role of professional recreation therapist, and survey of therapeutic recreation services and settings.

RECR 3202. Techniques of Therapeutic Recreation. (3). Basic therapeutic recreation methods emphasizing leadership and intervention techniques, assessment of client needs, activity analysis, program planning, and evaluative procedures. PREREQUISITES: BIOL 1731, 1732.

RECR 4102. Leisure Education for Recreation Therapy. (3). Leisure education as applied in recreation therapy settings. Analysis of groups served, programs offered, interagency coordination and general trends in the profession today.

(REHB) REHABILITATION SERVICES

Department of Counseling, Educational Psychology and Research

RONNIE PRIEST, Ph.D., *Chair*

Room 100, College of Education Building

<http://www.coe.memphis.edu/coe/CEPR/cepr.html>

REHB 3901. Introduction to Disabling Conditions and Their Helping Professions. (3). (COUN, SPER). Physical mental, and social disabling conditions and their effect on lives of handicapped and their families; roles of various helping professions in rehabilitation of such conditions.

REHB 3911. Techniques of Vocational Evaluation. (3). (COUN, SPER). Introduction to psychometric tests and work samples used in assessment of persons with disabling conditions; administration interpretation, and synthesizing of test results as well as report writing and use of word processor in developing reports.

REHB 3912. Techniques of Work Adjustment. (3). (COUN, SPER). Introduction to techniques and strategies used in work adjustment setting; behavioral observation and reporting, development of behavior management plan, time studies, contract bids, and program development.

REHB 4902. Adjustment of Disabling Conditions. (3). (SPER) (COUN). Medical, social, and psychological impact of disabling conditions as related to vocational potential; theories of adjustment to physical and mental disabilities and social and psychological aspects of disabling conditions.

REHB 4903. Techniques of Rehabilitation Education. (3). (SPER) (COUN). Focus on theories of human behavioral change as they relate to working with disabled persons. Student will develop life skills curriculum plans and behavioral programs and conduct job/task analysis related to various disability groups.

REHB 4905. Assessment Techniques in Counseling. (3). (SPER) (COUN). Use of biographical, psychological, medical and job information for case planning.

REHB 4941. Practicum in Rehabilitation. (3-6). (SPER) (COUN). Practical experiences in various rehabilitation settings. PREREQUISITE: REHB 3901 or consent of instructor. (S/U)

(RUSS) RUSSIAN

Department of Foreign Languages and Literatures

RALPH ALBANESE, Ph.D., *Chair*

◆*Room 375, Dunn Hall*

RUSS 1101. Elementary Russian I. (3). Introductory survey of Russian grammar and phonetics.

RUSS 1102. Elementary Russian II. (3). Continuation of RUSS 1101. PREREQUISITE: RUSS 1101 or permission of instructor.

RUSS 2201. Intermediate Russian I. (3). Comprehensive review of Russian grammar, exercises in spoken and written Russian. PREREQUISITE: RUSS 1102 or permission of instructor.

RUSS 2202. Intermediate Russian II. (3). Continuation of RUSS 2201. PREREQUISITE: RUSS 2201 or permission of instructor.

RUSS 3301. Russian Conversation and Composition (3). Development of advanced oral and written

communication skills. PREREQUISITE: RUSS 2202 or permission of instructor.

RUSS 3302. Russian Conversation and Composition (3). Continuation of RUSS 3301. PREREQUISITE: RUSS 3301 or permission of instructor.

RUSS 3441. Early Nineteenth-Century Russian Literature. (3). Survey of major writers and works of the first half of the 19th century, including Pushkin and Gogol.

RUSS 3442. Nineteenth-Century Russian Realism. (3). Survey of major writers and works of the last half of the 19th century, including Dostoevskii and Tolstoi.

RUSS 3443. Twentieth-Century Russian Prose. (3). Survey of Russian literature since 1900, including selected writers and works of the pre-revolutionary and Soviet periods and Russian emigre literature.

RUSS 3611. Survey of Russian Civilization. (3). Russia and its people; highlights of Russian civilization as revealed in the fields of literature, music, painting and architecture. May not be used for Russian language credit.

RUSS 3791. Russian for Commerce. (3). Russian business terminology and forms of correspondence; regular reading of business, commercial, and technical publications. PREREQUISITE: RUSS 2202 or equivalent.

RUSS 3792. Russian for Commerce II. (3). Continuation of RUSS 3791. PREREQUISITE: RUSS 3791 or equivalent.

RUSS 4309. The Art of Translating Russian. (3). PREREQUISITE: RUSS 2202 or permission of instructor.

RUSS 4780. Individual Studies in Russian. (1-3). Directed individual study in selected areas of Russian chosen in consultation with instructor. Repeatable for a maximum of 6 semester hours credit by permission of chair. PREREQUISITE: permission of instructor.

RUSS 4791-99. Special Topics in Russian. (3). May be repeated for a maximum of 6 hours credit. PREREQUISITE: permission of chair and instructor.

(SLC) SPORT AND LEISURE COMMERCE

Department of Human Movement Sciences and Education

◆RALPH C. WILCOX, Ph.D., *Chair*

◆*Room 106, Fieldhouse*

<http://www.hmse.memphis.edu/>

SLC 4102-11-6102-11. Special Topics Workshop in Sport and Leisure Commerce. (1-6). Selected phases of sport and leisure commerce through group study, in-depth study in area of interest and need for leaders in sport and leisure commerce. May be repeated for credit when topic varies.

SLC 4902-11-6902-11. Special Topics in Sport and Leisure Commerce (1-3). Current topics in sport and leisure commerce. May be repeated with change in topic. See Schedule of Classes for topic.

(SLS) SPORT AND LEISURE STUDIES

Department of Human Movement Sciences and Education

RALPH C. WILCOX, Ph.D., *Chair*

◆*Room 106, Fieldhouse*

<http://www.hmse.memphis.edu/>

SLS 2105. Foundations of Sport and Leisure Studies. (3). (RECR 2105 and 3105). Explores and analyzes sport and leisure from philosophical, historical, and organizational perspectives; prefatory work on professional development portfolio that addresses skills, knowledge, attitudes, and behaviors inherent to interrelated and diverse fields of sport and leisure studies. This course may be taken to improve the grade for one, but not both, of the former courses. COREQUISITE: SLS 2605.

SLS 2605. Field Experience in Sport and Leisure Studies. (1-3). Allows students entering Sport and Leisure Studies program early, supervised practical experiences in a variety of sport and leisure service areas. COREQUISITE: SLS 2105. S/U.

SLS 3005. Computer Applications in Sport and Leisure. (3). (RECR 4505). History and application of computers and information systems; emphasis on hardware and software relevant to sport and leisure programs as well as applications of common computer programs to specific leisure service and sport management situations. [C]

SLS 3103. Outdoor Recreation and Education for Urban America. (3). (RECR 3103 and RECR 3605,

3705). Analysis of concepts and issues associated with outdoor recreation and education with an emphasis on urban citizen; outdoor recreation behavior in terms of individual dynamics of participation, resources for outdoor recreation, outdoor education, and outdoor leadership; achieves balance among practical information, theory, and information from current research. This course may be taken to improve the grade for one, but not both, of the former courses.

SLS 3104. Commercial Recreation and Tourism. (3). (RECR 3104). Survey of urban commercial recreation with special emphasis on travel and tourism; sport and athletics, theaters, fitness centers, amusement and theme parks, aquatic areas, risk recreation, and historical areas, as well as the travel and tourism industry.

SLS 3105. Sport and Leisure as Popular Culture. (3). (PHED 3307, 2101). The analysis of the production and consumption of sport and leisure as an aspect of contemporary popular culture; relationship between sport and leisure and the economy, the media, politics, and the experience of class, race, gender, ethnicity, and nationality.

SLS 3202. Park and Recreation Resource Management. (3). (RECR 3203, 3405). Management, operation, and maintenance of areas and facilities within field of recreation and parks; identification, acquisition, allocation, development, and management of land and water resources through environmentally sound techniques.

SLS 3204. Organizational Dynamics in Sport and Leisure. (3). (PHED 4503 and RECR 4405). Analysis of the organization and administration of sport and leisure service organizations; organizational structuring: goals, objectives, and policy development; planning process; personnel development; risk management conflict resolution as applied to sport and leisure services; theories of organization covered in course's prerequisite. This course may be taken to improve the grade for one, but not both, of the former courses. **PREREQUISITE:** MGMT 3110.

SLS 3205. Area and Facility Management. (3). (PHED 4613 and RECR 3205). Planning, development, and maintenance of sport and leisure facilities; inspection, comprehensive recreation surveys, and planning a layout. This course may be taken to improve the grade for one, but not both, of the former courses.

SLS 3305. Leisure and Recreation Program Development. (3). (RECR 3305). Planning techniques in regard to citizen surveys, leisure and recreation needs analysis, leisure and recreation activity selection, and leisure and recreation program design, promotion, and evaluation.

SLS 3600. Event Management. (3). Basic concepts pertaining to the production of sporting events, both amateur and professional; planning, organizing, publicizing, and conducting an event. **PREREQUISITES:** SLS 2105, 3205, and 3305.

SLS 3605. Financial Management in Sport and Leisure. (3). Basic finance and accounting applied to managerial control of sport and leisure organizations; feasibility analysis, formulation and development of operating budgets, financial forecasting, ownership models, taxation issues, and revenue production. **PREREQUISITES:** SLS 2105.

SLS 3650. Sport Information and Public Relations. (3). Basic knowledge and understanding of media relations in both amateur and professional sport; special emphasis is placed on building and maintaining an effective media relations program; writing for media, public relations, and business communications. **PREREQUISITES:** JOUR 3400; SLS 2105.

SLS 3905. Leisure and Recreation for People with Disabilities. (3). (RECR 3905). Examination of role of leisure and recreation for persons with special needs including individuals with physical, emotional, mental, and social disabilities.

SLS 4001. Park and Recreation Visitor Management. (3). (RECR 4001 and 4002). Visitor management as it relates to design and management of visitor interpretive and educational services; attended and unattended services including interpretive talks, living interpretation, audio devices, self-guided tours, exhibits, and educational publications. This course may be taken to improve the grade for one, but not both, of the former courses.

SLS 4103. Camp Administration, Counseling and Programming. (3). (RECR 4103, 3505). History, administration, organization and operation of organized camping programs; emphasis on program planning, camp administration, staff selection, training and camp counseling techniques as practiced today.

SLS 4105. Leadership in Leisure Services. (3). (RECR 4105). Concepts of leisure leadership through group discussion, activity, role playing, gaming, lecture, and class projects. Culminates professional development portfolio of SLS 2105. Students unable to complete professional development portfolio while enrolled in this class will receive (IP) grades. **PREREQUISITE:** SLS 2105 or permission of the instructor. **(A-F, IP)**

SLS 4125. Gender, Race, and Class Considerations in Urban Sport and Leisure. (3). Socially constructed categories of class, race, and gender, and their influence on perceptions of the body; way these categories shape institutionalization, practice, and representation of sport and leisure is discussed with an emphasis on promoting unbiased and non-prejudicial sport and leisure cultures. PREREQUISITE: SLS 3105 or permission of the instructor.

SLS 4135. Sport and Popular Culture in Global Perspective. (3). Nature, meaning, and significance of sport, leisure, and popular culture across selected nations. Identification and systematic analysis of persistent problems in American sport and popular culture as well as cultural interstices in emerging global village; cultural conflict, cultural resistance, and cultural imperialism. PREREQUISITES: Social Sciences requirement, SLS 3105, or permission of instructor.

SLS 4145. The Cultural Formation of Sport in Urban America. (3). (PHED 3903). Sociocultural foundations of American sport in urban environment; reciprocal relationship between sport, urban structure and process explored in context of industrial, modern, and postmodern American city; sport in relationship to walking city; radial city; suburban city; cause or panacea for urban ills; community cohesion, and urban identity; urban politics; capitalism, and city taxpayer; economic impact on the city; and, urban renewal. PREREQUISITES: HIST 2602, SLS 3105, or permission of instructor.

SLS 4155. Problems in Urban Sport. (3). Analysis of causes and consequences of contemporary problems in urban sport; case-study approach used to examine social, political, and economic factors influencing structure and experience of sport in American cities; emphasis on formulating solutions and potential strategies to address identified problems. Culminates professional development portfolio of SLS 2105. Students unable to complete their professional development portfolio while enrolled in this class will receive IP grades. PREREQUISITES: SLS 2105, 3105, 4145, or permission of instructor. (A-F, IP)

SLS 4203. Aquatic Administration. (2). (RECR 4203). Administration and management of aquatic programs; emphasizes organization and direction of aquatic programs in recreational and educational environments.

SLS 4205. Legal and Ethical Aspects of Sport and Leisure. (3). (RECR 3204). Legal and statutory regulations relevant to sport and leisure programs in urban context; emphasis placed on promotion of ethical decision-making and practices in field of sport and leisure; developing statement of principles/values, and code of ethics; identification and compliance with relevant legal and statutory regulations; contracts; trademarks, licensing, and copyright. PREREQUISITE: Historical/Philosophical Heritage requirement, SLS 3204, 3305, or permission of instructor.

SLS 4305. Problems in Sport and Leisure Studies. (1-3). Independent study and/or research project on a selected sport and leisure problem, issue, or concern. PREREQUISITE: Permission of instructor.

SLS 4500. Sport and Leisure Marketing. (3).(SLS 4005). Basic marketing concepts with applications to the uniqueness of the sport and leisure industry; event marketing, sponsorship, licensing, sport information and public relations. PREREQUISITES: JOUR 3400; MKTG 3010; SLS 2105, and 3105.

SLS 4605. Internship in Sport and Leisure Studies. (3-9). (PHED 4605/RECR 4605). Culminating experience allowing students the opportunity to demonstrate knowledge and skills in an appropriate professional setting based upon their training and experience. Represents a culminating experience and can only be conducted when all other course work is complete. PREREQUISITES: Senior status and permission of instructor. COREQUISITE: HMSE 4999. (S/U).

(SOC) SOCIOLOGY
Department of Sociology
 REBECCA F. GUY, Ph.D., *Chair*
Room 231, Clement Hall

<http://www.people.memphis.edu/~socinfo/socdept/homepage.html>

Sociology 1111 is a prerequisite for all other courses in sociology except 2100 and 2101.

SOCI 1111. Introductory Sociology. (3). Introduction to concepts, methods and theoretical perspectives in sociology. Basic principles of sociological reasoning introduced through lectures, reading assignments, and micro-computer instruction. [G]

SOCI 2100. Sociology of International Development. (3). Social change in an increasingly interdependent world; introduction to development theory and how relations among countries condition changes within them; cultural conflict, social inequality, education and ideology, industrialization, urbanization, multi-national

corporations, population problems, quality of life indicators. [G]

SOCI 2101. The Family in Global Perspective. (3). (Same as CSED 2101). Introduction to family as a primary, global, social institution; contributions sociology, anthropology, and home economics have made to understanding how and why family systems vary worldwide and common bonds and problems facing families in modern societies. [G]

SOCI 3112. Contemporary Social Problems. (3). (1112). Sociological approaches to understanding contemporary social problems; magnitude, causes, consequences, and possible solutions to various problems such as poverty, racism, sexism, problems of aging, crime, and population.

SOCI 3311. Social Statistics. (3). Application of basic statistical concepts and techniques to social analysis; description of data for single variables and for relationships between two variables; tests of significance for relationships between two variables involving sample data; use of packaged statistical computer programs for single- and two-variable analysis. [C]

SOCI 3322. Methods of Social Research. (3). Overview of process of social research; selection and formulation of problem, design of research, methods of investigation, analysis and interpretation of data, and report preparation. Emphasis on data collection techniques. PREREQUISITE: SOCI 3311.

SOCI 3401. Social Inequality. (3). Unequal distribution of power, property, and prestige and social relations of dominance and subordination in the American class system; how and why this inequality develops and persists; differences in life chances and options across different social classes.

SOCI 3420. Sociology of the South. (3). Political economy and major institutions in the South and implications for different races and classes; the South since World War II, including the Civil Rights movement.

SOCI 3422. Racial and Ethnic Minorities: A Socio-Historical Approach. (3). Comparative study of racial and ethnic minorities in United States, how inequality is institutionalized in such areas as employment, education, political participation, and social relations; emphasis on how subordinate groups resist oppression and initiate social change. [G]

SOCI 3432. Sociology of Gender. (3). Traditional conceptions of masculinity and femininity and modifications of these resulting from economic, demographic and cultural changes; socialization for masculine and feminine roles and variations in these roles throughout life cycle; class, race, occupational and other institutional differences in sex roles.

SOCI 3501. Sociology of Deviant Behavior. (3). Problems in applying definitions of deviance in everyday life; theories about causes and consequences of deviance critically reviewed; types of deviance analyzed, ranging from interpersonal violence to various forms of sexual expression.

SOCI 3541. Criminology. (3). (3521). Nature and significance of criminality; etiology of illegal behavior; trends in social reactions to crime and criminals; evolution of biological, psychological, and sociological theories of criminal behavior.

SOCI 3701. Individual and Society. (3). Basic theory and research dealing with study of human behavior in social situations; emphasis on communication processes, socialization, social roles, social self, and interaction in group contexts.

SOCI 3801. Sociology of Organizations and Bureaucracies. (3). Analysis of bureaucratic organizations in modern society and effects on individual and group behavior; benefits of industrial-technological society and costs of bureaucratization and centralization of organizational life; current issues concerning individual autonomy, organizational productivity, and control.

SOCI 3820. Sociology of Education. (3). Sociological analysis of education and its functions, school and community relationships; problems of social change and educational adjustments.

SOCI 3831. Marriage and the Family. (3). American family patterns, including mate-selection, man-woman relationships, marital satisfaction, parent-child communication, divorce, alternative lifestyles and other contemporary issues.

SOCI 3860. Sociology of Religion. (3). Role of religion in modern society; relationship between religion and other spheres of life; sociological examination of cults, sects, churches, and religious movements; causes and consequences of religious beliefs and practices.

SOCI 3940. Social Change. (3). Sociological analysis of theory, nature, meaning, and consequences of social change.

SOCI 4210. Rise of Sociological Theory. (3). Nature, grounds, and explanatory powers of various forms of sociological theory; analysis of bases for scientific and philosophical assumptions and social and political

contexts; major theorists including Durkheim, Marx, Weber, Simmel.

SOCI 4211-6211. Contemporary Sociological Theory. (3). Major frameworks of 20th century sociological thought, including theoretical schools of functionalism, exchange theory, critical theory, symbolic interactionism, phenomenological sociology, and ethnomethodology; current social and political trends and issues.

SOCI 4312-6312. Intermediate Social Statistics. (3). Multivariate analysis of social data; use of computer programs for data management and statistical analysis. PREREQUISITES: SOCI 3311, 3322, or equivalent, or permission of the instructor.

SOCI 4420. Racial Inequality. (3). Relations of dominance and subordination in the United States; social and political experiences of African Americans, Asian Americans, and Latinos, especially strategies employed to resist oppression and reduce inequality.

SOCI 4442. Sociology of Poverty. (3). Structural sources of inequality and how experiences of poverty are shaped by race, gender and age. [W]

SOCI 4460. Black and White Women in the South. (3). How history of South and political-economic structure has shaped black and white women's work, family, community activities, and relationships; emphasis on collaboration and competition aspects, identity issues, and demographic characteristics; focus on the Memphis area. [W]

SOCI 4541-6541. Sociology of Aging. (3). Ageism in sociocultural contexts; current beliefs, values, and norms regarding aging; structural location of aging in society; and implications of ageism in employment, poverty, private and institutional housing, crime, physical illness and mental illness.

SOCI 4631. Cities in Change. (3). Historical transformation of urban communities; effects of urbanism on behavior; patterns of class, race and ethnic segregation in American cities; growth and decline of cities in relation to social, political, and economic forces, global patterns of urbanization: causes and consequences. [W]

SOCI 4641. Sociology of the Global Environment. (3). Examination of interactions between physical environment in which we live and human societies which we have created; emphasis on crises of global environment and efforts toward sustainable development.

SOCI 4642. Culture and Modernization of East Asia. (3). Sociological examination of impact of cultural traditions embedded in East Asian worldview on economic modernization of Japanese, Korean, and Chinese societies; emphasis on significance of alternative paths to global economy.

SOCI 4702. Personal Relations and Primary Groups. (3). Principles and dynamics of personal relationships within context of groups. Surveys social psychological theories of origin, maintenance and dissolution of relationships; applied approach; includes sociation in general and emphasizes varieties of love.

SOCI 4842-6842. Sociology of Occupations and Professions. (3). Sociological analysis of division of labor, occupational groupings, career patterns, and professional associations in modern American society; meaning of work.

SOCI 4851. Medical Sociology. (3). Examination of human arrangements and their human legitimations within which variations in human biology are discovered, defined, diagnosed, described, and disposed of as disease.

SOCI 4852. Sociology of Mental Illness. (3). Examination of human arrangements and their legitimations within which incomprehensible behavior is discovered, defined, diagnosed, described, and disposed of as mental illness.

SOCI 4900-09-6900-09. Special Topics in Sociology. (3). Special areas of sociology not otherwise included in the curriculum.

SOCI 4912. Directed Individual Study. (1-6). Individually directed advanced reading and/or research in special areas of interest. NOTE: Course may be repeated for maximum of 6 hours credit. PREREQUISITE: permission of department chair.

