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BULLETIN

MEMPHIS
STATE
UNIVERSITY

Undergraduate Issue
1975-76

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Bulletin of Memphis State University

Vol. LXIV, Number 1

February, 1975

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The validity date for degree requirements is summer, 1982.

The University reserves the right to cancel or alter any part of this Bulletin without notice.

BULLETIN OF
MEMPHIS STATE UNIVERSITY

*The Sixty-fourth session will open
August 28, 1975*

Billy M. Jones, Ph.D., *President*
J. Millard Smith, M.A., *President Emeritus*
Cecil C. Humphreys, Ph.D., *President Emeritus*

U N D E R G R A D U A T E I S S U E 1 9 7 5 - 7 6

MEMPHIS, TENNESSEE

FEBRUARY, 1975

Memphis State is an equal opportunity University

Directory for Correspondence

Inquiries will receive attention if addressed to the administrative offices below at Memphis State University, Memphis, Tennessee 38152.

Admission	Dean of Admissions and Records (454-2101)
Alumni Affairs	Director of Alumni Affairs
Degree Requirements	Dean of the college in which the degree is offered
Entrance Examination	Dean of Admissions and Records
Evaluation of Credits	Dean of Admissions and Records
Institutes and Conferences	Vice President, Public Service and Continuing Education
Off-Campus Courses	Vice President, Public Service and Continuing Education
Financial and Business Affairs	Director of Finance
Graduate Studies	Dean of The Graduate School
Housing	Director of University Housing
Pre-Professional Curricula	Dean of the college in which the curriculum is offered
Publications	Office of Public Relations
Registration	Dean of Admissions and Records
Scholarships and Loans	Director of Student Aid
Transcripts	Dean of Admissions and Records
University Press	Director of Press
Veterans' Affairs	Coordinator of Veterans' Affairs
President of the University Johnson Hall (901) 454-2234	Dean of Admissions and Records Administration Building (901) 454-2101

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Calendar

FALL SEMESTER 1975

August 28, Thursday	Meeting of the new members of the University faculty, University Center Ballroom, 9 a.m.
August 29, Friday	Meeting of the entire University faculty, University Center Ballroom, 9 a.m.
August 29, Friday	Meeting of the University faculty by colleges and departments.
August 30, Saturday	Registration, The Graduate School
September 1, Monday	Holiday: Labor Day
September 2, Tuesday <i>through</i>	Registration Week. For detailed dates and times, see the <i>Bulletin</i> (Schedule of Classes) for the Fall Semester, 1975.
September 4, Thursday	
September 5, Friday	Classes meet as scheduled.
September 11, Thursday	Last day for adding courses.
September 30, Tuesday	Last day for removing summer session "Incomplete" grades.
October 3, Friday	Holiday: West Tennessee Education Association.
October 30, Thursday	Mid-Semester deficiency reports due in the Records Office.
November 18, Tuesday	Last day for dropping courses.
November 18, Tuesday	Last day to withdraw from the University.
November 26, Wednesday	Last day for making application to the dean of the appropriate undergraduate college for degrees to be conferred May, 1976.
November 27, Thursday <i>through</i>	Thanksgiving Recess
November 30, Sunday	
December 11, Thursday	Study Day
December 12, Friday	Final Examinations Begin
December 20, Saturday	Commencement

SPRING SEMESTER 1976

January 10, Saturday	Registration, The Graduate School
January 12, Monday <i>through</i>	Registration Week. For detailed dates and times, see the <i>Bulletin</i> (Schedule of Classes) for the Spring Semester, 1976.
January 14, Wednesday	
January 15, Thursday	Classes meet as scheduled.
January 21, Wednesday	Last day for adding courses.

February 3, Tuesday	Last day for removing Fall Semester "Incomplete" grades.
March 7, Sunday <i>through</i> March 14, Sunday	Spring Holidays
March 17, Wednesday	Mid-term deficiency reports due in the Records Office.
April 8, Thursday	Last day for dropping courses.
April 8, Thursday	Last day to withdraw from the University.
April 14, Wednesday	Last day to make application to the dean of the appropriate undergraduate college for degrees to be conferred August, 1976.
April 29, Thursday	Study Day
April 30, Friday	Final Examinations begin.
May 8, Saturday	Commencement