SOCI 4923. Social Institutions and the Life Cycle. (3). Analysis of social institutions from life cycle perspective; social institutions studied from perspective of their specific function for and appropriateness to specific stages of life cycle development. [W]

SOCI 4999. Senior Thesis Seminar. (3). Analysis of process and practice of sociological inquiry. Emphasis on integration of sociological theory, research methods, statistics, and knowledge of a substantive area through formulation and completion of original research project. Research problem will be formulated and executed by student with consultation and supervision of instructor. PREREQUISITES: SOCI 3311, 3322, 4210 or 4211, and nine upper division hours. [W,I]

(SPAN) SPANISH
Department of Foreign Languages and Literatures
 RALPH ALBANESE, Ph.D., *Chair*
Room 375, Dunn Hall

SPAN 1101. Elementary Spanish. (3). Basic skills fundamental to language proficiency and culture.

SPAN 1102. Elementary Spanish. (3). Further development of basic skills fundamental to language proficiency and culture. PREREQUISITE: SPAN 1101 or equivalent.

SPAN 1112. Intensive Elementary Spanish. (6). First year college Spanish; skills fundamental to language proficiency and culture. Covers material of SPAN 1101 and 1102. Classroom sessions daily. A maximum of 6 hours credit may be received for any combination of SPAN 1101, 1102, and 1112.

SPAN 2201. Intermediate Spanish. (3). Comprehensive review of Spanish grammar, exercises in writing conversation, and readings in Hispanic literature and culture. PREREQUISITE: SPAN 1102 or equivalent.

SPAN 2202. Intermediate Spanish. (3). More advanced readings. PREREQUISITE: SPAN 2201 or equivalent.

SPAN 2212. Intensive Intermediate Spanish. (6). Comprehensive review of Spanish grammar; exercises in writing, conversation; readings in Hispanic literature and culture. Covers material of SPAN 2201 and 2202. Meets every day. A maximum of 6 hours credit may be received for any combination of SPAN 2201, 2202, and 2212.

SPAN 3301. Conversation. (3). (3300). Designed to help students develop oral proficiency; diverse opportunities for self-expression. Not intended for students with native or near-native proficiency in Spanish. PREREQUISITE: SPAN 2202 or equivalent.

SPAN 3303. Composition. (3). (3300). Designed to develop adequate writing skills; compositions analyzed to identify and avoid frequent grammatical errors and to avoid interference from English. Not intended for students with native or near-native proficiency. PREREQUISITE: SPAN 2202 or equivalent.

SPAN 3311. Intermediate Conversation. (3). (3302). Designed to develop strong conversational and listening skills. Includes wide variety of activities, exposure to different pronunciations and native conversational speed; selected readings to help expand vocabulary. Not intended for students with native or near-native proficiency. PREREQUISITE: SPAN 3301 or permission of instructor.

SPAN 3312. Advanced Conversation. (3). Further vocabulary expansion, precision in diction, and ability to express and understand non-technical subjects. Required of majors and minors. PREREQUISITE: SPAN 3311 or permission of instructor.

SPAN 3313. Advanced Composition. (3). (3300). Designed to develop strong command of written language; emphasis on style, organization and exposition of content as opposed to grammatical analysis. PREREQUISITE: SPAN 3303 or permission of instructor.

SPAN 4302-6302. Advanced Grammar. (3). Special problems in grammar; recommended for majors and minors. PREREQUISITE: 3000-level Spanish course or equivalent.

SPAN 4306-6306. Applied Spanish Linguistics. (3). (4501). Current research in linguistics, psycholinguistics and sociolinguistics and their contribution to second language teaching and second-language learning.

SPAN 4410-6410. Spanish Literature and Civilization. (3). (3410). Survey of literary movements and major figures with readings in literature and civilization. Required of majors. PREREQUISITE: 3312 or equivalent.

SPAN 4431-6431. Contemporary Spanish Prose. (3). Spanish prose from Generation of 1898 to present. PREREQUISITES: SPAN 4410 or permission of instructor.

SPAN 4432. Contemporary Spanish Poetry and Drama. (3). Spanish poetry and drama from Generation of 1898 to present. PREREQUISITES: 4410 or permission of instructor.

SPAN 4510-6510. Spanish American Literature and Civilization. (3). (3510). Survey of literary movements and major figures with readings in literature and civilization. Required of majors. PREREQUISITE: SPAN 3312 or equivalent.

SPAN 4561-6561. Pre-Contemporary Spanish American Prose Fiction. (3). Development of Spanish American novel and short story from beginnings through 20th century. PREREQUISITE: SPAN 4510.

SPAN 4562-6562. Contemporary Spanish American Prose Fiction. (3). Spanish American novel and short story of 20th century. PREREQUISITE: SPAN 4510.

SPAN 4701. Spanish for Commerce I. (3). (3791). Spanish business terminology and correspondence.

PREREQUISITE: any 3000-level Spanish course or permission of instructor.

SPAN 4702. Spanish for Commerce II. (3). (3792). Business concepts and documents. PREREQUISITE: any 3000-level Spanish course or permission of instructor.

SPAN 4780. Individual Studies in Spanish. (1-3). Directed individual study in selected areas of Spanish chosen in consultation with instructor. Repeatable for a maximum of 6 semester hours credit by permission of chairman. PREREQUISITE: permission of instructor.

SPAN 4790-99. Special Topics in Literature and Linguistics. (3). Literary topics include medieval literature, Golden Age, 19th century literature, and Spanish American drama. May be repeated for maximum of 6 hours credit. PREREQUISITE: permission of instructor.

(SPED) SPECIAL EDUCATION

Department of Instruction and Curriculum Leadership

DENNIE L. SMITH, Ed.D., *Chair*

◆ *Room 106D, College of Education Building*

<http://www.coe.memphis.edu/coe/ICL/icl.html>

SPED 2000. Issues of Human Diversity. (3). (SPER). Overview of special education including historical and legal perspectives of the field, characteristics of each exceptionality, and educational and community services utilized by exceptional persons and their families. Field experience: 5 hours.

SPED 3002. Independent Study in Special Education. (1-6). (SPER). Opportunity for self-directed study and/or research under supervision. PREREQUISITE: consent of department.

SPED 3201. Students with Emotional Problems. (3). (SPER). Study of identification and education of students considered emotionally disturbed; mild to severe behavioral and psychological characteristics and appropriate educational placement alternatives and practices emphasized. Practicum with students with emotional disturbance included. PREREQUISITE: SPED 2000.

SPED 3401. Students with Learning Disabilities. (3). (SPER). Historical developments and current practices in identification, assessment and instruction of students with learning disabilities; emphasis on diagnosis, characteristics, and major approaches to instructional methodology. Practicum with students with learning disabilities included. PREREQUISITE: SPED 2000.

SPED 3501. Nature of Students with Mental Retardation. (3). (SPER). Definitions, etiology, and characteristics associated with mental retardation; examination of evaluation, placement and programming used in educational, prevocational, and transitional settings. Practicum with students with mental retardation included. PREREQUISITE: SPED 2000.

SPED 3601. Students with Physical/Health Impairments. (3). Etiology and characteristics of students having mild to severe physical/health impairments; emphasis on physical and educational modification used to facilitate learning and developing vocational skills; accessibility, movement patterns, prosthetic and augmentative communication devices and supportive medical procedures examined. Practicum with students with physical/health impairments included. PREREQUISITE: SPED 2000.

NOTE: SPED 3800, 3801, 3802, and 3803 must be taken as corequisites. The prerequisites for this sequence are SPED 2000, 3201, 3401, 3501, 3601; ELED 3251, 4242; and admission to TEP.

SPED 3800. Methods, Materials and Curriculum for Learners with Mild Disabilities. (3). (3012). Curriculum, methods, and materials applicable to special educational needs of learners with mild disabilities in primary, intermediate and secondary levels; emphasis on programming techniques and implementation of appropriate interventions in special education or regular settings CO/PREREQUISITES: See NOTE above.

SPED 3801. Practicum with Learners Having Mild Disabilities. (3). (3013). Planning and implementation of special education methods and materials with learners having mild disabilities CO/PREREQUISITES: See NOTE above. (S/U)

SPED 3802. Assessment of Learners with Disabilities. (3). (3014). Tests and measurements used with learners having disabilities; diagnostic achievement testing as related to instructional planning. Includes other major assessment instruments and procedures used in evaluation of mild to severe exceptionalities. CO/PREREQUISITES: See NOTE above.

SPED 3803. Behavior Management for Learners with Disabilities. (3). (3015). Advanced strategies for managing social behaviors of learners with mild to severe disabilities; techniques for eliminating maladaptive behaviors, managing aggressive and antisocial students, and teaching appropriate social skills.

CO/PREREQUISITES: See NOTE above.

SPED 4000. Methods, Materials and Curriculum for Learners with Moderate/Severe Disabilities. (3). Curriculum, methods, and materials applicable to special educational needs of learners with moderate to severe disabilities; emphasis on educational and vocational skills that facilitate normalization and independent living. PREREQUISITES: SPED 3800, 3801. COREQUISITE: SPED 4001.

SPED 4001. Practicum with Learners Having Moderate/ Severe Disabilities. (3). (4013). Planning and implementation of special education methods and materials with learners having moderate to severe disabilities. PREREQUISITES: SPED 3800, 3801. COREQUISITE: SPED 4000. (S/U).

SPED 4002. Professional Seminar in Special Education. (3). (SPER). Professional development issues including development of communication skills affecting educator interaction with students, parents, and other professionals; emphasis on addressing concerns and questions arising in student teaching settings. PREREQUISITES: SPED 3800, 3801. COREQUISITE: 4901.

SPED 4101-10. Special Topics in Special Education. (1-3). Investigation in selected areas of special education. Topics are varied and announced in the Schedule of Classes.

SPED 4801-10-6801-10. Workshop in Special Education (1-9). For professionals in field of special education. Intensive examination of current methodologies, research, issues and trends in various areas of exceptionalities. See Schedule of Classes for specific workshop title.

SPED 4900. Consultation with School/Family/Community. (3). Professional development issues which impact on educator interaction with students, parents and other professionals, including the development of communication and consultation skills. Practicum included.

(SWRK) SOCIAL WORK

Division of Social Work

JEROME LEWIS-BLAKEMORE, Ph.D., Director

Room 231, Clement Humanities Building

SWRK 2910 and 2911 are prerequisites for all other courses in the Division of Social Work; may be taken after earning 40 credit hours, as specified in the note accompanying the requirements for the major; and are required of Social Work Majors.

SWRK 2910. Social Work Profession and Practice. (4). (3901). Overview of social work as profession, including introduction to its value base, knowledge base, and skill base; and roles of social workers in social service agencies. Community laboratory experience required. *Two and one-half lecture, one and one-half laboratory hours per week.* NOTE: The following courses are to be taken prior to or concurrently with SWRK 2910: ENGL 1102; ANTH 1200; and two courses (with a minimum grade of C) from the following: SOCI 1111; PSYC 1101; POLS 1100; or ECON 2120.

SWRK 2911. Social Response to Human Need. (3). Introduction to historical and contemporary issues related to American social welfare systems; analysis of impact on vulnerable populations, value implications, change processes, and culturally-relevant concepts of need. Volunteer experience required. NOTE: The following courses are to be taken prior to or concurrently with SWRK 2911; ENGL 1102; ANTH 1200; and two courses (with a minimum grade of C) from the following: SOCI 1111; PSYC 1101; POLS 1100; or ECON 2120.

SWRK 3902. Human Behavior and Social Environment. (3). Overview of human development from birth through old age; focus on interaction of biological, psychological, and socio-cultural factors; major developmental theories, transitional phases, and variant lifestyles; relevance to social functioning and social work practice. PREREQUISITES: SWRK 2910 or 2911 and BIOL 1071/1072 or instructor's permission.

SWRK 3903. Social Work Practice I. (3). Overview of traditional social casework methodology; emphasis on theoretical approaches and generalist practice; beginning applications of case study model. PREREQUISITE: SWRK 2911, 3901, 3902, or director's permission.

SWRK 3904. Social Work Practice II. (3). Continuation of SWRK 3903, with emphasis on application of theory through assessment, intervention planning, use of community resources, and functions of social workers; extensive case analysis. PREREQUISITE: SWRK 3903.

SWRK 3906. Social Work Practice III. (3). (4932). Theory and application of group dynamics concepts as applied to individual in group, committee and community structures and functions, roles of social worker in these settings. PREREQUISITES: SWRK 2910, 2911, and 3903. COREQUISITES: SWRK 4830 and 4840.

SWRK 3920. Social Welfare Policies and Programs: Theory and Application. (3). Overview of social

welfare policy development and methods; programs resulting from these efforts; influence of competing value orientations; exposure to differing models of policy analysis; and implications for professional practice including the role of social work in developing, implementing, and evaluating social programs. PREREQUISITES: SWRK 2910 and 2911. COREQUISITE: SWRK 3930.

SWRK 3930. Social Work Research. (3). History and methods of social work research including scientific thinking, application of statistical operations, and systematic approaches to acquisition of social work knowledge. PREREQUISITES: SWRK 2910 and 2911 and SOCI 3311.

SWRK 4830. Field Instruction in Social Work I. (3). Supervised internship in social service agency or program. *Minimum two days per week required.* PREREQUISITE: SWRK 3904. COREQUISITES: SWRK 4840 and 3906.

SWRK 4831. Field Instruction in Social Work II. (4). Continuation of supervised internship. *Minimum three days per week required.* PREREQUISITES: SWRK 4830 and 4840. COREQUISITE: SWRK 4841.

SWRK 4840. Integrative Field Seminar I. (2). Integration of social work theory with field instruction experiences. COREQUISITE: SWRK 4830 and 3906.

SWRK 4841. Integrative Field Seminar II. (2). Continuation of SWRK 4840. COREQUISITE: SWRK 4831.

SWRK 4911-19. Special Topics in Social Work. (3). Topics of contemporary interest in social work profession and in social welfare practices. PREREQUISITE: SWRK 2911 or permission of instructor.

SWRK 4933. Directed Individual Study. (1-4). Directed advanced reading, field study and/or research in special areas of social work, not otherwise provided in curriculum. NOTE: No more than 4 hours may be taken in any one semester. May be repeated for maximum of 6 semester hours credit. PREREQUISITE: Social Work major and permission of director, Division of Social Work.

SWRK 4934. Child Welfare Policy and Services. (3). Historic overview and contemporary application of child welfare policy; problems in policy development; contemporary American child welfare services in both public and private domains. PREREQUISITE: SWRK 2910, 2911, and 3920.

(TECH) TECHNOLOGY

Department of Engineering Technology

RONALD LEE DAY, M.A., *Chair*

Room 203, Engineering Technology Building

<http://www.people.memphis.edu/~engtech/home.html>

TECH 1010. Computer Applications In Technology. (3). Introduction to computer applications using microcomputers networked to Tiger LAN and VAX; microcomputer applications include operating systems, spreadsheets, word-processing, BASIC, and VAX/Internet.

TECH 1411. Introduction to Technology. (1). Emphasis on engineering technology programs as to content and opportunities upon graduation; technical applications, calculations and activities related to various technological disciplines; approaches to basic research techniques and problem solving.

TECH 1521. Graphics and Descriptive Geometry. (3). Orthographic projections, sections, pictorials; drafting with instruments, sketching, and introduction to computer aided drafting. Auxiliary views and revolutions, profiles, vector graphics and developments. *Two lecture hours, three laboratory hours per week.*

TECH 3044. Analysis for Engineering Technology. (4). (2944). Application of mathematical, scientific, and engineering principles to solution of technology problems, using a variety of examples from various major areas in Technology; analyze and provide acceptable solutions to ascending order of well designed problems using language and techniques or related technological disciplines and selected areas of mathematics, such as algebra, trigonometry, calculus and differential equations. *Three lecture hours, three laboratory hours per week.* PREREQUISITE: MATH 1321. [C]

TECH 3414. Construction Administration. (3). Ethical practice, social responsibility, licensing, codes, and public regulation of contracting, specification writing and interpretation, functions of architect-engineer and owner, construction contracts, bonding, insurance, indemnification, labor agreements and jurisdictional procedures, joint venture and subcontract relationship.

TECH 3451. Construction Surveying Methods. (3). Methods, techniques and formulas necessary to establish controlling points at any construction site; both office and field procedures required to locate center lines and bounds of structures. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: ARCH 2451.

- TECH 3691. Construction Estimating. (3).** Fundamentals of commercial and light frame estimating; emphasis given to conducting a quantity survey, including unit and overhead costs. PREREQUISITE: TECH 3520.
- TECH 3940. Analytic Approaches to Public Fire Protection. (3).** Systems analysis and its use and limitations in fire protection and other problem areas; illustrated with case studies and models using the systems approach to fire suppression and prevention. PREREQUISITE: admission restricted to students seeking B.P.S. degree in Fire Administration or Fire Prevention Technology. [C]
- TECH 3942. Fire Related Human Factors. (3).** Dynamics of human behavior in fire incidents related to building design, codes and ordinances, and other fire prevention practices. PREREQUISITE: admission restricted to students seeking B.P.S. degree in Fire Administration or Fire Prevention Technology.
- TECH 3944. Fire Protection Structure and Systems Design. (3).** Design principles involved in protection of structure from fire involvement empirical tests and prediction procedures; control detection, and suppression system design practices; fundamentals of hydraulic design of sprinkler and water spray systems with recent innovations. PREREQUISITE: admission restricted to students seeking B.P.S. degree in Fire Administration or Fire Prevention Technology.
- TECH 3945. Incendiary Fire Analysis and Investigation. (3).** Procedures and techniques for collection, comparison, and analysis of physical evidence related to fire origin; principles of evidence of ignition phenomenon and propagation variables; legislative, economic, psychological, and sociological variables of incendiary fire, role of insurance and government programs. PREREQUISITE: students of B.P.S. degree in Fire Administration or Fire Prevention Technology program.
- TECH 3946. Fire Dynamics. (3).** Fire propagation phenomenon in both fuel and air regulated phases; variables in pre- and post-flash over fire development; geometric, material, gaseous, fluid flow, and thermodynamic parameters; compartment and building fire models. PREREQUISITE: student of B.P.S. degree in Fire Administration or Fire Prevention Technology program.
- TECH 3947. Applications of Fire Research. (3).** Fire research and its application; transfer and implications of available research results for fire prevention and protection programs; national and international studies and research developments. PREREQUISITE: student of B.P.S. degree in Fire Administration or Fire Prevention Technology program.
- TECH 3948. Managerial Issues in Hazardous Materials. (3).** Examination of federal regulatory issues, hazard identification and vulnerability analysis, multi-agency contingency planning, response personnel, multi-agency response resources and systems; discussion of agency policies, public education and emergency information systems, health and safety issues, command post dynamics, strategic and tactical considerations, recovery and termination procedures. PREREQUISITE: enrollment in B.P.S. degree in Fire Administration or Fire Prevention Technology program.
- TECH 4510-6510. Construction Planning and Scheduling. (3).** Principles of planning, scheduling, organizing, and controlling construction projects; studies in critical path method (CPM) and PERT, with resource leveling and financial scheduling; computer applications in CPM and PERT emphasized.
- TECH 4512. Soil Technology in Construction. (3).** Soil technology as applied to construction field; fundamental properties of soils with application to foundations, highways, retaining walls and slope stability; relationship between soil characteristics and geologic formations. *Two lecture hours, three laboratory hours per week.* PREREQUISITE: PHYS 2001, 2110.
- TECH 4520-6520. Construction Methods and Equipment. (3).** Theory and practice of construction operations, equipment utilization, construction methods, analysis of costs, crew and equipment.
- TECH 4950-6950. Product Safety Management. (3). (3921, 3931).** Study of modern concepts of accident prevention by means of safety analysis; analyses of responsibilities and requirements of management in producing safe consumer products; emphasis on electrical and mechanical hazards.

(THEA) THEATRE

Department of Theatre and Dance

ROBERT A. HETHERINGTON, M.A., *Chair*

◆ Room 143, Theatre and Communication Building

THEATRELIB@cc.memphis.edu

NOTE: In addition to specific prerequisites, junior standing or permission of the department chair is a

prerequisite for all 3000- and 4000-level courses in the Department of Theatre and Dance.

THEA 1411. Basic Oral Interpretation. (3). Introduction to interpretation of literature in performance; develop and heighten performer's responsiveness to the literary text.

THEA 1551. Introduction to Theatre. (3). Experiential, conceptual, historical, and cultural study of theatre as a unique form of artistic expression and mirror of human experiences and values throughout the world; survey of constituent elements of a theatrical work and its major forms of expression. Attendance at The University of Memphis Theatre productions required. [G]

THEA 1561. Introduction to Design. (3). Historical and conceptual survey of basic elements of production-scenery, costumes, lighting, sound - and their relation to theatrical production process.

THEA 2501. Stage Movement. (3). Introduction to movement as basic element of actor's craft; focus on recognition, development, and understanding of natural physical actions and rhythms and their application to stage. [G]

THEA 2511. Theatre Crafts. (3). Lecture/laboratory covering all phases of craft skills and equipment involved in technical theatre production. Required lab work.

THEA 2512. Introduction to Theatre Graphics. (3). Introduction to graphic communication processes of technical theatre. Mechanical drafting and CAD for scenery, properties, sound and lighting design; poster and program graphics. (Offered alternate years)

THEA 2515. Stage Make-up. (3). Lecture/laboratory class in which fundamentals of theatrical make-up are studied through a series of make-up projects including corrective make-up, fantasy, mask and beard makeups. (Offered alternate years)

THEA 2530. Acting for Non-Majors. (3). Introduction to craft of acting; development of actor's individual potential through basic technique; performance of short scenes in class.

THEA 2531. Basic Acting Techniques. (4). First essential of acting study: exploration of the actor; class exercises to develop relaxation, concentration, imagination, and improvisation skills.

THEA 2532. Character Development. (4). Principles of role analysis through study of subtext, character motivation, and objectives. PREREQUISITE: THEA 2531 or permission of instructor.

THEA 3212. Voice Production for the Performer. (4). Techniques for freeing the vocal mechanism: breathing, phonation, movement to enhance the performer's craft.

THEA 3213. Voice Articulation for the Performer. (3). International Phonetic Alphabet; Standard American Dialect; exercises in articulation and dialects as techniques for conveying dramatic intention and character. May be taken to improve grade in COMM 1211.

THEA 3412. Directing Experiments. (3). Theatrical image; creative exercises in imaginative use of space, time, and materials as they relate to stage direction and design. (Offered alternate years)

THEA 3505. Mime. (3). Techniques, composition and exploration of various styles of mime. PREREQUISITE: THEA 2501 or permission of instructor.

THEA 3506. Movement Styles. (3). Techniques and choreography of the movement styles of various periods, with study in such areas as stage combat and masks. PREREQUISITE: THEA 3505 or permission of instructor.

THEA 3511. Stagecraft. (3). Lecture/laboratory includes theatre terminology, theatre forms, production organization, job descriptions, and safety; scenery construction to include painting, flat scenery, three-dimensional scenery, and introduction to steel materials. Required lab work. (Offered alternate years)

◆PREREQUISITE: THEA 2511.

THEA 3531. Scene Study. (4). Development of ensemble work within scenes. May be repeated for a maximum of 8 hours with permission of instructor. PREREQUISITE: THEA 2532.

THEA 3532. Advanced Scene Study. (4). Continuation of 3531. Attention to material from modern classics. May be repeated for a maximum of 8 hours with permission of instructor. PREREQUISITE: THEA 3531.

THEA 3551. Audition Preparation Performance Laboratory. (1). (3541-005). Weekly meeting to review/critique actors' audition choices and progress. PREREQUISITE: permission of instructor.

THEA 3561. Principles of Scene Design. (3). Application of principles to various theatrical conventions and configurations. (Offered alternate years)

THEA 3562. Principles of Costume Design. (3). Techniques of costume design with special attention to character interpretation and design visualization. Open to non-majors with permission of instructor. (Offered alternate years).

NOTE: THEA 3601, 3602, 3603, 3604, 3605, 3606, 3607, and 3608 include preparation for and participation in departmental theatre productions. Individualized work is in the form of supervised laboratory situations.

Running crews for season productions selected from participating labs. Each course may be repeated for a maximum of 3 hours with permission of the instructor.

THEA 3601. Management and Publicity Production Laboratory. (1). (3542-001).

THEA 3602. Costumes Production Laboratory. (1). (3542-002).

THEA 3603. Lighting Production Laboratory. (1). (3542-003).

THEA 3604. Sound Production Laboratory. (1). (3542-004).

THEA 3605. Scenery Production Laboratory. (1). (3542-005).

THEA 3606. Props Production Laboratory. (1). (3542-006).

THEA 3607. Make-up Production Laboratory. (1). (3542-007).

THEA 3608. Dance Production Laboratory. (1).

THEA 3609. Stage Management Production Laboratory. (1).

THEA 4210-19-6210-19. Special Topics in Theatre. (1-3). Topics are varied and announced in Schedule of Classes. May be repeated to a maximum of 9 hours when topic varies.

THEA 4401-6401. Children's Literature in Performance. (3). Adaptation of Children's literature for performances in theatrical and educational settings; styles of literature, principles of performance and production of material designed for young audiences. May be repeated for up to 6 hours credit with permission of instructor.

THEA 4441-6441. Performance Repertory. (3). Group performance in dramatic and narrative theatre styles as well as dance and theatre movement. May be repeated for a maximum of 9 hours. **PREREQUISITE:** Prospective students must audition for and be cast in the Memphis Moving Line Company.

THEA 4455. Directing Narrative Theatre. (3). Directing techniques for staging literary texts not originally written for the theatre. Includes script adaptation of short stories, poetry, and non-fiction prose. Directing projects required. **(Offered alternate years)** **PREREQUISITE:** THEA 4521 or permission of instructor.

THEA 4457-6457. Interpretive Styles. (3). Exploration of performance style as it evolves from language, structure, and style of the literary text. Materials for performance will vary each semester and may alternate among the genres of prose fiction, poetry, and period drama. Repeatable for a maximum of 9 hours when content varies. **PREREQUISITE:** permission of instructor.

THEA 4501-6501. Advanced Movement Styles. (3). Advanced study in physical theatre styles. Varied semester topics: performance art; mask performance; fighting styles for period weapons; and physical theatre techniques for directors, choreographers, and teachers. Repeatable for a maximum of 6 hours when content varies. **PREREQUISITE:** permission of instructor.

THEA 4503-6503. Creative Dramatics. (3). Basic techniques and theories for use of dramatization in elementary and secondary education. Includes socio-drama, dramatization of school subjects and daily concerns, and improvisation and creation of dramatic plays.

THEA 4514-6514. Theatrical Rendering Techniques. (3). Materials and techniques for rendering theatrical space and scenic, costume, lighting, and properties design elements.

THEA 4515-6515. Scene Painting. (3). Lecture/laboratory covering techniques of painting scenery for stage. **(Offered alternate years)** **PREREQUISITE:** THEA 3561.

THEA 4516-6516. Technical Direction. (3). Lecture/ laboratory for theatre technicians includes production organization and safety, engineering, rigging, materials control and supply ordering. **(Offered alternate years)** **PREREQUISITE:** THEA 3511 .

THEA 4521. Principles of Stage Direction. (3). Exploration of conceptual, planning and implementation skills of stage director from script interpretation to rehearsal and performance; attention to both traditional and non-traditional theatrical modes. Directing projects required. **(Offered alternate years)** **PREREQUISITE:** THEA 3412 or permission of instructor.

THEA 4531-6531. Acting Styles. (4). Development of acting styles as influenced by environments of historical periods. May be repeated for maximum of 8 hours. **(Offered alternate years)** **PREREQUISITE:** THEA 3532.

THEA 4532-6532. Advanced Acting Styles. (4). Continued work in acting styles. May be repeated for maximum of 8 hours. *(Offered alternate years)*. **PREREQUISITE:** THEA 4531.

THEA 4541. Internship. (1-6). Supervised work in actual university, community, or professional theatre productions on internship basis. Credit varies with amount of time and responsibility involved. May be repeated for a maximum of 12 semester hours. **PREREQUISITE:** permission of Director of Theatre.

THEA 4551-6551. Theatre History-Classic. (3). Shaping forces and theatrical forms from primitive

civilizations to the Renaissance in both Western and non-Western cultures, with emphasis on the former. **(Offered alternate years)**

THEA 4552-6552. Theatre History-Modern. (3). Continuation of 4551 to present. **(Offered alternate years)**

THEA 4553. Directed Individual Studies in Theatre. (1-3). For advanced student who wishes to do concentrated study in specific area of theatre. May be repeated for maximum of 9 hours. **PREREQUISITE:** permission of instructor.

THEA 4554-6554. Visual History for Theatrical Design. (3). Design aesthetics of selected historical periods as applied to theatrical design. May be repeated for a maximum of 6 hours.

THEA 4555-6555. Technical Production Studio: Theatre Technology. (3). Lecture/laboratory using traditional and contemporary materials and scenic techniques including rigging, metals and welding, wood working, and plastics. **PREREQUISITE:** THEA 3511 or permission of instructor.

THEA 4556-6556. Technical Production Studio: Lighting. (3). Study of technical principles that support areas of theatrical lighting design. Includes instrumentation and equipment, electricity and electronics, control systems, operational and maintenance principles and procedures for stage electricians.

THEA 4557-6557. Technical Production Studio: Costume. (3). Intermediate costume construction techniques employing both traditional and experiential methods for sewing; brings costume design from concept to reality. **PREREQUISITE:** THEA 3562 or permission of instructor.

THEA 4561. Design Studio: Scenic. (3). Application of design principles to study of analysis, design process, and graphic skills. Creative expression and portfolio development also stressed.

THEA 4562. Design Studio: Lighting. (3). Lecture/seminar/practicum investigation of arts of lighting design; script analysis, design approaches and methodologies, procedures and practices for working designers, cue techniques, design styles and forms, and criticism of lighting design. Research project work and staged scenes required. **PREREQUISITE:** THEA 4556 or permission of instructor.

THEA 4563. Design Studio: Costume. (3). Theories and techniques of aesthetics of costume design as applied to contemporary theatre; script analysis for costume design; character and period interpretation through line, color, and fabric.

THEA 4571-6571. Playwriting. (3). Theory and principles of writing plays for stage. Practice in writing either short or long play. May be repeated for maximum of 9 semester hours. **(Offered alternate years)**

◆**PREREQUISITE:** permission of instructor. [W]

THEA 4582. Script Interpretation. (3). Exploration of the script as blueprint for realization of artistic stage image. Special attention given to plot, structure, character treatment, and language style as they relate to performance, direction, and scenography. **(Offered alternate years)** **PREREQUISITE:** major or minor in Department of Theatre and Dance. [W,I]

THEA 4591. Theatre Management. (3). Procedures and practices for stage management; theatrical production management; box office; publicity and promotion for theatre and performing arts; comparative study of commercial, educational, and amateur theatre operations. **(Offered alternate years)** [C]

THEA 4592-6592. Theatre Architecture And Facilities Planning. (3). Processes and techniques employed by theatre planners in design and construction/renovation of theatrical spaces and structures; survey of theatre forms, historical development of theatrical structures and spaces, programming methods and procedures, specification, renovation techniques, multi-use structure concepts, and consultation procedures and practices. **(Offered alternate years)** **PREREQUISITE:** permission of instructor.

THEA 4595-6595. Technical Production Studio: Sound. (3). Technical principles that support areas of theatrical sound design; digital and analog equipment, audio signal theory and technologies, systems design, software, and operational principles and procedures for theatrical sound engineers.

THEA 4596. Design Studio: Sound. (3). Lecture/seminar/practicum investigation of the art of theatrical sound design; script analysis, creative design processes and aesthetics, cue techniques, design styles and forms, procedures and practices for working designers and criticism of sound design. **PREREQUISITE:** THEA 4595 or permission of instructor.

THEA 4631-6631. Acting for Film and Television. (4). Educational experience for actor in media of film and television, concentrating on dramatic, commercial and documentary areas. **(Offered alternate years)** **PREREQUISITE:** permission of instructor.

THEA 4980. Honors Studies. (3). (COMM, THCA). Reserved for students enrolled in Theatre and Dance Honors Program. May be repeated for a maximum of 15 hours. **PREREQUISITE:** Permission Department Chair.

THEA 4982. Honors Seminar. (3). (THCA). Intensive study of particular problems in theatre and dance. May be repeated for a maximum of 12 hours when semester topics vary. **PREREQUISITE:** Permission Department Chair

THEA 4999. Senior Honors Thesis. (3). (COMM 4981, THCA 4999). Supervised independent research project. Open only to students enrolled in the Theatre and Dance Honors Program. May be repeated for a maximum of 6 hours. **PREREQUISITE:** Permission Department Chair.

(TRAC) TRANSITIONAL ACADEMIC STUDIES

SUSAN MAGUN-JACKSON, Ph.D., *Director*

Room 203, Administration Building

<http://www.people.memphis.edu/~dstudies>

TRAC 0710. Basic Composition. (3). (ASDS 0710, R&DS 0710). Practice in developing paragraphs and compositions; extensive work on competencies in grammar, punctuation, and mechanics through numerous writing assignments. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

TRAC 0720. Basic Mathematics. (3). (ASDS 0720, R&DS 0720). Real numbers and number operations, ratio and proportion, percent, measurement, geometry, variables, equations, and applications. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

TRAC 0740. Critical Reading I. (3). (ASDS 0740, R&DS 0740). Essential reading skills needed as foundation for critical reading skills; emphasizes word attack skills, general vocabulary development, comprehension, and increased reading rate. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

TRAC 0810. Developmental Composition. (3). (ENGL 1100, ASDS 0810, R&DS 0810). Expository writing; emphasis on focus, development, organization, and revision of composition; practice with grammar, sentence structure, punctuation, and mechanics. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

TRAC 0820. Elementary Algebra. (3). (MATH 1000, ASDS 0820, R&DS 0820). Real numbers, their properties, variables, solving equations, polynomials, factoring, introduce algebraic fractions, linear equations, systems of linear equations, graphing linear equations in two variables, inequalities, radicals, quadratic equations, and applications. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

TRAC 0821. Intermediate Algebra. (3). (MATH 1100, ASDS 0821, R&DS 0821). First and second degree equations, linear equations in two variables, polynomials, rational expressions, exponents and radicals, systems of equations, graphing linear equations, inequalities, and applications. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

TRAC 0830. Developmental Study Skills. (3). (ASDS 0830, R&DS 0830). Necessary reasoning and study skills for college level work; emphasizes critical thinking skills and efficient study techniques. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

TRAC 0840. Critical Reading II. (3). (ELED 1201, CIED 1201, ASDS 0840, R&DS 0840). Critical reading skills prerequisite for comprehension of college texts; emphasizes increased development of general vocabulary as well as technical and specialized vocabularies. Comprehension with special attention directed toward critical reading skills and improvement of reading flexibility and reading rate. *Three lecture hours per week.* Credit earned will not apply toward degree credit.

[Last Updated: 6/12/15](#)

(UNHP) UNIVERSITY HONORS PROGRAM

◆MELINDA JONES, Ph.D., *Director*

◆Room 404, Jones Hall

UNHP 1100. The Honors Forum. (1). Logistical and metaphysical questions about the pursuit of a higher education; presentation of first foundations for the learning tasks and responsibilities that honors students assume as exemplary students. Ten-hour service competent. (S/U)

UNHP 3250-3299. Special Topics. (1-3). To accommodate student interests and faculty inspiration. May feature scholars-in-residence, museum exhibits, or other timely opportunities. Innovation in content and format encouraged. Counts toward Honors Certificate. May be repeated for credit as topics vary. May not be repeated to improve a former grade.

UNHP 4150-4199. Contemporary Issues. (3). Selected contemporary issues to be approached in terms of demographic, social, economic, political, cultural, and historical dimensions;◆ perspectives from social sciences and humanities; emphasis on social policies as problem solving strategies. Varied topics based on broad thematic areas such as public education; race and ethnic relations; criminal justice system; religion in public life; role of media in political discussion. May be selected as option for Interdisciplinary Liberal Arts Honors or may apply to Honors Certificate. May be repeated for credit as topics vary. May not be repeated to improve a former grade.

UNHP 4250-4299. Cross-Cultural Perspectives. (3). Emphasis on global environment; area study or thematic approach with consideration of demographic, social, economic, political, cultural, and historical dimensions; perspectives from social sciences and humanities. May include such topics and areas as concept of the Third World, the non-western mind, the Middle East, Eastern Europe, Japan, or post-colonial Africa. May be selected as an option for Interdisciplinary Liberal Arts Honors or may apply to Honors Certificate. May be repeated for credit as topics vary. May not be repeated to improve a former grade.

UNHP 4302. Mind, Brain, and Intelligence, Honors. (3). Interdisciplinary studies of cognition, behavior, emotion, intelligence, and brain mechanisms; synthesis of research contributions from cognitive science, neuroscience, artificial intelligence, and philosophy. This course is cross-listed with PSYC 4305 and UNIV 4520.

UNHP 4350-4399. Science and Technology. (3). Emphasis on relationship between science and technological innovation on the one hand and ethics, values, and public policy on the other. Includes basic science content suitable for non-science majors, as well as perspectives from social sciences and humanities. May include varied topics such as environmental issues, biomedical engineering, space program, artificial intelligence, human factors analysis, the mind and the brain. May be selected as an option for Interdisciplinary Liberal Arts Honors or may apply to the Honors Certificate. May be repeated for credit as topics vary. May not be repeated to improve a former grade.

UNHP 4404. Holocaust Studies. (3). (Same as JDST 4511). Synthesizing knowledge and methodologies from several disciplines; contexts and implications of the Holocaust; encompass periods before, during, and after the event to explore questions of human values and responsibility; research paper, journal, writing for oral presentation, and essay exam. Intended for seniors. [W,I]

UNHP 4450-4499. Interdisciplinary Special Topics. (3). Themes and topics that lend themselves to interdisciplinary discussion and analysis. Emphasis on texts and primary sources, as well as innovative teaching formats. May be team taught by faculty from two or more disciplines.◆ May apply to Honors Certificate. May be repeated for credit as topics vary. May not be repeated to improve a former grade.

UNHP 4900. Advanced Honors Projects. (1-3). Designed for individuals or small groups of students working collaboratively. Students encouraged to design own projects. May include reading, research, discussion group, or experiential projects. Advanced projects assume sufficient background for advanced level. Credit varies according to project. No more than 3 hours may apply toward Honors Certificate. Application to department and college honors programs at their discretion. Application to Interdisciplinary Liberal Arts Honors negotiable. Letter grade unless student application for credit/no credit approved before registration. May be repeated for credit; however, maximum credit◆ is 9 hours. May not be repeated to improve a former grade.

UNHP 4999. Honors Thesis. (3). (4300). In conjunction with a faculty mentor, most often from student◆s major department. Guidelines for students and faculty and applications available from Honors Office. Required for Interdisciplinary Liberal Arts Honors. Preliminary applications should be completed two semesters in advance. Formal applications due before final examinations week in semester preceding semester in which

credit sought. Letter grade unless student application for credit/no credit approved before registration. Honors credit requires grade of A or B. May not be repeated to improve a former grade.

(UNIV) University College

SUSANNE B. DARNELL, Ph.D., *Interim Dean*

◆Room G-1, Johnson Hall

UNIV 1005. Directed Study. (1-3). Directed study at introductory level. Student may seek permission to study under faculty direction in an area not routinely taught. This course may be repeated for maximum credit of 6 hours. PREREQUISITE: approval of Out-of-Class Learning and Baccalaureate Contracts.

UNIV 1610. Natural Science I. (4). Development of universe; origin of elements and species; development of natural laws and their influence on cultural development of humankind; potentials and limitations of science explored. *Three lecture hours, two laboratory hours per week.* [G]

UNIV 1611. Natural Science II. (4). Concept of origin of universe and development of scientific thought; ways in which scientists develop knowledge of distant past; degrees of certainty possible to scientific investigation; possible conflicts between scientific thinking and human institutions explored. *Three lecture hours, two laboratory hours per week.* [G]

UNIV 2110. Field Experience. (1-6). Supervised on-site training in basic skills. May be repeated up to a maximum of 6 hours. PREREQUISITE: Approval of Out-of-Class Learning and Baccalaureate Contracts. (S/U)

UNIV 2304. Gender and Society. (3). Sources, development, and effect of gender hierarchy on self-concept, quality of life, and ability to effect social change; subordination of women of different classes, races, and ethnicities across nationalities, cultures, and centuries; symbol, myth, and psychology in human development and gender divisions of power within historical struggle for control of world's wealth. [G]

UNIV 2850. Religions of Abraham: Judaism, Christianity, Islam. (3). Survey of development of several Near Eastern religious traditions; consideration of intellectual relationships among them. [G]

UNIV 2860. Historical/Philosophical Perspectives on Cultural Confrontations. (3). Interdisciplinary examination of causes and effects of conflicts between and within cultures. Examines notion of cultural unity, issues of cultural identify, and categories used to construct cultural positions; European, African, Asian, and Native-American cultures studied in order to assess historical and philosophical viewpoints that influence understandings of contemporary society. [G]

UNIV 3200. Aviation Administration. (3). Administrative principles as applied to airport operations, general aviation, government operations and enforcement, airline companies, and manufacturing companies; emphasis upon Federal Aviation Administration regulations that govern and guide the administrator in these areas.

UNIV 3300. Medical Illustration Techniques I. (3). Special techniques used by illustrators working in medical settings.

UNIV 3301. Medical Illustration Techniques II. (3). Further instruction in special techniques used by illustrators working in medical settings. Work with case problems.

UNIV 3302. Biomedical Photography. (3). Special techniques used by photographers working in medical settings.

UNIV 3500-3599. Thematic Studies. (3-9). Interdisciplinary courses about significant problems, themes, or ideas. Specific course descriptions each semester in ◆Addenda◆ section of Schedule of Classes.

UNIV 3509. Connections. (6). [W]

UNIV 3527. Making the Humane City. (6). [W]

UNIV 3531. American Experience: Images and Narrative. (3). Organized around ◆images◆ and ◆narratives◆; utilizes a variety of cultural materials to enhance appreciation of the peoples and experiences that define the term ◆American.◆

UNIV 3541. American Experience: Language and Objects. (3). Organized around ◆language◆ and ◆objects◆; utilizes a variety of cultural materials to enhance appreciation of American language and American perceptions of objects.

UNIV 3580. Hebrew and Greek Legacy. (3). Interdisciplinary examination of salient ideas, values, and traditions of ancient Hebraic and Greek cultures, with emphasis on those ideas and values that have most significantly influenced the modern world; understanding of ideas and values enhanced through comparison with selected non-Western traditions. [G]

UNIV 3581. Faith, Reason, and Imagination. (3). Interdisciplinary examination of religious, rationalist, and aesthetic viewpoints as distinctive ways of understanding what is fundamental to human experience. Exploration of historical development of each of these modes of understanding and examination of tensions that exist among them in modern world. [G]

UNIV 3601. Introduction to Health Services Administration. (3). Structure of the U.S. health care system and issues involved in administration of system; causes and characteristics of use of health services; individual provider settings; technology and resources needed to provide health care services; health care policy and politics.