PRE-SUMMER SESSION 1976

May 10, Monday	Registration
May 11, Tuesday	Classes meet as scheduled
May 11, Tuesday	Last day for late registration
May 25, Tuesday	Last day to withdraw
May 28, Friday	Final examinations

SUMMER SESSIONS 1976

First Summer Term


May 31, Monday <i>through</i> June 1, Tuesday	Registration. For detailed dates and times, see the <i>Bulletin</i> (Schedule of Classes) for the Summer Session, 1976.
June 2, Wednesday	Classes meet as scheduled.
June 4, Friday	Last day for adding first term courses.
June 22, Tuesday	Last day for removing Spring Semester "Incomplete" grades.
July 1, Thursday	Last day for dropping first term courses.
July 1, Thursday	Last day to withdraw from the University (first term)
July 5, Monday	Holiday: Independence Day
July 8, Thursday	Final examinations begin for the first term

Second Summer Term

July 12, Monday	Course Adjustment Day
July 13, Tuesday	Classes meet as scheduled.
July 15, Thursday	Last day to add second term courses.
July 28, Wednesday	Last day for making application to the dean of the appropriate undergraduate college for degrees to be conferred December, 1976.
August 6, Friday	Last day for dropping second term courses.
August 6, Friday	Last day to withdraw from the University (second term)
August 13, Friday	Final examinations
August 14, Saturday	Commencement

Extended Summer Term

May 31, Monday <i>through</i> June 1, Tuesday	Registration. For detailed dates and times, see the <i>Bulletin</i> (Schedule of Classes) for the Summer Session, 1976.
June 2, Wednesday	Classes meet as scheduled.
June 4, Friday	Last day to add extended term courses.
June 22, Tuesday	Last day for removing spring semester "Incomplete" grades.
July 5, Monday	Holiday: Independence Day
July 8, Thursday <i>through</i> July 9, Friday	Mid-Term Break
July 12, Monday	Study day
July 22, Thursday	Last day to drop extended term courses.
July 22, Thursday	Last day to withdraw from the University. (extended term courses)
July 28, Wednesday	Last day for making application to the dean of the appropriate undergraduate college for degrees to be conferred December, 1976.
August 13, Friday	Final examinations
August 14, Saturday	Commencement



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Description of the University

Historical Statement

In 1909 The General Assembly of Tennessee enacted a General Education law which provided for the establishment and maintenance of three normal schools, one school to be located in each of the three grand divisions of the state. Memphis and Shelby County contributed \$350,000 and a site of approximately 80 acres near the eastern edge of the city. On September 15, 1912, West Tennessee State Normal School opened.

In 1925, the institution became a senior college, and the name was changed to West Tennessee State Teachers College. In 1941 the school's liberal arts curriculum was enlarged, and the name was changed to Memphis State College. The undergraduate program was reorganized into three schools in 1951, and a graduate school was added. On July 1, 1957, by action of the Tennessee legislature, the institution was designated Memphis State University.

Organization

Memphis State University is comprised of five undergraduate colleges, The School of Law, The Graduate School, and the Office of Public Service and Continuing Education. The undergraduate colleges are The College of Arts and Sciences, The College of Business Administration, The College of Education, The Herff College of Engineering, and The University College. There are six special programs: AFROTC, Audiology and Speech Pathology, City and Regional Planning, International Studies, Nursing, and Urban Studies. The Office of Public Service and Continuing Education coordinates off-campus degree credit courses in metropolitan Memphis and regional centers; CEU (Continuing Education Unit) credit through conferences, institutes, short courses, etc.; and non-credit courses designed to provide increased opportunities for the people of this area to avail themselves of University facilities and services.

Goals of the University

The primary purpose of Memphis State University is to advance learning. The University is dedicated first to the traditional ideals of learning by focusing its attention and efforts upon the creation, transmission, and application of knowledge. Secondly, it is committed to goals that are utilitarian in (1) preparing students to serve in a variety of professions and occupations, and in (2) providing services to society for improving the quality of

life and environment. Through instruction, research, and public service, the University proffers a diversity of learning opportunities for the pursuit of knowledge and truth in an atmosphere of free inquiry and open discussion. A community of learning, the University exists to nurture students in achieving intellectual competence, maturity, and self-development.

Memphis State University recognizes its responsibility to meet the needs of a changing social and economic order. The University missions are primarily met through programs and activities of undergraduate education, graduate education, continuing education, and of research and public service. The undergraduate program offers a variety of experiences that are both liberal and specialized in character. Graduate education provides further opportunities in the professions, the arts, and the sciences. Continuing education serves the educational interests and needs of the community by promoting programs which complement the courses of study offered by degree-granting colleges. Research and service activities — contributing to the vitality of sound instruction and learning — not only advance knowledge but also apply knowledge to the improvement of life and the environment. These programs and activities are not mutually exclusive. Each contributes to the basic purpose of the University — to promote learning.

Memphis State University is dedicated to these purposes:

1. Providing opportunities for its students to experience an education which is both liberal and specialized in character.
2. Preparing its students to serve in a variety of professions and occupations upon which society depends.
3. Developing graduates whose accomplishments attest to their intellectual discipline, curiosity, maturity, and professional competence.
4. Encouraging scholarly research and creative effort designed to advance the frontiers of knowledge and to enrich the cultural dimensions of society.
5. Providing services which bring knowledge to focus on societal problems, with particular emphasis on urban needs, for the purpose of improving the quality of life and environment.
6. Maintaining facilities and an atmosphere conducive to learning and the advancement of knowledge.

Accreditation and Institutional Membership

The University is fully accredited by the Southern Association of Colleges and Schools and is a member of the Association of American Colleges, the Tennessee College Association, the American Association of Colleges for Teacher Education, the American Council on Education, and the National Collegiate Athletic Association. The various colleges, schools and departments are accredited by or are members of the following:

- American Association of Collegiate Schools of Business
- American Association of State Colleges and Universities
- American Association of University Women
- American Bar Association
- American Chemical Society
- American College and University Concert Managers
- American Council on Education for Journalism
- American Psychological Association
- American Speech and Hearing Association
- Association of University Evening Colleges
- Board of Law Examiners of Tennessee
- Council on Social Work Education
- Engineers' Council for Professional Development
- National Association of Schools of Music
- National Association of Summer Sessions
- National Commission on Accrediting
- National Council for Accreditation of Teacher Education
- National League of Nursing
- National Opera Association
- Oak Ridge Associated Universities
- Southern Universities Student Government Association
- Tennessee Board of Nursing
- Tennessee Education Association

Governing Body

The governance, management and control of Memphis State University is vested in the State Board of Regents. The sixteen member Board includes four *ex officio* members: the Governor, the Commissioner of Education, the Executive Director of the Tennessee Higher Education Commission, and the Commissioner of Agriculture. Twelve public members are appointed by the Governor: one member is selected from each congressional district and four members are selected at large from different geographical areas of the state.

Memphis State University is the largest of the institutions of higher education under the direction of the Board of Regents. The other institutions with baccalaureate and graduate programs are Austin Peay State University at Clarksville; East Tennessee State University at Johnson City; Middle Tennessee State University at Murfreesboro; Tennessee State University at Nashville; and Tennessee Technological University at Cookeville.

Memphis State University Foundation

The Memphis State University Foundation, a private, non-profit general welfare corporation, was established in 1964 to promote and support the academic program of the University. It is administered by a Board of Trustees, which may have 100 members, and is composed of eminent community leaders.

Contributions, gifts, and bequests are solicited by the Foundation for the advancement of Memphis State University as an institution of excellence. The funds of the Foundation are expended for student scholarship, departmental projects, research, visiting distinguished professors, faculty salary supplements, visiting lecturers, library and art acquisitions, and similar purposes. Contributions to the Foundation, a tax-exempt organization, are deductible for income tax purposes.

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Admission to the University

Admission To The University

Memphis State University offers equal educational opportunity to all persons without regard to race, sex, creed, color or national origin. Inquiries about admission to any college of the University should be addressed to the Office of Admissions. This office receives and processes all applications, evaluates credentials, and issues notices of acceptance to qualified applicants. Graduate and undergraduate students may enter at the beginning of either of the regular semesters or at the beginning of the three terms of the summer session. Nursing and law students may enter only at the beginning of the fall semester.

Certain instructional programs of the University are subject to special admissions requirements which are in addition to the general admissions requirements. These programs, which are indicated below, necessitate special admissions requirements and are subject to change due to the availability of institutional resources. Students wishing to enter one of these programs of study should check with the appropriate department or division offering the program in order to become familiar with these special requirements.