UNIV 3700-3739. Special Topics. (1-6). Examination of selected topics announced in Schedule of Classes.

UNIV 4110. Internship. (3-6). Supervised training in work related to student's educational objectives. May be repeated to maximum of 12 hours. PREREQUISITE: approval of Out-of-Class Learning and Baccalaureate Contracts. (S/U)

UNIV 4304. Studies in Feminism. (3). Analysis and application of feminist theory across disciplines; emphasis upon development of feminist philosophies and impact upon traditional methodologies and fields of study.

UNIV 4380. Independent Study. (1-3). Directed individual study or research. Students who have identified area of study pertinent to their coordinated study program, that is not routinely taught, may pursue the study under direction of faculty member. May be repeated to maximum of 6 hours. PREREQUISITE: approval of Out-of-Class Learning and Baccalaureate Contracts.

UNIV 4500-4599. Advanced Thematic Studies. (3-9). Advanced interdisciplinary courses about significant problems, themes, or ideas. Specific course descriptions each semester in Addenda section of Schedule of Classes.

UNIV 4520. Mind, Brain, and Intelligence. (3). Same as PSYC 4305 and UNHP 4302.

UNIV 4529. Character and Society in Contemporary America. (6). (3529). [W, I]

UNIV 4700-09. Advanced Special Topics. (3-6). Advanced examination of selected topics announced in Schedule of Classes.

UNIV 4990. Project Planning Seminar. (3). Selected and individualized methodology related to identifying, planning, conducting, analyzing, and reporting research related to the culminating special project. PREREQUISITE: Senior Standing and approved baccalaureate contract or interdisciplinary degree guidelines and permission of Associate Dean. (S/U).

UNIV 4995. Special Project. (3 or 6). Academic research or other creative activity resulting in tangible project to demonstrate synthesis of student's Coordinated Study. PREREQUISITE: Completion of UNIV 4990 or equivalent and approval of a learning contract for the project. Students will receive an in-progress grade or a letter grade. [I]

(UNIV) EXPERIENTIAL LEARNING

?? A portfolio describing and documenting knowledge gained through experience or non-traditional instruction may be prepared by a University College student for assessment by a faculty member. This learning must be related to the Coordinated Study. (See Expenses and Aid and Academic Regulations sections for more details.) That faculty assessor recommends the descriptive title, level, and amount of credit to be assigned by the dean of University College. A maximum of 33 hours may be applied to a degree. Credit is posted to the student's transcript as follows.

UNIV 1900. Introductory Level Experiential Learning in (descriptive title).

UNIV 2900. Intermediate Level Experiential Learning in (descriptive title).

UNIV 3900. Advanced Level Experiential Learning in (descriptive title).

[Last Updated: 6/12/15](#)

courses require a grade of at least a **C-**.

Enrollment Priority

Neither admission by The University of Memphis and The Fogelman College of Business and Economics nor completion of the minimum requirements guarantees admission to any specific course offered by the college. Limited resources may require that enrollment in business classes be based on ranking by Grade Point Average with exceptions being made for graduating seniors.

I. THE MAJOR

Each student, with the assistance of an advisor in the college, not later than the beginning of the junior year, will select a major and, if available, an area of concentration within the major. The specific courses required by each area for the satisfaction of its major are listed in the section following. A major requires a minimum of 21 hours beyond upper division core requirements, and courses used to satisfy one major may not be used toward a second major. A minimum grade of C must be earned for each required course for the major.

II. COURSES NOT APPLICABLE TOWARD B.B.A. DEGREE

Transitional Academic Studies (TRAC) courses may not be used to fulfill the minimum number of hours required for the B.B.A. degree.

III. THE MINOR

A student whose major is within The Fogelman College of Business and Economics is not required to have a minor; however, such an option is available. A minimum grade of C (2.0) must be earned for each required course in the lower division and upper division business administration core curriculum and in each course required for the minor.

A student whose major is within one of the other colleges of the university may take a minor in one of the academic areas. (See Residence Requirements for The Fogelman College of Business and Economics.)

ACADEMIC REQUIREMENTS FOR MAJORS AND MINORS

ACCOUNTING

Area of Accountancy

The mission of the bachelor's degree program in Accountancy is to serve the needs of students, the accounting profession, and the general business community through teaching, research and service. Within this mission, the area offers students a balanced integrative approach to business education. In this interdisciplinary view, students must have a broad University General Education Program grounded in non-business courses, a strong supporting business acumen, and an interrelated view of accounting to the other areas of business. Specifically, accounting classes synthesize accounting with the financing, investing, and operating functions so that students can develop their critical thinking skills and apply them to making decisions on accounting and other business problems. Overall, the B.B.A. with a major in Accounting is built on the foundation of technical, interpersonal, and communication skills. This focus allows enhancement of careers and leadership to businesses and government units that would strengthen the economic development of communities, state, and nation.

Program Options: The Accountancy area offers undergraduates two program options. One option is to complete only the 128 semester hours, which lead to the B.B.A. degree with a major in accountancy. The other option is the recommended curriculum for students interested in a professional career in accounting. It is a 158 semester hour professional program in accounting that combines undergraduate and master's degrees. Undergraduate B.B.A. students may begin taking graduate course work after they have completed 90 undergraduate credit hours, providing they have (1) a minimum GPA of 3.25, (2) a minimum 450 GMAT score, and (3) a minimum average GPA of 3.25 in ACCT 3110, 3120, and 3310. Students pursuing this option receive the bachelor's degree upon completion of the bachelor's requirements and the master's degree with a major in accounting upon completion of the full 158 semester hours. A student admitted to the professional program may take graduate courses only if she or he has completed the necessary prerequisites. Graduate courses may not be double counted for both the bachelor's and master's degrees. (See also section 2 of the current bulletin, Services to Students-Combination Senior.)

Accounting (B.B.A.)

A. University General Education Program (48 hours)

See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B. College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student's advisor.
- Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C. The Major (21 hours)

21 upper division semester hours in Accounting courses as follows: ACCT 3110, 3120, 3310, 3510, 4020, 4240, and an accounting elective.

D. Electives (14 hours)

Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: *Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.*

E. Computer Literacy

This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Accounting Minor

For students whose major is in another college of the university (15 hours): ACCT 2010, 2020, 3010, 3110; plus one of the following: 3120, 3310, 3510.

For students whose major is in a department in The Fogelman College of Business and Economics (12 hours): ACCT 3110, 3120, 3310, 3510.

BUSINESS ECONOMICS

Area of Economics

The academic area of Economics has two major objectives: to prepare students majoring in economics by providing a solid foundation in the principal areas of economics and to function as a service area for other areas in The Fogelman College of Business and Economics, as well as the other colleges of the University.

In general, the area attempts to give economics majors a solid background in economic theory, quantitative economics and applied economics.

Business Economics Major (B.B.A.)

A. University General Education Program (48 hours)

See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B. College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student's advisor.
- Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C. The Major (21 hours)

A minimum of 21 upper division semester hours in courses as follows:

- ECON 3310, 3320, 4920, and four additional upper division courses selected with the approval of the department advisor.
- The Major (B.A., College of Arts and Sciences). The student is required to meet the requirements for the Bachelor of Arts degree plus these specific major requirements: ECON 2110, 2120, 3310, 3320, 4920 and five additional upper division courses, for a total of 30 semester hours, selected with the approval of the area advisor.

D. Electives (14 hours)

Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: *Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.*

E. Computer Literacy

This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

F. Honors Program

All students who receive a grade of B (3.0) or better in ECON 2110 or 2120 honors sections are eligible for the program. Entry to the program can also be obtained through the recommendation of a member of the faculty to the Economics Area Honors Committee. A student must maintain an average grade of at least 3.25 in economics to continue in the program and must have an average grade of 3.5 or better in economics to graduate with honors in economics. Honor students take special courses during the junior and senior years, particularly the honors sections of ECON 3310 and 3320, and write a senior research paper. At commencement they are awarded the special distinction with honors in Economics. Details of the program are available at the Area office.

Business Economics Minor

For students whose major is in another college of the university: 18 semester hours in economics courses, including ECON 2110, 2120, and 12 additional upper division hours in courses as approved by the area advisor.

For students whose major is in another area in The Fogelman College of Business and Economics: Nine additional upper division hours in economics approved by the area advisor.

FINANCE

Area of Finance

The primary objective of the area is to provide the basic concepts, principles and analytical tools essential for business decisions in the fields of finance. The area curriculum is designed to provide a broad background for effective functioning within the discipline. Finance majors study the environment, theory and techniques of decisions on the acquisition of funds by business firms, including the applied areas of investment and financial institutions.

Finance Major (B.B.A.)

A. University General Education Program (48 hours)

See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B. College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

No grade below C (2.0) and 2.25 GPA in the following courses:

FIR 3130 Legal, Social, and Political Environment of Business (3)
 FIR 3410 Business Finance (3)
 MGMT 3110 Organization and Management (3)
 MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
 MKTG 3010 Principles of Marketing (3)
 MGMT 3510 Business Communications (3) [W]
 ISDS 3510 Production and Operations Management (3)
 ISDS 3711 Analytical Tools for Business Decisions (3) [C]
 ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆◆ advisor.
- ◆◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆◆ The Major (21 hours)

- ◆◆◆ A minimum of 21 upper division semester hours in courses as follows: FIR 3710, 3720, 4440, 4610, and nine additional upper division hours in courses selected with the approval of the advisor.

D.◆◆ Electives (14 hours)

- ◆◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Finance Minor

For students whose major is in another area in The Fogelman College of Business and Economics: Nine upper division hours in finance approved by the Director of Undergraduate Programs.
For students whose major is within another college of the university: (24 hours) ACCT 2010 and 2020; ECON 2110, 2120, 3610; FIR 3410, 3710. Three additional upper division hours approved by the Director of Undergraduate Programs.

HOSPITALITY AND RESORT MANAGEMENT (B.B.A.)

Area of Hospitality and Resort Management

- ◆◆◆ The primary goal of the Hospitality and Resort Management◆◆◆ (HPRM) program is to produce graduates who have the intellectual capabilities and skills necessary for them to be successful in their chosen fields on today◆◆◆ increasingly competitive hospitality business environment. HPRM is committed to expanding the general business knowledge, specific hospitality skills, and overall technical competence of both students and faculty who matriculate and educate within this program.

Hospitality and Resort Management Major (B.B.A.)

A.◆◆ University General Education Program (48 hours)

- ◆◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

ACCT 2010 Fundamentals of Accounting I (3)
 ACCT 2020 Fundamentals of Accounting II (3)
 ISDS 2710 Business Statistics I (3)
 ISDS 2749 Introduction to Business Microcomputer Applications (3)
 ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

No grade below C (2.0) and 2.25 GPA in the following courses:
 FIR 3130 Legal, Social, and Political Environment of Business (3)
 FIR 3410 Business Finance (3)
 MGMT 3110 Organization and Management (3)
 MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
 MKTG 3010 Principles of Marketing (3)
 MGMT 3510 Business Communications (3) [W]
 ISDS 3510 Production and Operations Management (3)
 ISDS 3711 Analytical Tools for Business Decisions (3) [C]
 ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆◆ advisor.
- ◆◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆◆ The Major (22 hours)

- ◆◆◆ A minimum of 22 upper division semester hours including HPRM 3010, 4315, 4320, 4322, 4330, 4340, 4350, 4911 are used◆◆◆ to fulfill the major requirement.

D. Electives (13 hours)

- ◆◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

INTERNATIONAL BUSINESS

Area of Interdisciplinary Program

- ◆◆◆ The primary objective of the International Business Program is to provide a broad interdisciplinary background for a career in international business. Through the study of theoretical and practical aspects of the operations of international and multinational business and through work in several liberal arts disciplines, the graduate of this program should be prepared, after receiving a minimum orientation training in a particular international firm, to apply the knowledge acquired to the solution of problems faced by the company.
- ◆◆◆ For further information concerning this program, contact the Advising Office, The Fogelman College of Business and Economics.

International Business Major (B.B.A.)

A.◆◆ University General Education Program (48 hours)

- ◆◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

ACCT 2010 Fundamentals of Accounting I (3)
 ACCT 2020 Fundamentals of Accounting II (3)
 ISDS 2710 Business Statistics I (3)
 ISDS 2749 Introduction to Business Microcomputer Applications (3)
 ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

No grade below C (2.0) and 2.25 GPA in the following courses:
 FIR 3130 Legal, Social, and Political Environment of Business (3)
 FIR 3410 Business Finance (3)
 MGMT 3110 Organization and Management (3)
 MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
 MKTG 3010 Principles of Marketing (3)
 MGMT 3510 Business Communications (3) [W]
 ISDS 3510 Production and Operations Management (3)
 ISDS 3711 Analytical Tools for Business Decisions (3) [C]
 ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆◆ advisor.
- ◆◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆◆ The Major (21 hours)

- ◆◆◆ The student majoring in International Business must complete the same courses required of all students working toward the B.B.A. degree. For additional requirements during the sophomore and junior years, see the International Business advisor. Students majoring in International Business are required to take six credit hours in foreign language. It is also strongly suggested that the students take more than six hours.
- ◆◆◆ In the senior year, the student will take 21 semester hours in courses offered by The Fogelman College of Business and Economics, distributed as follows: 15 semester hours (5 courses) from the following group: ECON 3580, 4340, 4350, 4351; FIR 4550; MGMT 4510, 4810; MKTG 4530, 4570.
- ◆◆◆ Additionally, 6 semester hours (2 courses) from the following group: ECON 4120, FIR 4440, ISDS 3760, MKTG 4080.
- ◆◆◆ Two courses from the College of Arts and Sciences are also required in the senior year. See the advisor.

D.◆◆ Electives (14 hours)

- ◆◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

International Business Minor

For students whose major is in another area in The Fogelman College of Business and Economics: Nine hours from the following courses with the approval of the International Business advisor: ECON 4340, 4350, 4351; FIR 4550; MGMT 4810; MKTG 4530.
For students whose major is in another college of the university: The student will take a minimum of 18 hours in The Fogelman College of Business and Economics, at least 9 hours of which must be chosen from the following: ECON 4340, 4350, 4351; FIR 4550; MGMT 4810; MKTG 4530. The necessary prerequisites for the above courses are in parentheses:
 ◆◆◆ ECON 4340 (ECON 2110); ECON 4350 (ECON 2120); FIR 4550 (FIR 3410); MGMT 4810 (MGMT 3110); MKTG 4530 (MKTG 3010).

Pre-Professional Business Administration Minor

◆◆◆ The Fogelman College of Business and Economics offers a pre-professional minor (30 hours) for students whose major is in another college of the university. Requirements are as follows: ACCT 2010, 2020; ECON 2110, 2120; ISDS 2710, 2749; FIR 3130, 3410; MGMT 3110; MKTG 3010. Accounting, economics, and junior standing are prerequisites for 3000 level courses.

LOGISTICS/MARKETING

Area of Marketing

- ◆◆◆ The objective of the Marketing area is to provide a broad view of the marketing process and to develop an understanding of all the factors involved in the marketing of goods and services.
- ◆◆◆ Logistics/Marketing majors study the details of logistics management as well as an analysis of the political and competitive environment in which logistics practitioners must function. Additionally, numerous distribution functions such as warehousing, inventory management, order processing, and distribution planning are covered.

Logistics/Marketing Major (B.B.A.)

A.◆◆ University General Education Program (48 hours)

- ◆◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (21 hours)

- ◆◆ A minimum of 21 upper division semester hours in marketing courses as follows: MKTG 3610, 3620, 3630, 4080, 4901, and six semester hours chosen by the student from the following courses: MKTG 3012, 3320, 4220, 4470, 4570, 4620, 4790.

D.◆ Electives (14 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Logistics/Marketing Minor

For students whose major is in another college of the university (24 hours): ACCT 2010, ECON 2120, MKTG 3010, 3610, 3620, 3630, and six semester hours chosen by the student from the following: MKTG 3012, 3320, 4220, 4470, 4570, 4620, 4790.

For students whose major is in another area in the Fogelman College of Business and Economics (12 hours): MKTG 3610, 3620, 3630, and three semester hours chosen by the student from the following: MKTG 3012, 3320, 4220, 4470, 4570, 4620, 4790.

MANAGEMENT

Area of Management

- ◆ The effective manager of today must have competence in many disciplines, an understanding of a wide variety of relationships, and the ability to analyze evolving management requirements. Regardless of the functional specialty, the professional manager must also be a leader of people who knows how to organize and motivate groups of people serving the goals of the organization.
- ◆ Effective adaptation of management to such emergent conditions as the continued growth of science and technology, populations, and large scale organization demands a thorough grasp of management process theory including planning, organizing, directing, and controlling of operations.
- ◆ The management major is designed to provide students with a basic understanding of management concepts, theories and principles, which will be useful in all kinds of organizations. All management majors take courses in management principles, business communication, human resources administration, organizational behavior, international management, and strategic management. These courses and others are designed to develop knowledge of organizations and administrative processes and enhance skills in interpersonal relations, written and oral communication, and work project development and completion. The program in management is intended to promote the development of general knowledge and skills which can be applied in virtually any organizational setting and which will continue to be important in the future. In addition to required core courses in management, students select among several more specialized courses to complete their majors.

Management Major (B.B.A.)

A.◆ University General Education Program (48 hours)

- ◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (21 hours)

- ◆◆ A minimum of 21 upper division semester hours including MGMT 3215, 4420, and either MGMT 4510 or MGMT 4810. If either MGMT 4510 or MGMT 4810 is used to fulfill a college core requirement, the student must take the other course to fulfill the major requirement.
- ◆◆ The additional 12 hours of the 21 hour minimum for the major can be selected from the following: MGMT 4240, 4251, 4260, 4410, 4510, 4810, 4820, 4910, 4110-19.

D.◆ Electives (14 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Management Minor

For students whose major is in another area in The Fogelman College of Business and Economics (12 hours): MGMT 3215, 4420, and 6 upper division semester hours in management.

For students whose major is within another college of the university (18 hours): MGMT 3110, 3215, 4420; ISDS 3510; and 6 upper division semester hours in Management.

MANAGEMENT INFORMATION SYSTEMS

Area of Management Information Systems

- ◆ Managers and non-managers alike depend upon information for decision making. To be useful that information must be understandable, timely, thorough, focused on the decision at hand, and in the hands of the appropriate individual. Accomplishing all this is the challenge of Management Information Systems. It requires a knowledge of individual and/or group behavior, the process of perception (how people select and interpret information), the decision tools they need, computers and communication technology, systems design, managing data, and the impact individual decisions have on the organization.
- ◆ Management Information Systems includes several specialized areas including Artificial Intelligence, Expert Systems, Telecommunications, Cognitive Processing, Management Science, Management Information Systems Planning, Statistics, Data Base Management, Office Automation, and general applications of computers and microcomputers to business.
- ◆ Many Management Information Systems courses require substantial hands-on experience in computer labs. Therefore, the department does not allow credit by examination for upper division courses.

Management Information Systems Major (B.B.A.)

A.◆ University General Education Program (48 hours)

- ◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (24 hours)

- ◆◆ Completion of ISDS 2770 and a minimum of 21 upper division hours, including ISDS 3745, 3770, 3775, 3790 and 4800. The additional six hours will be satisfied by either (1) ISDS 3755 and ISDS 3780, or (2) ISDS 3755 and COMP 4262, or (3) ISDS 4760 and ISDS 4795
- ◆◆ ISDS 2770 must be completed prior to taking any upper division courses in the major.

D.◆ Electives (11 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Management Information Systems Minor

For students whose major is in another area in the Fogelman College of Business and Economics (12 hours): ISDS 3770, 3775, 3790, 4800.

For students whose major is within another college of the university (18 hours): ISDS 2749, 2755, 3770, 3775, 3790 and 4800.

MARKETING MANAGEMENT

Area of Marketing

- ◆ The objective of the Marketing area is to provide a broad view of the marketing process and to develop an understanding of all the factors involved in the marketing of goods and services.

- ◆ Marketing Management majors study the practical application of marketing concepts, including procedures for developing promotion, pricing, distribution, and sales management strategies. Additionally, instruction is provided in market research, buyer behavior issues, and a variety of market programming topics.

Marketing Management Major (B.B.A.)

A.◆ University General Education Program (48 hours)

- ◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (21 hours)

- ◆◆ A minimum of 21 upper division semester hours in marketing courses as follows: MKTG 3012, 3140, 3610, 4080, 4901, and six semester hours chosen by the student from the following: MKTG 3170, 3320, 3620, 4220, 4230, 4240, 4410, 4470, 4530, 4570, 4790, 4920-29.

D.◆ Electives (14 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Marketing Management Minor

For students whose major is in another college of the university: (24 hours) ACCT 2010; ECON 2120; and MKTG 3010, 3012, 3140, 3610, and six semester hours chosen by the student from the following: MKTG 3170, 3320, 3620, 4220, 4230, 4240, 4410, 4470, 4530, 4570, 4790, 4920-29.

For students whose major is in another area in The Fogelman College of Business and Economics (12 hours): MKTG 3012, 3140, 3610, and three semester hours chosen by the student from the following: MKTG 3170, 3320, 3620, 4220, 4230, 4240, 4410, 4470, 4530, 4570, 4790, 4920-29.