Students interested in professional degrees in art, music, or theatre (Bachelor of Fine Arts or Bachelor of Music) should confer with the appropriate department chairman about requirements concerning auditions, interviews, and submission of portfolios. There are also special requirements for admission to the program for teacher certification and to the new University College.

Concurrent Enrollment

Outstanding high school students who have completed the junior year may be admitted and register for one college course per term of enrollment concurrently during their senior year provided the following criteria are met:

1. The applicant must be at least 16 years of age before the end of the calendar year in which the applicant desires to enroll.
2. A minimum high school cumulative grade point average of 3.00 on a 4.00 scale.
3. An above average score on the examination administered by the American College Testing Program.
4. A recommendation from the applicant's high school principal or guidance counselor.
5. Any other admission criteria established by the department which offers the course selected by the applicant.

Admission of Freshmen

An applicant may qualify for admission as a freshman by meeting the following requirements:

1. High School Graduation
 - a. By a transcript of credits showing graduation from an approved or an accredited high school based on a four-year course of study. Graduates of an unapproved or non-accredited high school must earn the minimum unconditional score on the A.C.T. examination. In addition to meeting all other requirements listed in this section, graduates of high schools outside of Tennessee must rank in the upper one-half of their graduating class or reside within a 150 mile radius of the University to be eligible for admission. Exceptions may be made only if the student has above average entrance examination scores and there are other factors which indicate that the applicant will be capable of doing satisfactory academic work. Students who do not present one unit of American History are required to register for the course during their first or second year at the University.
 - b. By high school equivalency diploma — Applicants 18 years of age or older may be admitted by the equivalency diploma provided it is issued upon a minimum average G.E.D. test score of 45.
 - c. By General Educational Development Test — Applicants 18 years of age or older who are not high school graduates may be admitted by G.E.D. scores averaging 45 or more. Under special circumstances, applicants 17 years of age may be considered for admission with a minimum average G.E.D. score of 45.
2. Entrance Examination

In order to receive consideration for admission as a freshman, applicants must submit scores earned on the test administered by the American College Testing Program. These scores should be furnished directly from A.C.T. Applicants who are not recent high school graduates may request an entrance examination administered by the Office of Admissions.
3. Age

An applicant must be at least 16 years of age.
4. Character

The applicant must submit evidence of good moral character (usually the recommendation of the high school principal). All applicants must have honorable dismissal from the last high school attended.
5. Health

Each student is required as a condition of admission to file with the Health Center a medical history and report of a physical examination on a health record card provided by the University. The purpose of this requirement is to detect and eliminate health hazards and to assess the student's ability to adapt to living conditions of the University community. The health record card should be submitted well in advance of the intended term of entry. Submitting the card early may enable the student to avoid a delay in his admission should the information on the card indicate a need for additional evaluation by the University Health Service or Counseling Center.

The applicant is advised to have all credentials on file well in advance (preferably thirty days) of the registration period for the term for which application is made. All credentials become the property of the University and cannot be forwarded or returned.

Admission of Transfer Students As Regular Undergraduates

Admission will be granted only to a student who has honorable dismissal from an accredited institution and whose cumulative quality point average meets the following minimum standards on a scale in which a grade of "A" gives four quality points:

With two semesters in residence — A quality point average of 1.5000.

With four semesters in residence—A quality point average of 1.8000.

With six semesters in residence—A quality point average of 1.9000.

With more than six semesters in residence —A quality point average of 2.000.

For part-time students, fifteen semester hours will be the equivalent of one semester. A transfer applicant with less than two semesters in full-time residence (or less than 30 semester hours of part-time work) must meet the admission requirement of beginning freshmen in addition to having a satisfactory college record.

In order to receive consideration for admission as a transfer student, an applicant must submit scores earned on the American College Test or the Scholastic Aptitude Test, or an examination administered by the Office of Admissions. The examination requirement may be waived for an applicant who meets the above minimum standards. (This work must have been completed in a program containing courses normally creditable toward a baccalaureate degree.) Transfer applicants not meeting the minimum admission requirements must submit acceptable S.A.T. or A.C.T. scores or take an examination administered by the Office of Admissions and earn an acceptable score.

A transfer student who is denied admission because he is not entitled to continue at another institution or because he does not meet the minimum quality point average requirement may have his application reconsidered after an appropriate period of time has elapsed. Consideration will not be given until the next regularly scheduled term.