PRODUCTION OPERATIONS MANAGEMENT

Area of Decision Sciences

- ◆ The Decision Sciences Area focuses on preparing future managers to meet the competitive challenges of global economy through its courses in Production Operations Management, Management Science/Operations Research, and Statistics. These courses enable students to enhance their decision-making capabilities to run business operations effectively, efficiently, and productively. Since some Decision Science courses require hands-on experience in computer labs, the area does not allow credit by examination for upper division courses.

Production Operations Management Major (B.B.A.)

A.◆ University General Education Program (48 hours)

- ◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (21 hours)

- ◆◆ Completion of ISDS 4510, 4511, 4512; MKTG 3610 and three of the following: TECH 4462, 4464, 4466; ISDS 3760; MKTG 3620, 4220; MGMT 4420.

D.◆ Electives (14 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Production Operations Management Minor

For students whose major is in another area in the Fogelman College of Business and Economics: (9 hours) ISDS 4510, 4511, and 4512.

For students whose major is in another college of the university: (24 hours) MGMT 3110; ISDS 2710, 3711, 3510, 4510, 4511, 4512. Three additional upper division hours approved by the Director of Undergraduate Programs.

REAL ESTATE

Area of Insurance, Real Estate, and Business Legal Studies

- ◆ Real Estate majors will be provided the basic theories and practices of urban land use and economics. Exposure will be to real estate principles, valuation, investment analysis and finance, legal environment, and development.

Real Estate Major (B.B.A.)

A.◆ University General Education Program (48 hours)

- ◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (21 hours)

- ◆◆ A minimum of 21 upper division semester hours in courses, as follows:
- ◆◆ FIR 3310, 4310, 4320, 4340, 4350, and a minimum of 6 additional upper division hours in courses selected with the approval of the advisor.

D.◆ Electives (14 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Real Estate Minor

For students whose major is in another area in The Fogelman College of Business and Economics: (9 hours) FIR 3310 and six additional upper division hours in real estate approved by the Director of Undergraduate Programs.

For students whose major is within another college of the university: (21 hours) ACCT 2010; ECON 2110; FIR 3011, 3130, 3310, and six additional upper division hours in real estate approved by the Director of Undergraduate Programs.

RISK MANAGEMENT AND INSURANCE

Area of Insurance, Real Estate, and Business Legal Studies

- ◆ Risk management and insurance majors study risk theory, risk management; life, health, and property-liability insurance and their relationships to other disciplines in business administration.

Risk Management and Insurance Major (B.B.A.)

A.◆ University General Education Program (48 hours)

- ◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (21 hours)

◆◆ A minimum of 21 upper division semester hours in courses as follows:

- ◆◆ FIR 3810, 4810, 4820, 4870, and nine additional upper division hours in courses selected with the approval of the advisor.

D.◆ Electives (14 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4112 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Risk Management and Insurance Minor

For students whose major is in another area in *The Fogelman College of Business and Economics*: (9 hours) FIR 3810, 4870 and three additional upper division hours in insurance approved by the Director of Undergraduate Programs.

For students whose major is within another college of the university: (21 hours) ACCT 2010, ECON 2110, ISDS 2710, FIR 3011, 3810, 4870, and three additional upper division hours in insurance or finance approved by the Director of Undergraduate Programs.

SALES

Area of Marketing

- ◆ The objective of the Marketing area is to provide a broad view of the marketing process and to develop an understanding of all the factors involved in the marketing of goods and services.
- ◆ Sales majors are taught practical and theoretical sales and sales management skills. Particular emphasis is placed on interpersonal communication techniques and on the practical application of the marketing concepts as they apply to sales and sales management.

Sales Major (B.B.A.)

A.◆ University General Education Program (48 hours)

- ◆◆ See page 55 for the University General Education Program requirements. Note that MATH 1312 (*Mathematics* requirement) and ECON 2110 and 2120 (*Social Science* requirement) are specified for the B.B.A. degree.

B.◆ College and Degree (B.A.) Requirements (45 hours)

Lower Division Business Core Curriculum (15 hours)

- ACCT 2010 Fundamentals of Accounting I (3)
- ACCT 2020 Fundamentals of Accounting II (3)
- ISDS 2710 Business Statistics I (3)
- ISDS 2749 Introduction to Business Microcomputer Applications (3)
- ISDS 2755 Introduction to Management Information Systems (3)

Upper Division Business Core Curriculum (30 hours)

- No grade below C (2.0) and 2.25 GPA in the following courses:
- FIR 3130 Legal, Social, and Political Environment of Business (3)
- FIR 3410 Business Finance (3)
- MGMT 3110 Organization and Management (3)
- MGMT 4710 Strategic Management (3) [I] (Enrollment usually limited to graduating seniors)
- MKTG 3010 Principles of Marketing (3)
- MGMT 3510 Business Communications (3) [W]
- ISDS 3510 Production and Operations Management (3)
- ISDS 3711 Analytical Tools for Business Decisions (3) [C]
- ECON 4112 Organizational Economics (3)

Choose One:

- ◆◆ MGMT 4810, International Management (3); MKTG 4530, International Marketing (3); ECON 4350, International Economics (3); FIR 4550, International Finance (3); MGMT 4510, International Business Communication and Negotiation (3); MKTG 4570 Import/Export Marketing (3); ECON 4351 International Monetary Economics: Theory and Policy (3); one course from FIR 4110-4119 (3) when the topic pertains to international business and has been approved in advance by the student◆◆ advisor.
- ◆◆ Transfer students are referred to the section Transfer Credit in the College of Business and Economics description.

C.◆ The Major (21 hours)

- ◆◆ A minimum of 21 upper division semester hours in marketing courses as follows: MKTG 3410, 4080, 4410, 4470, 4901, and six semester hours chosen by the student from the following: MKTG 3012, 3140, 3320, 3610, 4220, 4240, 4490, 4790.

D.◆ Electives (14 hours)

- ◆◆ Lower division or upper division courses to bring the total of non-business hours earned to 64. Note: Economics courses other than the required courses of ECON 2110, 2120, and 4111 will not count as non-business course work.

E. Computer Literacy

- ◆◆ This requirement is met by successfully passing ISDS 2749, ISDS 2755, and other required courses.

Sales Minor

For students whose major is in another college of the university (24 hours): ACCT 2010; ECON 2120; MKTG 3010, 3410, 4410, 4470, and six semester hours chosen by the student from the following courses: MKTG 3012, 3140, 3320, 3610, 4220, 4240, 4490, 4790.

For students whose major is in another area in *The Fogelman College of Business and Economics* (12 hours): MKTG 3410, 4410, 4470, and three semester hours chosen by the student from the following courses: MKTG 3012, 3140, 3320, 3610, 4220, 4240, 4490, 4790.

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in the fields of marketing, merchandising, journalism, or in occupational concentration area. Note: Family and Consumer Science Education students interested in obtaining a teacher licensure must submit a formal application to the College of Education Teacher Education Program (TEP). See departmental advisor for details.

c. **Food Systems Management Concentration (40 hours):** CSED 2302, 3502, 4322, 4702, 4722, 4802; ACCT 2010; ISDS 2710 or EDPR 4541 [C]; ISDS 2749 (1), 2755; MGMT 3110, 4420; MKTG 3010, 3410; FIR 3130.

d. **Merchandising Concentration (54-57 Hours).** Core (15 hours): CSED 2106, 3206 [C], 4600 (6); ID&T 3600; and select 1 or 2 below.

1. **Fashion (36 hours):** CSED 1105, 2005, 4405, 4705 (6); Marketing Management Minor (21 hours): ACCT 2010, and MKTG 3010, 3012, 3140, 3610. And 6 semester hours chosen by the student from required options in the Marketing Management minor.

2. **Home Furnishings (39 hours):** CSED 2004, 3204, 4204, 4304, 4314, 4405, 4804 (6); Business Administration Core (18 hours): ACCT 2010; MKTG 3010, and 9 hours in MKTG selected in consultation with advisor.

◆◆ All merchandising students must see CSED Advisor to:

- ◆◆ Consult on selection of required electives.
- ◆◆ Receive approval on completion of major subject areas prior to the final professional semester (CSED 4600, 4705, or 4804).
- ◆◆ Complete application for CSED 4600 prior to study day of the semester preceding the final professional semester.
- ◆◆ Enroll in 1 semester in Fashion Institute of Technology in New York City.◆◆◆◆◆◆◆◆◆◆

C. **Electives (0 - 18 hours)**

◆◆ Electives may be chosen to bring the total number of hours to 132.

D. **Computer Literacy**

◆◆ This requirement is fulfilled by completing IDT◆ 3600 or its equivalent. Consult advisor.

EXERCISE AND SPORT SCIENCE

Department of Human Movement Sciences and Education

Exercise and Sport Science Major (B.S.Ed.)

A. **University General Education Program (48 - 51 hours)**

◆◆ See page 55 for the University General Education Program requirements. Note the following are specified by the department for this major: *Social Science (non-Global):* PSYC 1101; *Fitness and Wellness (Activity):* PHED 1713 or any other higher level swimming course.

B. **The Major (27-30 hours)**

◆◆ Successful completion of B.S.Ed. requirements with a major in Exercise and Sport Science and a concentration in Physical Education will qualify a graduate to apply for licensure in Physical Education (K-12). Non-licensure majors should refer to the non-licensure requirements in the next section (Exercise Science and Health Promotion concentration).

1. **Core requirements (27 - 30 hours):** Minimum grade of C required in all major core and concentration courses;

◆◆ BIOL 1751/1752 (4), 1761/1762 (4); EXSS 2001, 3703 (4), 3803, 4204 [C], 4403; HMSE 2102; ICL 3600.

2. **Concentrations (51-57 hours)**

a. **Exercise Sciences and Health Promotion Concentration (51-57 hours).** CSED 2202; EXSS 3310, 3503, 3505, 3603, 4002, 4003, 4602 [W], 4603, 4605, 4703; HMSE 4999 [I]; MKTG 3010; plus 6-9 hours of guided electives selected in consultation with advisor from the following courses: BIOL 3730; CHEM 3311, 3312, 4511, 4512; COUN 4611, 4621, 4781; EDPR 2111; EXSS 2002, 2003, 2009, 3307, 3308, 3309, 3502, 3604, 3605, 3903, 4406, 4501, 4601, 4808, 4809; FIR 3011; MGMT 1010; MMCS 3130; SLS 3105, 3406, 3600, 3605, 4005, 4105, 4125, 4500; and 3-6 hours of general electives

b. **Physical Education Concentration (B.S.Ed. Licensure) (51-57 hours)** EXSS 2002, 2003, 2009, 3307, 3308 (2), 3309 (1), 3604 (2), 3605 (1), 3903 [W], 4808 (2), 4809 (1); EDPR 2111; ICL 3000, 4800 [I], 4909 (9); LEAD 2010; SPED 2000; 3-9 hours of general electives.

C. **Electives (4 - 21 hours)**

◆◆ Electives may be chosen to bring the total number of hours to 132.

D. **Computer Literacy**

◆◆ This requirement is fulfilled by completing IDT 3600 or its equivalent. Consult advisor.

◆◆ In some of the above courses, variable hours of supervised laboratory/field experience will be required.

HUMAN DEVELOPMENT AND LEARNING

Department of Instruction and Curriculum Leadership

Human Development and Learning Major (B.S.Ed.)

A. **University General Education Program (48 - 51 hours)**

◆◆ See page 55 for the University General Education Program requirements.

◆◆ NOTE: The following University General Education Program requirements are specified by the department for this major: *Historical/Philosophical Heritage [6 hours] Pre-1500:* Choose either CLAS 2481, or HIST 1301; *Post-1500:* PHIL 1102; *American Heritage [6 hours]:* Choose either HIST 2601 or 2602, plus one other course from the following: HIST 4851, 4881; ANTH 3282; GEOG 3401; SOCI 3422; *Social Science [6 hours]:* GEOG 1301 or 1401; and POLS 1100; *Natural Science[8 hours]:* Choose one of following 2-part sequence of course in Biology: BIOL 1071/1072, and BIOL 1081/1082; *Physical:* CHEM 1101-1102; CHEM 1121-1131 and CHEM 1122/1132; PHYS 1001/1010 and PHYS 1002/1020; *Earth:* GEOG 1001/1011 and GEOL 1002/1022, or GEOL 1101-1103; *Fitness and Wellness (4 hours):* HMSE 1100; PHED 1811.

B. **Additional General Education Courses for the B.S.Ed. Degree (9 hours):**

◆◆ SOCI 1111; 2 Natural Sciences courses, one from each area not covered in the above 8 hour sequence: Biology, Earth Science (GEOG or GEOL), Physical Science (CHEM or PHYS).◆◆◆◆◆◆◆◆◆◆

C. **Related Liberal Studies (9 hours):** EDPR 2111; LEAD 2010; EXSS 3306.

D. **The Major (33 hours)**

1. **Core (24 hours):** EDPR 3300, 3301; ECED 3555, 3565; SPED 2000; CCFA 3001; ICL 3511, 3600.

2. **Select one course from each of the following three areas:** Race and Ethnicity: SOCI 3401, 3422, 4420,◆ or 4442 [W]; Family and Culture: ANTH 3511, 4411; HIST 4831, 4863; or SOCI 3831; Gender: SOCI 3432 or 4460.

E. **Professional Education (33 hours)**

◆◆ Choose one concentration from the following:

1. **Early Childhood Education (Grades PreK-3 Licensure)** must take ICL 3000, 4800 [I]; ICL 4901 and 4902 or ICL 4903 (9 hours); ELED 4242 (6 hours); ECED 4510, 4520, 4530, 4540.

2. **Schools and Society (Non-Licensure)** must take SOCI 3820; ANTH 4051; and 9 hours selected from each of the following groups to total 27 hours:

a. **ECED 3555, 3565; EDPR 3100 [C], 3300, 3301; PSYC 3103; CSED 3401.**

b. **EDPR 4530, 4541 [C]; SWRK 2911; SOCI 3801, 4842; CSED 4104; COUN 4621; ICL 4111.**

c. **SOCI 3401, 3422, 3432, 3831, 4420, 4442, 4460; ANTH 3511, 4411; HIST 4831, 4863 [W].**

NOTE: The 9 hours selected from area 3 may not duplicate courses selected to meet the Human Development and Learning major core requirements.

F. **Computer Literacy**

◆◆ This requirement is fulfilled by taking IDT 3600 or its equivalent.

b. ♦♦♦♦♦♦♦♦ *Sport Management (15 hours)*. SLS 3600, 3650, 4135, 4145, 4155; plus 6-9 hours of guided electives selected in consultation with advisor; 3-6 hours of general electives; and satisfactory completion of a Professional Development Portfolio.

C. ♦ Electives (0 - 12 hours)

♦♦ Electives may be chosen to bring the total number of hours to 126.

D. ♦ Computer Literacy

♦♦ This requirement is fulfilled by completing IDT 3600 or its equivalent. Consult advisor.

[Last Updated: 6/12/15](#)

The Herff College of Engineering

RICHARD C. WARDER, JR., Ph.D., Dean
Room 201-D, Engineering Building
(901) 678-2171

<http://www.people.memphis.edu/~herffcoll/frame.html>

Department	Civil Engineering	Electrical Engineering	Engineering Technology	Mechanical Engineering
Major	Civil Engineering	Computer Engineering	Architectural Technology	Mechanical Engineering
Concentration Within Major	Construction Engineering	Electronics Engineering	Manufacturing Engineering	Biomedical Systems
Degree Offered	Bachelor of Science in Civil Engineering	Bachelor of Science in Electrical Engineering	Bachelor of Science in Engineering	Bachelor of Science in Mechanical Engineering
	(1) Environmental Engineering	(2) Electrophysics	(1) Computer Engineering	(1) Biomedical Systems
	(2) Foundation Engineering	(3) Systems and Signals	(2) Energy Systems	(2) Energy Systems
	(3) Structural Engineering	(4) Transportation Engineering	(3) Mechanical Systems	(3) Mechanical Systems
	(4) Transportation Engineering	(5) System Engineering (B.S.E.T.)		
	(5) System Engineering (B.S.E.T.)			

* Minor available; Minors also offered in Surveying and Technology.

** Note: Accredited by the Engineering Accreditation Commission of the Accreditation Board of Engineering and Technology (ABET).

*** Note: Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

Contact: Accreditation Director for Engineering Technology, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202

Individual program requirements described in the *Undergraduate Issue of the 1999-2001 Bulletin of The University of Memphis* are subject to change. Please consult the college level advisor for changes that may occur before publication of the next issue of this bulletin; or consult the undergraduate bulletin website at: <http://www.memphis.edu> for the latest catalog updates.

PURPOSES

The college's function is to serve the educational and research needs of the industrial community, the metropolitan area, the state, and the nation. It accomplishes this function by providing:

- undergraduate professional education in the principal fields of engineering,
- undergraduate education in both technical and educational technology,
- graduate education in all areas,
- a program of continuing education for the engineering and technological practitioners of the area,
- assistance in the solution of industrial problems through utilization of physical facilities and the professional talents of faculty and students,
- a forum for the interchange of ideas and experiences among members of the industrial community through conferences, institutes and short courses and
- an increase in the accumulation of knowledge in special fields of interest by a continuing program of study and research.

ORGANIZATION

The Herff College of Engineering is organized into the Departments of Biomedical, Civil (includes Industrial and Systems Engineering), Electrical (includes Computer Engineering), Mechanical Engineering and Engineering Technology. With the exception of Biomedical Engineering, each department offers a choice of specialized four-year programs leading to baccalaureate degrees. Graduate programs are offered in all other disciplines listed above.

Advising

- High school students, in planning for careers in one of the fields of engineering, should take advantage of preparatory courses. Since engineering is the application of mathematics and physical sciences to imaginative and useful systems, those courses should be emphasized in high school preparation. Courses are available at the university for those not fully prepared. Early enrollment in the summer terms offers excellent opportunity to remove any deficiencies that may exist.
- Freshman students who choose to study in The Herff College of Engineering will be advised by the Academic Advisor for the college. After students accumulate an appropriate number of hours, they will be transferred to the department of their major and will be advised by a member of the faculty. The College Academic Advisor facilitates changes of major and assists with other advising matters.
- Many students have found that study of engineering is an excellent preparation for medical school. Students who want to consider this option should discuss it with their academic advisor and should also consult the University Pre-Professional Advisor in the Dean's Office in the College of Arts and Sciences.

DEGREE REQUIREMENTS

- Degrees Offered**
- The Herff College of Engineering offers work leading to the following degrees: Bachelor of Science in Civil Engineering, Bachelor of Science in Industrial and Systems Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Science in Engineering Technology.
 - Information about graduate programs offered by the college may be found in the Graduate School Catalog.
 - The required curriculum, including elective specialties in each of the various undergraduate programs, is described in detail in the following pages. A minimum grade point average of 2.0 is required for graduation
 - Students who desire to take courses offered by other institutions and receive transfer credit at The University of Memphis must secure permission before enrolling in the courses.
 - University residence requirements are explained in detail in the Graduation from the University Section. A student in the Herff College of Engineering must earn the 33 hours required by the University for residency as upper division hours in courses in the Herff College of Engineering.
 - The university computer literacy requirement is met by a combination of introductory and specialized courses, complemented by advanced classroom assignments, in each major program of the College of Engineering. Specific requirements may be found in the following degree descriptions.

Bachelor of Science in Engineering Technology

Engineering Technology is a part of the technological field requiring the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities. The Department of Engineering Technology offers four majors leading to the degree Bachelor of Science in Engineering Technology. These majors are Architectural Technology, Computer Engineering Technology, Electronics Engineering Technology, and Manufacturing Engineering Technology.

In addition to meeting general university requirements, students must attain a grade of C or better in designated courses within the major and department.

ARCHITECTURAL TECHNOLOGY

Department of Engineering Technology

Architectural technology is concerned with the various aspects of architecture and design as related to buildings and building systems. The Architectural Technology Program at The University of Memphis provides a broad range of educational experiences based in design and technology to aid students in developing the skills and knowledge necessary for design buildings, manage projects, and plan building sites and their surroundings. Design and technology are synthesized in the design studio, in which students develop solutions to a variety of problems, many of which utilize the Memphis metropolitan area as an urban laboratory. Courses emphasize the development of skills essential in the practice of architecture and include the investigation of the physical, social, political, and aesthetic issues that affect the built environment. The B.S.E.T. degree with a major in Architectural Technology satisfies one of the requirements for registration as an architect in Tennessee.

Architectural Technology Major (B.S.E.T.)

A- University General Education Program (49 hours)

Enroll in page 55 for University General Education Program requirements. Note the following are specified by the department for this program: *Mathematics*: MATH 1321; *Fine Arts*: ART 1101; *Historical/Philosophical*: HIST 1301 and PHIL 1102; *Social Science*: ANTH 1200 and SOCI 1111; *Natural Science*: PHYS 2001, 2002, 2110, 2120.

B- College and Degree Requirements (25 hours)

Technology Core: ENGL 3601; CHEM 1101; MATH 1213; TECH 1010, 1411, 1521, 3044 [C], ARCH 4944 [I].

C- The Major (69 hours)

Completion of ARCH 1555, 1561, 1562, 2451, 2555, 2556, 2561, 3401, 3408, 3471, 3472, 3520, 3531, 3562, 4515, 4535, 4600, 4615, 4944.

NOTE: Substitutions must be approved by the program coordinator.

D- Computer Literacy

- This requirement is fulfilled by completing TECH 1010 and 2561.
- In the minor listed below, some prerequisites may not be listed. Check course listings and observe all prerequisites before enrolling in the courses required for the minor.

E. Architectural Technology Minor

TECH 1521, ARCH 1556, 1562, 2555, 3520, 3562, 4535, 4600.

TYPICAL SEQUENCE

	FRESHMAN YEAR	SOPHOMORE YEAR	JUNIOR YEAR	SENIOR YEAR
ENGL 1101	3			
MATH 1213	3			
TECH 1010	3			
TECH 1411	3			
TECH 1521	3			
ARCH 1555	2			
PHYS 2110/2001		4		
ARCH 1562		3		
ARCH 2555		3		
TECH 3044 [C]		4		
ARCH 3401		3		
HIST 2601			3	
ARCH 3471 [C]			3	
ARCH 3520			3	
ARCH 3531			3	
ARCH 3550			3	
Physical Activity			2	
ANTH 1200				3
CHEM 1101				3
SOCI 1111				4
ARCH 4515				3
ARCH 4535				3
				1
				16

CIVIL ENGINEERING

Department of Civil Engineering

The civil engineering program is designed to equip students with the knowledge and skills required to identify and solve the technical problems of society in a practical and ethical way. The program objectives are to (1) produce civil engineers who can assume technical and managerial leadership roles in the planning, design, construction, operation, and maintenance of our nation's infrastructure; (2) provide lifelong learning opportunities for civil engineering practitioners in the region; and (3) assist local government and industry in the solution of their technical problems while providing practical experience for our students. The civil engineering program is greatly enhanced by a diverse student body spanning a wide range of ages, backgrounds, and nationalities.

The civil engineering program of study provides an integrated educational experience that combines study in basic engineering science, the humanities, and the social sciences with practical experience in laboratory experimentation, problem solving, and engineering design. Students may pursue a general course of study or may elect to specialize in water resources or one of the following concentrations: environmental, structural, foundation, transportation, or construction engineering.

GRADUATION: To qualify for the degree of Bachelor of Science in Civil Engineering, a student must satisfy general university and college requirements, have a grade of C- or higher in all civil engineering courses that are applied toward the degree, and complete the course sequence outlined below. For credits

transferred from another institution, only those civil engineering course grades of C+ or higher may be applied toward the degree.

COURSE ENROLLMENT: The degree program in civil engineering includes a series of engineering science and professional courses taught at the upper division level. These courses are based on a background of communications, physical science, mathematics, and engineering science courses required during the freshman and sophomore years. All of the courses required during the freshman and sophomore years are prerequisites to junior standing in the Civil Engineering Department. Students shall not enroll in any upper division courses in civil engineering before the semester in which they complete all of the lower division requirements. Exceptions to this policy can be made only by the department chair acting upon the recommendation of the student's advisor.

HONORS PROGRAM: Students are eligible for the honors program in Civil Engineering if they have an overall GPA of 3.25 with a junior or senior standing or have received approval of the departmental honors committee. The honors program in civil engineering requires 12 hours of upper division honors courses. Those students who complete the program and the regular B.S.C.E. requirements will be recognized at the commencement ceremony by having their degree conferred With Honors in Civil Engineering. Moreover, the student's diploma and record at The University of Memphis will reflect this accomplishment. Details concerning this program and honors course offerings are available in the Department of Civil Engineering.

Civil Engineering Major (B.S.C.E.)

A. University General Education Program (43 hours)

- See page 55 for University General Education Program requirements. Note the following requirements are specified for this program: Oral Communication and Rhetoric: ENGL 3603 instead of COMM 2381; Mathematics: MATH 1321 (students who have not had MATH 1213 or its equivalent must take it before enrolling MATH 1321); Social Science: ECON 2110 must be taken in addition to 3 hours from the other specified choices; Natural Science: PHYS 2003, 2004, 2510, 2520. American Heritage: waived for B.S.C.E. students who have completed one unit of American history in high school.

B. College and Degree Requirements (28 hours)

Mathematics: MATH 2321, 2322, and 3391; Natural Science: CHEM 1121, 1131; and one of the following: CHEM 1122/ 1132, BIOL 1151 and 1152, GEOL 1101, or GEOL 1103. Collateral Courses: ELEC 2283 or MECH 3311; MECH 2308, 2332.

C. The Major (65 hours)

- Completion of CIVL 1101, 1112, 2107, 2131, 3113, 3121 [C], 3131, 3137, 3140 (4), 4151 (4), 4161, 3180, 3182 (1), 3322, 3325 (1), 4111, 4193 (1), 4199 [W, I].
- Fifteen hours of civil engineering electives approved by an advisor and selected as follows:
a. Group 1 Electives: Choose 6 hours from group 1 electives CIVL 3101, 3181, 4112, 4122, 4143, 4171, 4172, 4173, and an approved upper-division civil, electrical, or mechanical engineering course;
b. Group 2 Electives: Choose 9 hours from CIVL 4131, 4135, 4136, 4140, 4144, 4152, 4162, 4163, 4164, 4180, 4190, 4191, and 4900-10.
A student may select courses from the following concentrations to satisfy civil engineering elective requirements. If the student declares a concentration, a minimum of 9 hours from that concentration area is required.
1. Construction Engineering: CIVL 4164, 4171, 4172, 4173, 4191
2. Environmental Engineering: CIVL 4140, 4143, 4144, 4180, 4191.
3. Foundation Engineering: CIVL 4152, 4171, 4191.
4. Structural Engineering: CIVL 4131, 4136, 4152, 4191, 4122.
5. Transportation Engineering: CIVL 4162, 4163, 4164, 4191.

D. Computer Literacy

This requirement is fulfilled by completing CIVL 1112 and 2107.

TYPICAL SEQUENCE

Table showing typical course sequences for Freshman, Sophomore, Junior, and Senior years. Courses are listed with credit hours and cumulative totals.

1 Select from CHEM 1122/1132, BIOL 1151/1152, GEOL 1101, and GEOL 1103
2 Select from ELEC 2283 and MECH 3311
3 In addition to meeting the University General Education Program requirements, this course must be used to fulfill part of the engineering humanities and social sciences requirement. The combination must include a sequence of courses that reflects both breadth and depth in a particular area. Chair approval required.
4 Upper division course in civil engineering; advisor approval required.
5 Must satisfy University General Education Program Requirement

COMPUTER ENGINEERING

Department of Electrical Engineering
The primary goal of Computer Engineering major is to educate engineering professionals with expertise in computer engineering to meet the rapidly increasing needs of industry and government in the West Tennessee and the Mid-South region. The objectives are to provide students with an in-depth education in hardware, software, and the integration of hardware/software aspects of computer systems. The program will prepare graduates to design software and hardware associated with computer systems, design software for engineering applications, to design interfaces between computers and actual working systems, and undertake further studies in advanced areas such as computer-based instrumentation and instruction, computer communication, and computer graphics.
GRADUATION: The minimum requirements for the degree of Bachelor of Science in Computer Engineering are given below. The student must obtain a grade of C+ or better in ELEC 1202, 1207, 2201, 2222; MATH 1321, 2321, 2322, 2701, 3391; CHEM 1121, 1131; COMP 2150; PHYS 2003, 2004, 2510, 2520, or any equivalents to these courses used to satisfy degree requirements. In addition, an average grade of C+ must be maintained in all undergraduate ELEC courses. No transfer credit with a grade less than C+ may be used to satisfy a requirement for the Bachelor of Science in Computer Engineering.
MINORS: Students seeking the requirements for the Bachelor of Science in Computer Engineering may also satisfy requirements for a minor offered by a department in one of the other colleges. Requirements for a minor are specified by the appropriate college and department. Students should submit application for the minor to the appropriate department chair. Candidates for graduation who satisfy requirements for a minor should file the approved application with the intent-to-graduate cards.

Computer Engineering Major (B.S.Cp.E.)

A. University General Education Program (43 hours)

- See page 55 for University General Education Program requirements. Note the following requirements are specified for this program: Oral Communication and Rhetoric: ENGL 3603 instead of COMP 2381; Mathematics: MATH 1321 (students who have not had MATH 1213 or its equivalent must take it before enrolling MATH 1321); American Heritage: waived for B.S.Cp.E. students who have completed one unit of American history in high school; Social Science: ECON 2110 must be taken in addition to 3 hours from the other specified choices; Natural Science: PHYS 2003, 2004, 2510, 2520.

B. College and Degree Requirements (18 hours)

Mathematics (14 hours): MATH 2321, 2322, 2701, and 3391. Natural Science (4 hours): CHEM 1121, 1131.

C. The Major (71 hours)

- Major Core (56 hours): Completion of the following: ELEC 1202, 1207, 2201, 2222, COMP 2150, 3160, 4270, MECH 3310; ELEC 3301, 3202[C], 3211, 3213, 3220, 3221[C], 4235, 4270, 4271, 4280[W,I].
- Electives (15 hours): Choose from ELEC 4222, 4230, 4272, 4274, 4720, 4730, 4273, 4275, 4276, 4991 (1-3).

D. Computer Literacy

This requirement is fulfilled by completing ELEC 1202 and 1207.

TYPICAL SEQUENCE

Table showing typical course sequences for Freshman, Sophomore, Junior, and Senior years for Computer Engineering. Courses are listed with credit hours and cumulative totals.

1 ELEC electives are upper division Electrical Engineering courses.

Technology Core: ENGL 3601; CHEM 1101; MATH 1213; TECH 1010, 1411, 1521, 3044 [C], EETH 4944 [W, I].

C. The Major (65 - 67 hours)

- Completion of 65-67 hours including EETH 1811, 2821, 2831, 3811, 3812, 3821, 3822, 3841, 4821, 4823, 4841, 4944; CETH 2230, 3232, 3233, 4234; METH 1711, 3440, 4381, and 2 Technical electives (6-8 hours) approved by an advisor.
- NOTE: Substitutions must be approved by the program coordinator.

D. Computer Literacy

- This requirement is fulfilled by completing TECH 1010 and 3233.
- In the minor listed below, some prerequisites may not be listed. Check course listings and observe all prerequisites before enrolling in the courses required for the minor.

F. Electronics Engineering Technology Minor

- EETH 1811, 2821, 2831, 3811, 3821, 3841.

TYPICAL SEQUENCE
FRESHMAN YEAR

Gen. Ed. Prog. Req.*	3	ENGL 1101	3
ENGL 1101	3	ENGL 1102	3
MATH 1213	3	MATH 1321	3
TECH 1010	3	TECH 1411	3
TECH 1521	3	METH 1711	3
HMSE 1100	3	EETH 1811	3
		Physical Activity	2
			20

SOPHOMORE YEAR

Gen. Ed. Prog. Req.*	3	ENGL 2201 or 2202	3
ENGL 2201 or 2202	3	PHYS 2120	3
PHYS 2120	3	PHYS 2002	3
PHYS 2002	3	PHYS 2310	3
EETH 2821	3	CETH 2230	3
TECH 3044 [C]	3	EETH 2831	3
			17

JUNIOR YEAR

Gen. Ed. Prog. Req.*	3-4	Technical Elective	3-4
Gen. Ed. Prog. Req.*	4	CETH 3232	4
CETH 3232	4	EETH 3812	3
EETH 3812	3	EETH 3822	3
EETH 3822	3	EETH 3841	3
ENGL 3601	3		17-18

SENIOR YEAR

Gen. Ed. Prog. Req.*	3	Gen. Ed. Prog. Req.*	3
CETH 4234	3	EETH 4821	3
EETH 4821	3	METH 3440	3
EETH 4822	3	Technical Elective	3-4
METH 4381	3	EETH 4944 [W, I]	3
			16

*Must satisfy University General Education Program Requirement

INDUSTRIAL AND SYSTEMS ENGINEERING

Department of Civil Engineering

- The Bachelor of Science in Industrial and Systems Engineering is offered through the Department of Civil Engineering.
- goals of the Industrial and Systems Engineering Program are: (1) to provide a curriculum and an environment that challenge students' problem solving skills; (2) to provide a program that explicitly considers the needs of students, INSE faculty, and the local community; (3) to encourage the integration of faculty scholarly activities into the classroom; and (4) to encourage innovation in the classroom in instructional methods, assignments, and testing approaches.

Industrial and Systems Engineering Major (B.S.I.S.)

A. University General Education Program (43 hours)

- See page 55 for University General Education Program requirements. Note the following requirements are specified for this program: *Oral Communication and Rhetoric*: ENGL 3603 instead of COMP 2381; *Mathematics*: MATH 1321 (students who have not had MATH 1213 or its equivalent must take it before enrolling in MATH 1321).
- Social Science*: ECON 2110 must be taken in addition to 3 hours from the other specified choices; *Natural Science*: PHYS 2003, 2004, 2510, 2520.
- American Heritage*: waived for B.S.I.S. students who have completed one unit of American history in high school.

B. College and Degree Requirements (52 hours)

- Mathematics* (20 hours): MATH 2321, 2322, 3391, 4240, 4635, and 4637.
- Natural Science* (8 hours): CHEM 1121, 1131; and one of the following: CHEM 1122/1132, BIOL 1151 and 1152, or GEOL 1101.
- Collateral Courses* (24 hours): ELEC 2283; MECH 1307, 2332; CIVL 1101, 2131, 4111; PHIL 1611 and 3411, 3511, or 3512.

C. The Major (37 - 39 hours)

- Completion of INSE 3601, 3610, 3612, 3640, 3644, 4608, 4690, 4691; plus 15 hours of industrial and systems engineering electives approved by an advisor. These hours are to be determined by the student and the advisor, and constitutes a coherent focus of interest.
- Deterministic Methods*: INSE 4610, 4612, 4614
- Manufacturing Engineering*: INSE 4670, 4672, 4674, 4676, 4678
- Stochastic Methods*: INSE 4642, 4644

D. Computer Literacy

- This requirement is satisfied by completing MECH 1307 and INSE 3612.

GRADUATION: To qualify for the degree of Bachelor of Science in Industrial and Systems Engineering, a student must satisfy general university and college requirements, have a grade of "C" or higher in all civil engineering courses that are applied toward the degree, and complete the course sequence outlined below. For credits transferred from another institution, only those industrial and systems engineering course grades of "C" or higher may be applied toward the degree.

TYPICAL SEQUENCE
FRESHMAN YEAR

ENGL 1101	3	ENGL 1102	3
MATH 1213	3	MATH 1321	3
CHEM 1121	3	PHYS 2310	3
CHEM 1131	3	Natural Science*	3
HMSE 1100	3	MECH 1307	3
CIVL 1101	3	PHYS 2003	3
			18

SOPHOMORE YEAR

ENGL 2201 or 2202	3	Fin. Ass*	3
MATH 2322	3	MATH 3391	3
PHYS 2320	3	ELEC 2283	3
CIVL 2131	3	Physical Activity	2
ECON 2110	3	MECH 2332	3
PHYS 2004	3	Hist/Phil	3
			17

JUNIOR YEAR

MATH 4230	3	ENGL 3601	3
CIVL 4111	3	PHIL 1611	3
INSE 3610	3	INSE 3601	3
Social Science	3	INSE 3610	3
MATH 4637	3	INSE 3612	3
INSE 4690	3		15

SENIOR YEAR

PHIL, etc.	3	Hist/Phil	3
MATH 4635	3	INSE 4691	3
INSE 4608	3	INSE	3
INSE 4690	3	INSE	3
INSE 3610	3	INSE	3
INSE 4670	3	INSE	3
			18

1 Selected from PHIL 3411, 3511, or 3512.

- deterministic methods
- stochastic methods
- manufacturing engineering

*Must satisfy University General Education Program Requirement

MANUFACTURING ENGINEERING TECHNOLOGY

Department of Engineering Technology

- This program is designed for those individuals interested in careers in the manufacturing or service industries. Students will study a combination of technological and mechanical concepts coupled with quantitative management techniques that will enable them to design, control, and manage both traditional and automated industrial systems that utilize complex machinery and production systems.
- Graduates of this program are employed in the areas of quality assurance, supervision, plant management, manufacturing engineering technology, materials handling, industrial safety, systems planning, process planning, computer integrated manufacturing, technical sales, customer service, and warehouse management.

Manufacturing Engineering Technology Major (B.S.E.T.)

A. University General Education Program (49 hours)

- See page 55 for University General Education Program requirements. Note the following are specified by the department for this program: *Mathematics*: MATH 1321; *American Heritage*: HIST 2601, 2602; *Natural Science*: PHYS 2001, 2002, 2110, 2120.

B. College and Degree Requirements (25 hours)

- Technology Core*: ENGL 3601; CHEM 1101; MATH 1213; TECH 1010, 1411, 1521, 3044 [C], METH 4944 [W, I].

C. The Major (64 hours)

- Completion of 61 hours including METH 1711, 3386, 3401, 3408, 3421, 3440, 3462, 3573, 4381, 4460, 4462, 4464, 4466, 4472, 4474, 4476, 4571, 4944; EETH 1811, 2812, 2812.
- NOTE: Substitutions must be approved by the program coordinator.

D. Computer Literacy

- This requirement is fulfilled by completing TECH 1010 and 4472.
- In the minor listed below, some prerequisites may not be listed. Check course listings and observe all prerequisites before enrolling in the courses required for the minor.

E. Manufacturing Engineering Technology Minor

- TECH 1521; METH 1711, 3421, and observe prerequisites when enrolling for 9 additional hours from METH 4460, 4462, 4464, 4466, 4472, 4474, 4476, 4571, 4950, 4991.

TYPICAL SEQUENCE
FRESHMAN YEAR

Gen. Ed. Prog. Req.*	3	Gen. Ed. Prog. Req.*	3
ENGL 1101	3	ENGL 1102	3
MATH 1213	3	INSE 1101	3
TECH 1411	3	MATH 1321	3
TECH 1521	3	TECH 1010	3

The Loewenberg School of Nursing

TONI BARGAGLIOTTI, D.N.Sc., R.N., *Dean and Professor*
 Room 101 Newport Hall; (901) 678-2020
<http://www.people.memphis.edu/~uomlson>

Department	Major	Concentration Within Major	Degree Offered
* Nursing			
Bachelor of Science in Nursing (B.S.N.)			

* The school is not composed of departments.

Individual program requirements described in the *Undergraduate Issue* of the *1999-2001 Bulletin of The University of Memphis* are subject to change. Please consult the college level advisor for changes that may occur before publication of the next issue of this bulletin; or consult the undergraduate bulletin website at: <http://www.memphis.edu> for the latest catalog updates.

PURPOSES

The primary function of The Loewenberg School of Nursing is to offer a program of study designed to prepare students for careers in professional nursing. As a part of a comprehensive university, the school is dedicated to developing scholarship in nursing and providing services that support the institutional mission. The program is designed to accommodate the needs of high school graduates, transfer students, college graduates, licensed practical nurses, and registered nurses who are graduates of diploma or associate degree nursing programs. The school is committed to: (1) providing a curriculum leading to the degree of Bachelor of Science in Nursing basic to beginning professional practice and graduate study in nursing; (2) promoting the intellectual, personal and professional development of students by offering a curriculum that combines a strong liberal education with the professional major; (3) providing a plan of study with flexible options that are responsive to the individual learner's needs; (4) encouraging the use of opportunities available in a comprehensive university setting to foster values, attitudes and personal qualities essential to living a fulfilling life and contributing to a diverse society, (5) producing politically and socially conscious graduates who are competent practitioners in a variety of settings; and (6) preparing graduates who assume leadership roles to effect change for a healthy society.

Graduates of the program are eligible to apply to take the NCLEX examination for state licensure through the respective state boards of nursing. Program applicants should be aware that conviction of the following crimes would make you ineligible for Registered Nurse licensure in the State of Tennessee: Aggravated Assault as in T.C.A. 39-13-102; First Degree Murder, as in T.C.A. 39-13-202; Second Degree Murder, as in T.C.A. 39-13-207; Voluntary Manslaughter, as in T.C.A. 39-13-211; False Imprisonment, as in T.C.A. 39-13-302; Kidnapping, as in T.C.A. 39-13-303; Aggravated Kidnapping, as in T.C.A. 39-13-304; Especially Aggravated Kidnapping, as in T.C.A. 39-13-305; Robbery, as in T.C.A. 39-13-401; Aggravated Robbery, as in T.C.A. 39-13-402; Especially Aggravated Robbery, as in T.C.A. 39-13-403; Aggravated Rape, as in T.C.A. 39-13-502; Rape, as in T.C.A. 39-13-503; Aggravated Sexual Battery, as in T.C.A. 39-13-504; Sexual Battery, as in T.C.A. 39-13-505; Statutory Rape, as in T.C.A. 39-15-506; Theft of Property, as in T.C.A. 39-14-103; Theft of Services, as in T.C.A. 39-14-104; Forgery, as in T.C.A. 39-14-114; Falsifying of Educational and Academic Records, as in T.C.A. 39-14-136; Arson, as in T.C.A. 39-14-301; Aggravated Arson, as in T.C.A. 39-14-302; Burglary, as in T.C.A. 39-14-402; Aggravated Burglary, as in T.C.A. 39-14-404; Incest, as in T.C.A. 39-15-302; Aggravated Child Abuse, as in T.C.A. 39-15-402; Sexual Exploitation of a Minor, as in T.C.A. 39-17-1003; Aggravated Sexual Exploitation of a Minor, as in T.C.A. 39-17-1004; Especially Aggravated Sexual Exploitation of a Minor, as in T.C.A. 39-17-1005; Assisted Suicide, as in T.C.A. 39-13-216; Rape of a Child, as in T.C.A. 39-13-522.

PROGRAM OUTCOMES

Baccalaureate graduates of the Loewenberg School of Nursing:

1. Use the nursing process, core nursing knowledge¹, and core nursing competencies² to design, provide, and manage culturally competent, cost effective, direct and indirect nursing care or individuals, families, communities, and populations.
2. Integrate theoretical, empirical, and intuitive knowledge from other scientific disciplines, and the humanities into the practice of nursing.
3. Collaborate with others to provide health promotion and health care access to diverse populations.
4. Integrate professional nursing values³ into nursing practice.
5. Modify patient care in response to changing health care systems, health policies, and global environmental factors⁴.
6. Integrate selected research findings into nursing practice.
7. Maintain professional accountability for effective nursing practice and the advancement of the profession.
8. Implement nursing roles that meet the emerging health needs of individuals, families, communities, and populations.

¹ **Core nursing knowledge** includes: a) health promotion, risk reduction, and disease prevention, b) illness and disease management, and c) information and health care technologies.

² **Core nursing competencies** include: a) critical thinking, c) communication, c) assessment and technical skills, d) teaching, e) humanistic-caring, f) management, g) leadership, and h) integration of knowledge skills.

³ **Professional nursing values** include: a) caring, b) altruism, c) autonomy, d) human dignity, e) integrity, and f) social justice.

⁴ **Global environment factors** include: a) international law and public health, b) disease transmission, c) health policy, and d) health care economics.

ORGANIZATION

The Loewenberg School of Nursing is organized as one unit under the leadership of a dean. The curriculum leading to the degree of Bachelor of Science in Nursing includes general education and support courses offered through other units of the university as well as the major requirements offered by the school. A comprehensive approach to health care is emphasized through utilization of a wide variety of health care settings available in Memphis and the surrounding community.

The faculty of the Loewenberg School of Nursing represents all clinical areas of nursing practice and a variety of experiences and interests. They reflect this diversity in their teaching, practice and research and are qualified by practical experience as well as by academic credentials, to function as facilitators of learning.

The Loewenberg School of Nursing holds membership in the American Association of Colleges of Nursing, Southern Council for Collegiate Education in Nursing, and the National League for Nursing Council for Baccalaureate and Higher Degree Programs. The program is accredited by the National League for Nursing Accrediting Commission, 61 Broadway, 33rd Floor, New York, NY, 10006, (800) 669-1656, and approved by the Tennessee Board of Nursing.

The Loewenberg School of Nursing at The University of Memphis has been granted preliminary approval by the Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530, Washington, DC 20036-1120. (202) 887-6791. Preliminary approval is designed to be a temporary status and provides an indication that programs have been reviewed by the Commission and have met, at least, the following general requirements: (A) the nursing education program is viable and appears, based upon the review of submitted materials, to be conducted in a manner that will enable eventual compliance with CCNE accreditation standards; (B) the institution has a history of seeking and ensuring continuing accreditation and program recognition by appropriate accrediting and regulatory agencies; and (C) the institution has ensured the continuing viability of the nursing education program by being responsive to the concerns of accrediting and regulatory agencies.

ADMISSION AND ADVISING

Because the University seeks to provide in as much as possible a reasonably safe environment for its health career students and their patients, a student may be required during the course of the program to demonstrate their physical and/or emotional fitness to meet the essential requirements of the program. Such essential requirements include freedom from communicable diseases, the ability to perform certain physical tasks, and suitable emotional fitness. Any appraisal measures used

to determine such physical and/or emotional fitness will be in compliance with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990, so as not to discriminate against any individual on the basis of disability. See specific criteria under Clinical Nursing Course Requirements.

Core performance standards for admission and progression:

- A. Critical thinking ability sufficient for clinical judgement.
- B. ♦ Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.
- C. ♦ Communication abilities sufficient for interaction with others in verbal and written form.
- D. Physical abilities sufficient to move from room to room and maneuver in small spaces.
- E. ♦ Gross and fine motor abilities sufficient to provide safe and effective nursing care.
- F. ♦ Auditory ability sufficient to monitor and assess health needs.
- G. Visual ability sufficient for observation and assessment necessary in nursing care.
- H. Tactile ability sufficient for physical assessment.

FRESHMAN ADMISSION

Qualified high school seniors admitted as freshman to The University of Memphis may at the time of admission to the University be directly admitted to the nursing major. Freshman admission to the nursing major guarantees the student who remains in good standing placement in the nursing program in the second semester of the sophomore year.

Freshmen admitted to the nursing major must remain in ♦ good standing ♦ by completing the prescribed curriculum at The University of Memphis for the freshman year and first semester of the sophomore year with a minimum grade of ♦ C ♦ in all required prerequisite courses, a cumulative grade point average of 2.5 for the prescribed three semesters of course work, and a science cumulative grade point average of 2.4. Students who do not remain in ♦ good standing ♦ may reapply to the LSON in a competitive pool with other students.

Freshman admission requirements:

1. ♦ Graduation from an accredited high school with a cumulative grade point average of 3.0.
2. ♦ Minimum ACT score of 21 with a minimum score of 19 in all areas.
3. ♦ Completion of high school Algebra I, II, Geometry, Biology, and Chemistry.
- ♦ ♦ ♦ Applicants will be rank-ordered on the basis of a calculated point system:
 - ♦ ♦ ♦ Freshman Point System
 - ♦ ♦ ♦ Cumulative high school quality point average x 100 added to the ACT score x 10 or SAT score.

ADMISSION CRITERIA

Students who are not admitted as freshmen may apply to the Loewenberg School of Nursing when they meet the Admission to Clinical Nursing Coursework requirements. To be admitted to the School, a student must:

1. Be admitted to The University of Memphis as a degree-seeking undergraduate student. (A prerequisite science course may be repeated only once to earn a grade of ♦ C ♦ or higher. A maximum of two prerequisite science courses may be repeated to earn the minimum required grade.)
2. ♦ Complete and submit School of Nursing application for admission to:
 - Loewenberg School of Nursing
 - The University of Memphis
 - Newport Hall, Room 101
 - Memphis, TN 38152
3. Meet the Admission to Clinical Nursing Coursework requirements.
4. Must have complete files by the deadline (February 15 for Fall; October 1 for Spring) to be considered. (In order to allow adequate time for processing of The University of Memphis transfer credit evaluation you should receive your acceptance letter to the University by September 15 for Spring term or February 1 for Fall term).

Admission to Clinical Nursing Coursework

1. Minimum grade of ♦ C ♦ in all required prerequisite courses: ENGL 1101, 1102; MATH 1181 and 1182 or MATH 1312, 1321 or 2000; BIOL 1751/1752 and 1761/1762; CHEM 1101 and 1102; MMCS 1451/1452; EDPR 2111; CSED 3203*; PSYC 1101 or SOCI 1111.
2. Minimum of 2.4 cumulative grade point average in required laboratory science courses: BIOL 1751/1752 and 1761/1762; CHEM 1101 and 1102; MMCS 1451/1452. A prerequisite science course may be repeated only once to earn a grade of ♦ C ♦ or higher. A maximum of two prerequisite science courses may be repeated to earn the minimum required grade.
3. Have a minimum score of 600 on the TOEFL (for students for whom English is a second language).
4. Have cleared all high school deficiencies.
5. Students who are transferring from another nursing program must submit a letter of good standing from the dean/director of previous nursing program.

*Credit in CSED 2202 may also be used to meet this course requirement

Selection of Students

1. All students admitted as freshmen students to the nursing major who remain in good standing will be accommodated.
2. After freshmen nursing majors have been accommodated, all other students will be considered on a competitive space available basis according to GPA.

ADMISSION PROCEDURES:

1. ♦ Students must have complete files by the deadline (February 15 for Fall; October 1 for Spring) to be considered.
2. ♦ Acceptance into the school will be based on rank-order cumulative GPA.
3. ♦ If individuals have the same GPA, the order will be determined by the amount of prerequisite and support course work completed.
4. ♦ A new list will be created each semester. Students who are not accepted must reapply for consideration the next ♦ semester.
5. ♦ An alternate list will be established each semester to fill vacancies that might occur before the beginning of class. The criteria for the alternate list will be the same as for the acceptance list.

ADVANCED PLACEMENT ADMISSION-RN STUDENTS

♦ ♦ ♦ ♦ To be admitted with advanced placement, the Registered Nurse must:

1. ♦ Be admitted to The University of Memphis as a degree-seeking undergraduate student.
2. ♦ Have current licensure as a Registered Nurse in Tennessee.
3. ♦ Submit evidence of recent clinical practice.
4. ♦ Have a minimum college cumulative grade point average of 2.5.
5. ♦ Have completed specified pre-nursing courses with a grade of C or better: ENGL 1101, 1102 (6); BIOL 1751/1752, 1761/1762 (8), MATH 1181 and 1182 or MATH 1312, 1321 or 2000, MMCS 1451/1452 (4); CHEM 1101, 1102 (8); SOCI 1111 or PSYC 1101; ♦ CSED 3202; EDPR 2111 Development Across Lifespan; Mathematics (3) selected from approved courses ♦ in the School of Nursing ♦ s General Education selection below.

6. Minimum of 2.4 cumulative grade point average in required laboratory science courses: BIOL 1751/1752 and 1761/1762; CHEM 1101 and 1102; MMCS 1451/1452. A prerequisite science course may be repeated only once to earn a grade of **C** or higher. A maximum of two prerequisite science courses may be repeated to earn the minimum required grade.

7. Must meet the Admission to Clinical Course Work requirements.

*Credit in CSED 2202 may also be used to meet this course requirement

ACADEMIC ADVISING-BASIC AND RN STUDENTS

◆◆◆ Students who are completing courses required for admission to The Loewenberg School of Nursing receive advising through the Academic Counseling Unit located in Scates Hall. The assistant to the dean of the school, however, will be happy to answer inquiries from students regarding admission requirements. Following admission to the School of Nursing, each student is assigned an advisor from the school. The advisor will assist the student in planning for completion of the BSN program and will provide the opportunity for meaningful discussion regarding academic progress and career goals. This assistance, however, does not in any way relieve the student of the primary responsibility for studying the Catalog and fulfilling all the requirements for the degree.

LOANS AND SCHOLARSHIPS

Students are encouraged to complete applications and forms for financial aid. These are available in the Student Financial Aid Office. Some scholarships are also available through The Loewenberg School of Nursing. See Section 3 of this bulletin for a list. Applications for scholarships are available in the school office.

RESIDENCY

University residence requirements are explained in detail in the Graduation from the University section of this catalog. Note that students transferring from a community or junior college must complete a minimum of sixty semester hours in an accredited senior institution. In addition, 33 of the last 66 semester hours for the degree must be completed at The University of Memphis.

DEGREE REQUIREMENTS

- ◆ To qualify for the degree of Bachelor of Science in Nursing, the student must complete a minimum of 132 semester hours with the minimum overall grade point average of 2.0 and must meet specific grade requirements described below.
- ◆ A minimum grade of C must be earned for English 1101 and 1102, each required science course, each required upper division course, and each required nursing course.
- ◆ Detailed course requirements are described below under General Education Program Requirements, Other Support Course Requirements, and Nursing Course Requirements.

Nursing Major (B.S.N.)

A.◆ University General Education Program (48 - 51 hours)

◆◆ See page 55 for University General Education Program requirements.◆ Note the following requirements are specified for this program: *Natural Science*: CHEM 1101, 1102, or CHEM 1121, 1131, 1122, 1132; *Social Science*: Non-global, PSYC 1101 or SOCI 1111.

B.◆ Support Courses for Nursing Major (29 hours)

◆◆ *Anatomy and Physiology** (8 hours): BIOL 1751/1752, 1761/1762

◆◆ *Microbiology* (4 hours)*: MMCS 1451/1452

◆◆ *Chemistry* (8 hours)*: See natural science requirement above.

◆◆ *Growth and Development*: (3 hours): EDPR 2111.

◆◆ *Nutrition* (3 hours): CSED 2202.

◆◆ *Statistics* (3 hours): EDPR 4541 [C], PSYC 3001 [C], or SOCI 3311 [C], with a minimum grade of C.

◆◆ All support courses must be completed with a minimum cumulative grade of C.

* Science courses must have a minimum grade point average of 2.4 and must have been completed in the past 7 years. Refer to Science Course Validation section below.

C.◆ The Major (60 hours)

◆◆ Completion of NURS 2217, 2218 (1), 2219 (2), 2220 (1), 3000, 3101, 3117, 3118 (1), 3119 (2), 3127 (2), 3129, 3217 (2), 3219, 3227 (2), 3229, 3400, 4110 [W], 4117 (2), 4119, 4120 (2), 4127, 4129, 4227 [I], 4229 (4).

D.◆ Elective (3 hours)

◆◆ Any upper division course at the 3000 or 4000 level.

E. Computer Literacy

◆◆ This requirement is fulfilled by completing COMP 1200, NURS 3003, a course of study approved by the dean, or satisfactory score on the university-approved computer literacy examination.

Support Course Requirements

***Anatomy and Physiology** (8 hours): BIOL 1751/1752, 1761/1762

***Microbiology** (4 hours): MMCS 1451/1452

***Chemistry** (8 hours): See natural science requirement above.

Growth and Development: (3 hours): EDPR 2111.

Nutrition (3 hours): CSED 3202.

Statistics (3 hours): EDPR 4541 [C], PSYC 3001 [C], or SOCI 3311 [C], with a minimum grade of C.

All support courses must be completed with a minimum cumulative grade of C.

* Science courses must have a minimum grade point average of 2.4 and must have been completed in the past 7 years. Refer to Science Course Validation section below.

Nursing Course Requirements - Basic Students

Nursing (60 hours): NURS 2217, 2218 (1), 2219 (2), 2220 (1), 3000, 3101, 3117 (3), 3118 (1), 3119 (2), 3127 (2), 3129, 3217 (2), 3219, 3227 (2), 3229, 3400, 4110 [W], 4117 (2), 4119, 4120 (2), 4127, 4129, 4227 [I], 4229 (4).

Upper Division Elective (3 hours): Any 3000-4000 course.

Nursing Course Requirements - RN Students

Nursing (27 hours): NURS 3000, 3101, 3400, 4110, [W], 4120 (2), 4127, 4129, 4327 [I] (4), 4329.

Upper Division Elective (3 hours): Any 3000-4000 course.

The remaining hours for the major requirements are fulfilled by validation.

Under the Tennessee Career Mobility Plan registered nurses who have graduated from Tennessee schools or out-of-state NLN accredited programs will be able to progress to the baccalaureate degree in nursing without testing to verify previous nursing education. Registered nurses articulating to the baccalaureate level may be awarded or transfer in nursing credits equivalent to approximately one year of nursing courses. For this to occur, a grade of C or better must have been earned in

previous nursing course work. Nursing credits transferred or awarded will be held in escrow. These credits will be placed on individual transcripts only after students have successfully completed 15 hours of nursing courses with a C or better in The Loewenberg School of Nursing. Non nursing credits are transferred according to university policies. Testing will be required for graduates of non NLN accredited programs or for students who have not been in active clinical practice in the past three years.

The following represent typical schedule plans for basic and RN students.

BASIC STUDENTS

FRESHMAN YEAR

ENGL 1101 3 ENGL 1102 3
 BIOL 1751/1752 4 BIOL 1761/1762 4
 CHEM 1101 4 CHEM 1102 4
 HMSE 1100 2 MATH 3
¹Social Science 3 ¹Fine Arts Heritage 3
 16 17

SOPHOMORE YEAR

ENGL 2201 or 2202 3 NURS 3400 3
 MMCS 1451/1452 4 NURS 3101 3
 EDPR 2111 3 NURS 2217 3
 CSED 3202 3 NURS 2218 1
 COMM 2381 3 NURS 2219 2
 Physical Activity 2 NURS 3000 3
 NURS 2220 1
 18 16

JUNIOR YEAR

NURS 3117 3 NURS 3217 2
 NURS 3118 1 NURS 3219 3
 NURS 3119 2 NURS 3227 2
 NURS 3127 2 NURS 3229 3
 NURS 3129 3 ¹Hist/Phil Heritage 3
¹Social Science 3 ¹American Heritage 3
¹American Heritage 3
 17 16

SENIOR YEAR

²Statistics 3 NURS 4110 [W] 3
 NURS 4117 2 NURS 4227 3
 NURS 4119 3 NURS 4229 4
 NURS 4127 3 NURS 4120 2
 NURS 4129 3 ¹Hist/Phil Heritage 3
 Elective 3
 17 15

¹ Refer to B.S.N. University General Education Program requirements for approved courses.

² Take one of the following: EDPR 4541 [C], PSYC 3001 [C], SOCI 3311 [C].

NOTE: PROGRESSION OF NURSING COURSEWORK: All courses in group A must be completed before enrolling in any courses in group B. All courses in group B must be completed before enrolling in any courses in group C.

- A. Professional Foundation Courses: NURS 3101, 2217, 2218, 2219, 2220, 3400, 3000.
- B. ♦ Provider of Care Courses: NURS 3117, 3118, 3119, 3127, 3129, 3217, 3219, 3227, 3229.
- C. Coordinator of Care Courses: NURS 4117, 4119, 4127, 4129, 4227, 4228, 4327, 4329, 4110, 4120.

RN (Upper Division Requirements)

SENIOR YEAR

NURS 3000 3 NURS 4110 [W] 3
 NURS 3101 3 NURS 4120 2
 NURS 3400 3 NURS 4327 4
 NURS 4127 3 NURS 4329 3
 NURS 4129 3 Elective 3
 *Statistics 3
 18 15

♦* ♦ Take one of the following: EDPR 4541 [C], PSYC 3001 [C], or SOCI 3311 [C].

Science Course Validation: If seven years have lapsed since credit was earned in BIOL 1751/1752 and 1761/1762 (Anatomy and Physiology), MMCS 1451/1452 (Microbiology), or CHEM 1101 and 1102, or CHEM 1121/1131 and 1122/ 1132, the content is considered outdated, and students are required to either repeat the course(s) or validate currency of knowledge. Registered nurses may validate currency of knowledge by submitting evidence of recent clinical practice. If not currently employed as a RN, validation of current knowledge may be accomplished by taking a higher level course in the same field or by examination. The NLN tests in Anatomy and Physiology, Chemistry and Microbiology are used for this purpose. A score at the fiftieth percentile or above is required. Registered nurses are required to submit evidence of recent clinical practice to validate currency of knowledge.

Progression in the Nursing Major:

1. ♦ A nursing course may only be entered twice.
2. ♦ A grade of ♦C♦ or better must be earned in each nursing course to progress. Failure to earn a grade of ♦C♦ will require repeating the course before attempting other nursing courses.
3. ♦ When the theory or clinical component of any course sequence must be repeated, the companion course must also be repeated even though a satisfactory grade has been earned.
4. ♦ Irregular progression students who are out of clinical nursing course work for longer than three months will be reviewed by the Student Progression Committee.

The Committee may require testing or the repetition of courses in ♦ which satisfactory grades have been earned.

Disqualification from the Nursing Major:

1. ♦ Failure to earn a grade of ♦ ♦C♦ or better when repeating a nursing course for a grade of less than a ♦ ♦C♦.
2. ♦ Failure to earn a satisfactory grade in a clinical course when repeating the course for an unsatisfactory grade.
3. ♦ Failure to earn a ♦ ♦C♦ or ♦ ♦S♦ or better in two nursing courses.
4. ♦ Professional/academic misconduct or dishonesty.
5. ♦ Falsification of any academic/medical/ nursing record or misrepresentation of nursing care or credential.
6. ♦ Clinical practice that willfully places patients in physical or emotional jeopardy.
7. ♦ Clinical practice while under the influence of alcohol or illegal substance.

Clinical Nursing Course Requirements: Before enrolling in a clinical nursing course, students must present evidence of current CPR certification, professional liability insurance (\$1,000,000 per occurrence/\$3,000,000 aggregate minimum coverage), appropriate immunizations and titers, and a statement of good health, including a negative PPD skin test or chest x-ray. Immunizations and titers include DT, measles, mumps, polio, Hepatitis B; Rubella vaccine or titer showing immunity; varicella titer. The basic nursing student will pay for malpractice insurance at fee payment. RN students must purchase their own insurance and present evidence prior to enrolling in clinical nursing courses. RN students are also required to present evidence of current licensure in Tennessee.

Students are encouraged to complete these requirements during the semester prior to anticipated enrollment. No student will be allowed to participate in clinical learning experiences until these requirements are satisfied.

Credit By Exam: Credit for some of the upper division nursing courses may be earned through credit by examination. Other methods of earning credit are explained in detail in the Academic Regulations section of this catalog.

RN Licensure: Upon graduation from the program, graduates are eligible to take the NCLEX examination for licensure at testing sites determined by the Tennessee Board of Nursing.

Student Organizations: Students are encouraged to join their professional organization, Student Nurses ♦ Association. This is the local chapter of the National Student Nurses ♦ Association.

Senior students who have achieved a 3.0 cumulative grade point average and who are recommended by faculty are eligible to apply for induction into Sigma Theta Tau, Beta Theta Chapter at Large of the international nursing honor society.

[Last Updated: 6/12/15](#)

2. Minimum overall GPA of 2.00
3. Minimum GPA of 2.25 on most recent 12 semester hours preceding application
4. Meeting admission requirements as printed in advising guidelines for specific areas

Committee Admission

◆ Applications not meeting criterion (2) or (3) or (4) above may be reviewed for admission by the Admission Committee.

◆ Inquiries from persons considering a degree through University College are welcome; persons who believe that their interests will be best served by a baccalaureate program emphasizing personally designed education through contract degrees should attend an inquiry session. Information about dates and times for these sessions, which are held several times a month, may be obtained by calling the University College office. When the University College application is submitted, a \$40.00 fee must be paid. This fee includes a \$15.00 non-refundable screening fee plus a \$25.00 contract/advising fee, refundable if the application is not accepted. Applications are reviewed by University College staff and, if appropriate, by selected faculty. After acceptance, students are advised in the development of their programs and instructed in a final special project by a faculty chairperson or a contract/advising committee chaired by a faculty member.

BACCALAUREATE PROGRAMS

The Contract Degree

◆ Students enrolling in the University College pursue either of two degrees: the Bachelor of Liberal Studies (B.L.S.) or the Bachelor of Professional Studies (B.P.S.). Both of these degrees must be awarded for programs that are systematic, interdisciplinary, and individualized. Students and advisors will use learning contracts to design individual studies.

All contracts will be reviewed and approved by the administration of the University College. A Contract/Advising Committee will assist the student in the development and execution of a degree program that serves the student's needs and meets the academic requirements of the University College and of The University of Memphis. The chairperson and one other committee member must be regular or adjunct members of The University of Memphis faculty. A third committee member is optional; this person may be a faculty member, an appropriate student, or an off-campus resource person. The committee may direct the student in the preparation of a portfolio to obtain credit for knowledge gained through experience or nontraditional instruction; see Expenses and Aid for a description of credit evaluation fees. The Baccalaureate Contract will include work in these major areas: General Education, Coordinated Study, Thematic Studies, Special Project, and Electives.

Thematic Studies

◆ Thematic Studies cross departmental and disciplinary lines to examine a theme, problem, issue, or epoch from several points of view. As upper-division courses, they are designed to provide ways for undergraduates to integrate the full scope of their studies more effectively than they are able to do within the traditional departmental structure. Thematic Studies do, however, require the special knowledge and expertise learned from and fostered by the traditional disciplines. All students will complete a minimum of six semester hours of thematic studies courses.

Coordinated Study

◆ The Individualized Study component of the program includes a Coordinated Study Program of at least 30 to 36 upper-division hours in at least two academic disciplines followed by the Special Project described below. Credit may be earned through courses offered by departments in the other degree-granting colleges, credit by examination, credit for experiential learning, transfer credit, internships or apprenticeships, independent studies, and additional Thematic Studies courses. *For a University College student, the Coordinated Study Program corresponds to a departmental major.* Students must earn a C (2.0) or above in each graded course and a minimum 2.25 GPA overall in the Coordinated Study. All Coordinated Study programs must include a minimum of nine graded upper division hours taken at The University of Memphis. These hours must be earned in courses from two or more departments. A maximum of 33 hours for portfolio-based credit for experiential learning may be applied toward a degree. This learning must be related to the Coordinated Study.

The Special Project

◆ The Special Project will be designed as a synthesizing activity, interdisciplinary in nature, by which the student demonstrates in a sustained manner comprehension and command of the complex skills and understanding encompassed by the Coordinated Study program. A faculty advisor/ chairperson supervises the student's work on the project. The Special Project carries 3 or 6 semester hours credit and is preceded by the project planning seminar or an equivalent 3 credit course. Students must earn at least a grade of C (2.0) on their Special Projects. Projects must also receive administrative approval before students are certified for graduation.

Electives

◆ Students are not required to take electives. They may include courses in any subject area as electives in their degree program.

Computer Literacy

◆ This requirement is fulfilled by completing any course approved for satisfaction of the computer literacy requirement, a satisfactory score on the University-approved computer literacy examination, or a course of study approved by the dean.

Evaluation

◆ The following methods are used to evaluate a student's performance: the traditional grading systems, Satisfactory/ Unsatisfactory and Credit/No Credit options supplemented by written narrative evaluations, credit or placement by examination, Advanced Placement examinations, and credit for validated learning from experience or non-traditional instruction. Of the 132 semester hours required for graduation, at least 33 of the last 66 hours must be earned through credit earned at The University of Memphis.

Honors

◆ Students in University College may earn Honors distinction by fulfilling requirements for the Interdisciplinary Liberal Arts Honors Program or the Individual Thematic Honors Program. Both of these programs require 18 hours of upper division course work, some of which may count toward the Bachelor of Liberal Studies, Bachelor of Professional Studies, or general education requirements, and some of which may be part of the student's elective hours.

- JDST 4661 Sacred Hebrew Texts (3)
- JDST 4671 Jewish Literary Texts (3)
- Israel (Choose one or two)
- JDST 4820 Zionism (3)
- JDST 4830 Israel: Antiquity in Modernity (3)
- JDST 4840 Israel: Antiquity in Modernity (3)
- With the permission of the Director of Bornblum Judaic Studies, students may substitute the following courses for two courses listed under C, or they may be used as part of the electives listed below.
- JDST 4750-4799 Topics (3) Special
- JDST 4990 Independent Study (3)

D. INTERDISCIPLINARY ELECTIVES (9 Hours)

- ANTH 4253 Anthropology of Religion (3)
- ART 4121 Ancient Art of the Near East (3)
- HIST 4272 Modern Middle East (3)
- HIST 4320 Ancient Near East (3)
- PHIL 3701 The Human and the Divine (3)
- PHIL 4711 Philosophy of Religion (3)
- (Prerequisite: PHIL 1101 or 1102, or permission of instructor)
- POLS 3102 Religion and Politics (3)
- SOCI 3860 Sociology of Religion (3)

F. THEMATIC STUDIES (6 Hours)

- UNIV 35xx Thematic Studies (3,6)
- UNIV 45xx Advanced Thematic Studies (3,6)
- It is recommended that two of the following courses be taken to complete the Thematic Studies requirement:
- UNIV 3850 Hebrew and Greek Legacy (3)
- UNIV 3581 Faith, Reason, and Imagination (3)
- JDST 4511 Holocaust Studies (3)

G. Special Project (6 or 9 Hours)

- UNIV 4990 Project Planning Seminar (3)
- UNIV 4995 Special Project (3,6)

African American Studies

African American Studies re-examines history, society and the arts from a different perspective, giving recognition to the achievements of African Americans and directing scholarship toward the totality of the African American experience. In addition, it offers all students an intellectual framework for discerning and dealing with racism; informs and awakens all students to the cultural heritage of African Americans to promote improved self-understanding regardless of race; and provides African American students with positive models of leadership, personal development and social commitment. Students may individualize a concentration in African-American studies using as core the African-American Studies minor presented in the section of this catalog describing the College of Arts and Sciences.

American Studies

American Studies engages students in an examination of the culture and society of the United States, with attention paid to the ways in which Americans express their basic values and give meaning to their institutions and everyday social practices. These values, institutions, and practices are a reflection, in part, of the different experiences of a people, according to their race, gender, class, and historical roots. These guidelines provide students and faculty the opportunity to explore the commonalities and differences among Americans through an interdisciplinary course of study.

Religion in Society

These guidelines are designed to serve persons who are interested in the study of religion and who want to work within some type of religious organization. They offer an historical understanding of the place of religion in society as well as an understanding of the social and individual dimensions of religious experience. They also offer an opportunity to study various religious belief systems from an academic perspective. Persons who want to serve in religious organizations may use these guidelines to gain practical skills. Graduates may enter graduate study in religion and receive further preparation for careers in religious organizations, as leaders, administrators, directors of education, counselors, teachers, social workers, or youth directors.

Women's Studies

Women's Studies at The University of Memphis is an interdisciplinary academic field encompassing women's history, work, literature, roles, and status in diverse classes, cultures, and societies. Focusing on the study of gender across the curriculum, Women's Studies reexamines and provides a critical context for the basic assumptions and theories on which traditional academic disciplines rest. Students may individualize a concentration in Women's Studies, using as a core the Women's Studies minor presented in the section of this catalog describing the College of Arts and Sciences.

Bachelor of Professional Studies

Alcohol and Drug Abuse Services

◆ Students in Alcohol and Drug Abuse Services will develop concentrations in either Social and Public Services or Administrative Services. All will take a core of courses in alcohol and drug abuse, social, and administrative services, and will complete their contracts by taking courses relevant to their concentrations. All students must have on-the-job experience, evaluated through internships or portfolio assessment, or both.

Aviation Administration

◆ Students in Aviation Administration study in one of these three areas: General Administration and Management, Computer Systems, or Electronic Systems. In addition, thirty-four semester hours of academic credit are available for completion of three categories of FAA journeyman level instruction: Airport Traffic Control Tower, Air Route Control Center, and Flight Service Station. Credit by individual course is granted for Airways Facilities Journeyman and for instruction in all four categories beyond the journeyman level.

Biomedical Illustration

◆ Students in Biomedical Illustration will take a common core of courses in art, photography, chemistry, and the life sciences. In addition to courses in biomedical illustration and biomedical photography, students will take appropriate courses in cinema, video, computer applications, and graphics. Students in Biomedical Illustration will complete internships in at least one setting in the Memphis area.

Commercial Aviation

◆ Students in Commercial Aviation will study General Administration or develop contracts in areas of interest such as aviation and climatology and technological or computer systems. A student must hold private pilot license or other FAA ratings to be considered for admission. Academic credit is awarded for FAA ratings for Commercial Pilot, Instrument Rating, Multi-Engine Rating, and other ratings. Students are required to earn a minimum number of FAA ratings.

Construction Management Services

◆ These guidelines are designed for persons wishing to increase professional skills with the construction industry. In addition to enhancing their technical knowledge and understanding, such persons will also wish to increase their skills in management, organizational relations, and communication, add to their knowledge of political and economic contexts within which the management construction fits, and enhance their ability to manage diversity and respond appropriately to workplace dynamics.

Fire Administration and Fire Prevention Technology

◆ University College is the regional center for the Degrees at a Distance Open Learning Fire Service (OLFS), serving fire service personnel in Alabama, Arkansas, Kentucky, Louisiana, Mississippi, South Carolina, and Tennessee. OLFS is a degree completion program, offering upper division courses in Fire Administration and Fire Prevention Technology. These courses are designed for independent study. Freshman and sophomore courses, electives, and other courses related to the fire service are taken at a college near the student's residence. Students completing the AAS in Fire Science at State Technical Institute at Memphis may transfer directly into this program. Additional articulation agreements exist with other two-year fire science programs in the region.

CORE COURSES

POLS ◆◆◆◆◆◆◆◆ 3613◆◆◆◆ Advanced Fire Administration
 TECH◆◆◆◆◆◆◆◆ 3940◆◆◆◆ Analytic Approaches to Public Fire Protection [C]
 POLS ◆◆◆◆◆◆◆◆ 3612◆◆◆◆ Fire Prevention Organization and Management
 POLS ◆◆◆◆◆◆◆◆ 3614◆◆◆◆ Political and Legal Foundations of Fire Protection [W]
 TECH◆◆◆◆◆◆◆◆ 3944◆◆◆◆ Fire Protection Structure and Systems Design
 TECH◆◆◆◆◆◆◆◆ 3947◆◆◆◆ Applications of Fire Research
 TECH◆◆◆◆◆◆◆◆ 3948◆◆◆◆ Managerial Issues in Hazardous Materials

FIRE ADMINISTRATION CONCENTRATION

POLS ◆◆◆◆◆◆◆◆ 3610◆◆◆◆ Personnel Management for the Fire Service
 POLS ◆◆◆◆◆◆◆◆ 3611◆◆◆◆ Disaster and Fire Defense Planning
 POLS ◆◆◆◆◆◆◆◆ 3615◆◆◆◆ The Community and the Fire Threat

FIRE PREVENTION TECHNOLOGY CONCENTRATION

TECH◆◆◆◆◆◆◆◆ 3942◆◆◆◆ Fire Related Human Factors
 TECH◆◆◆◆◆◆◆◆ 3945◆◆◆◆ Incendiary Fire Analysis and

INVESTIGATION

TECH◆◆◆◆◆◆◆◆ 3946◆◆◆◆ Fire Dynamics

Health Services Administration

◆ Students following guidelines for Health Services Administration will be experienced health care professionals who have completed non-baccalaureate programs in health care specialties such as medical laboratory technology, respiratory therapy, radiological technology, and nursing, and who want to become administrators in health care settings. They will build upon their training and experience by taking courses in such areas as business practice, administration, interpersonal skills, policy, risk management, social context of health care, and financial management. Transfer credits for their health care

(3)
 JDST 4830 Israel: Ancient and Modern (3) Politics of Israel (3)

D. General Electives (6 hours)

- POLS 3102 Religion and Society (3)
 - UNIV 3580 Hebrew and Greek Legacy (3)
 - SOCI 3860 Sociology of Religion (3)
 - ENGL 4461 Bible as Literature (3)
 - PHIL 4711 Philosophy of Religion (3)
 - ART 4121 Ancient Art of the Near East (3)
- With the permission of the Director of Bornblum Judaic Studies, students may substitute up to two courses in any category listed above. Such courses will have substantial Judaic Studies content.

Study in Israel

Students may earn up to 9 hours toward a minor in Judaic Studies through study abroad programs with Israeli Universities. Contact the Director of Bornblum Judaic Studies for details.

Nonprofit Management

The University College offers an interdisciplinary minor in Nonprofit Management which includes courses that offer competencies necessary for work in nonprofit organizations. The minor is open to students majoring in any department in the University or to special students who wish to enroll in order to take such a program.

Students who complete this minor and specified co-curricular activities will be eligible for certification in Nonprofit Management and Leadership by American Humanics.

The Minor: 24 semester hours of required courses and electives.

1. Nonprofit Management and Program Planning (6 hours):

- POLS 4226 Introduction to Nonprofit Organizations
- ANTH 4412 Neighborhood Development and Poverty

2. Accounting and Financial Management (3 hours):

- ACCT 2010 Fundamental of Accounting I, ACCT 2020 Fundamentals of Accounting II, or ACCT 3010 Managerial Accounting

3. Human Resource Development and Supervision (3 hours):

- POLS 3601 Public Administration; MGMT 3110 Organization and Management or MGMT 3215 Management of Human Resources

4. Communication Skills (3 hours):

- COMM 4342 Small Group Communication, COUN 4621 Human Interactions or MGMT 4420 Organizational Behavior in Business

5. Marketing and Public Relations (3 hours):

- JOUR 3400 Introduction to Public Relations or MKGT 3010 Principles of Marketing

6. Youth and Adult Development (3 hours):

- PSYC 3103 Child Psychology, PSYC 3104 Adult Psychology
- EDPR 2111 Development Across the Life Span
- CSED 3302/EDUC 3302 Child and Adolescent Development
- EDSV 3350 The Adult Learner, SOCI 4541 Sociology of Aging
- SOCI 4923 Social Institutions and the Life Cycle, or SWRK 3902 Human Development and Social Interaction

7. Nonprofit Organizations (3 hours):

- UNIV 4110 Internship

Religion In Society

The University College offers an interdisciplinary minor in Religion in Society. This minor examines the role of religion in society as seen from the perspectives of culture and social organization; of history and philosophy; of art and music. The minor is open to students majoring in any area in any of the undergraduate colleges or to special students who wish to enroll in order to take such a program.

The Minor: 18 semester hours of core courses and electives.

A. Required Core Courses:

- PHIL 3701 The Human and the Divine
- ANTH 4253 Anthropology of Religion
- UNIV 2850 Religions of Abraham: Judaism, Christianity, Islam

B. Additional Courses (select one course each from any three of the following four groups of courses):

Group 1

- ANTH 3351 Archaeology of Europe and Asia
- JDST 3201 Jewish Heritage I
- JDST 3202 Jewish Heritage II
- JDST 4511 Holocaust Studies
- SOCI 3860 Sociology of Religion
- POLS 3102 Religion and Politics

Group 2

- JDST 3801 Jewish Thought I
- JDST 3802 Jewish Thought II
- PHIL 3411 Contemporary Moral Problems

PHIL 3511 Ethics
PHIL 3721 Oriental Philosophy
PHIL 4711 Philosophy of Religion
UNIV 3581 Faith, Reason, and Imagination

Group 3

HIST 3272 Islamic Civilization
HIST 3274 Modern Islamic World
HIST 3275 History of Jewish People
HIST 3290 Traditional Asia
HIST 4361 History of the Byzantine Empire
HIST 4371 Early Middle Ages
HIST 4372 High Middle Ages
HIST 4390 Europe in the Age of Reformation
HIST 4882 Civil Rights Movement in the U.S. Since 1930

Group 4

ART 4130 Art of the Medieval World
ART 4143 Art of the High Renaissance in Italy [W]
ART 4181 Traditional Arts of Africa, Oceania, and North America
ENGL 4461 Bible as Literature
CLAS 2481 Mythology
JDST 4661 Sacred Hebrew Texts
MUSA 4104 Sacred Music in History & Practice I
MUSA4105 Sacred Music in History & Practice II
UNIV 3580 Hebrew and Greek Legacy

[Last Updated: 6/12/15](#)

Independent Departments and Programs

◆ There are several independent units that contribute to undergraduate programs. The independent departments or programs included here are Transitional Academic Studies and University Honors Program.

THE NATIONAL STUDENT EXCHANGE: The University of Memphis is a member of the National Student Exchange (NSE). Students at NSE member institutions may spend a semester or up to a full year at other participating institutions, while paying tuition and fees typically comparable to costs of attending The University of Memphis. Students might exchange to experience a different part of the country or to pursue special academic opportunities offered by other member institutions. Over 130 member institutions in nearly every state and Puerto Rico and the Virgin Islands have exchanged over 40,000 students since the program was established in 1968.

Participating students must have a 2.5 grade point average at the time of application for an NSE exchange. Applications are screened by The University of Memphis and will include biographical essays, transcripts, and letters of reference from faculty. Institutions to which students are applying then select incoming exchange students based on how many students they are able to accept and the strength of the students' applications. Ninety-seven percent of students are placed at their first, second, or third choice exchange institutions; 84% are placed at their first choice institution.

For more information and applications see the NSE coordinator in the University Honors Program office.

TRANSITIONAL ACADEMIC STUDIES

SUSAN MAGUN-JACKSON, Ph.D., *Director*
Room 203, Administration Building, (901) 678-2028
<http://www.people.memphis.edu/~dstudies>

◆◆◆◆◆ The Transitional Academic Studies Program at The University of Memphis permits students to enroll in special remedial/developmental level courses to develop the academic competencies necessary for success in college level courses. Major components of the program include testing and placement in appropriate level courses.

ADMISSION TO THE PROGRAM (PLACEMENT)

◆ Students admitted to The University of Memphis as beginning freshmen may be required to take various placement tests to determine if they have the appropriate academic skills to successfully complete college level courses. Depending on the results of these tests, students may be required to take one or more Transitional Academic Studies courses. The following regulations regarding placement tests and course enrollment will apply:

◆ First-time freshmen admitted with an ACT composite score less than 19 (SAT total score less than 890), an ACT mathematics subscore less than 19 (SAT quantitative score less than 450), an ACT English subscore less than 19 (SAT verbal score less than 460), or no ACT (SAT) score, are required to take appropriate components of the AAPP course placement test as a condition of enrollment, and to enroll in the courses indicated by the test results.

An advisor in the Academic Counseling Unit or the Transitional Academic Studies Office should be consulted regarding the test scores and placement.

◆ Testing is also required of students whose ACT (SAT) scores are more than 3 years old, transfer students with fewer than 60 semester hours and no college level credit in math or English, non-degree seeking students before enrollment in math or English, students with high school unit deficiencies in algebra or English, and students with GED scores.

Students placing in Transitional Academic Studies courses must enroll in and begin each subject-area sequence at the level indicated by the test results and complete that particular sequence before enrolling in the subsequent Level I (college level) course.

◆ Enrollment in any Transitional Academic Studies (TRAC prefix) course is restricted to students who have taken the appropriate AAPP test. Self-placement without testing is not permitted.

RETESTING

◆ Approval for retesting will be made only in extenuating circumstances and at the discretion of the Transitional Academic Studies Program Director. Retesting must take place prior to university enrollment, but not within 90 days of initial testing.

CREDIT

◆ Each Transitional Academic Studies course carries 3 semester hours of non-degree level credit.

The credit will count in the calculation of full-time status and the undergraduate joint (UJ) grade point average, and toward eligibility for athletics, financial aid, scholarships, and housing.

FEES

◆ Fees for Transitional Academic Studies courses are the same as those for college level courses.

ACADEMIC ADVISING

◆ Students requiring Transitional Academic Studies testing or courses should be advised in the Academic Counseling Unit, Room 107, Scates Hall.

COURSE GRADES AND CLASS ATTENDANCE

◆ The grading scale for Transitional Academic Studies courses is A, B, C, F. No audit students will be permitted. Regular class attendance is mandatory and will be used in determining semester grades.

TWO-ATTEMPT RULE

◆ A student who fails after two attempts to complete a Transitional Academic Studies course with a grade of C or better will be suspended from

the University for one regular semester (spring or fall). Drops, withdrawals, and F grades count as unsuccessful attempts.

Students who believe that extenuating circumstances justify a third attempt without suspension should contact the Transitional Academic Studies Office regarding the appeals process. In the case of an appeal the burden of proof for any extenuating circumstances will rest with the student. Other matters which will be taken into consideration in an appeal include current grade point average, class attendance, instructor recommendation, performance in other Transitional Academic Studies courses, and recommendations of student support services staff. Students failing to meet exit criteria after the third attempt will be suspended from the university.

ADD/DROP AND WITHDRAWAL

All students in Transitional Academic Studies courses wishing to drop a course or withdraw from the university after the end of the registration period must make an application to the Program Director within the normal university deadlines as stated in the Semester Calendar. Approval for course add/drops or withdrawals will be made at the discretion of the Transitional Academic Studies Program Director.

[Last Updated: 6/12/15](#)