A transfer student who is accepted for admission after an appropriate period of time has elapsed who does not have a quality point average of 1.5000 in his last term of enrollment, or whose cumulative quality point average does not meet the minimum standard, or who is not in good academic standing at the last school attended, will be entered on scholastic probation.

A transfer student who has failed his work at another institution and is not entitled to

continue there will not be admitted to the University except under unusual circumstances.

An applicant who has attended any accredited or approved institution of higher learning will not be permitted to enroll as a beginning freshman.

Advanced Standing Credit

Credit toward a degree will be accepted only from collegiate level institutions for courses which are equivalent to those offered at Memphis State University. After the student has been approved for admission, the Transfer Affairs Section of the Office of Admissions will evaluate the transcript of each transfer student to show the credits accepted by the University.

All credits are transferred at their original grade; if the quality point average on such transferred credits is less than "C," the cumulative quality point average must be brought up to a "C" by higher grades at Memphis State University before the student can qualify for graduation. (See page 39 for the method of computing quality point averages.) Every student must qualify for graduation on the basis of every course attempted at Memphis State University and elsewhere. In no case may transferred grades be used to raise the student's quality point average on courses taken at Memphis State University; his average on all courses must be "C" (2.000) or better.

In computing the scholarship ratio or quality point average of a student who has earned an associate degree from an institution with a grading practice which does not reflect failing grades, only those courses for which credit was granted will be used. A student who does not earn the associate degree prior to transfer or one who attends merely to take courses will have his quality point average computed using all courses attempted at that institution.

A student submitting advanced standing credit from an unaccredited institution will be given consideration. Each case will be considered individually, and credit may be accepted tentatively. In no case will credit be recorded until it has been validated by satisfactory work at Memphis State University for one or more semesters.

A student transferring credits from a two-year collegiate institution must complete, as a requirement for the baccalaureate degree, a minimum of 60 semester hours in an accredited senior institution. Residency and

other degree requirements of Memphis State University must be met.

Transfer credit from vocational colleges not accredited by the Tennessee State Board of Education and/or the Southern Association of Colleges and Secondary Schools (or corresponding agencies for other states and regions of the United States) will not be accepted toward a degree or toward teacher certification.

As Term Special Students

A regularly enrolled student of another accredited institution who desires to take only a limited number of hours during a single term and who is not presently working toward a degree at Memphis State University may be admitted as a Term Special student, subject to the following provisions:

1. He must submit an application for admission and a five-dollar (\$5.00) application fee (unless the fee has been paid previously).
2. He must have the registrar of his college or university submit to the Office of Admissions a statement of academic standing indicating eligibility to return for further study. (Note: If the student later decides to become a permanent transfer student, he must meet requirements for admission of regular students listed on page 14.)
3. Subsequent re-enrollment in the Term Special category will be allowed only under unusual circumstances.

As Special Undergraduates

A graduate of an accredited institution who desires to take only a limited number of courses and who indicates that he is not presently working toward a degree at Memphis State University may be admitted as a Special Undergraduate student, subject to the following provisions:

1. He must submit an application for admission and a five-dollar (\$5.00) application fee (unless the fee has been paid previously).
2. He must have the college or university from which he was graduated send to the Office of Admissions a statement indicating the degree earned and the date it was awarded. (Note: If the student later decides to become a permanent transfer student and works toward another degree, transcripts of all college work will have to be submitted.)

Admission of Adult Special Students

A student who desires to take only a limited number of courses and who indicates that he is not presently working toward a degree at Memphis State University may be admitted as an Adult Special student subject to the following provisions:

1. The applicant must hold a high school diploma or be 21 years of age or older.
2. He will be permitted to take no more than 9 semester hours per semester.
3. He may not accumulate, in Adult Special status, more than 18 semester hours of credit at Memphis State University. (After that time, he must apply for regular classification if he is to continue to enroll.)
4. He may at any time apply to the Office of Admissions for reclassification as a regular student, effective at the beginning of the next regularly scheduled semester; he must follow the same procedures and meet the same standard as required for all other applicants for admission to the University. If he is admitted as a regular student, the credits which he earned as an Adult Special student (up to a maximum of 18 semester hours) may be counted toward a baccalaureate degree if approved by the dean of the college from which the degree is sought.
5. A student who has been denied regular admission to Memphis State University because of low admission test scores or a low grade point average may not apply for Adult Special admission until at least twelve months after the previous application.
6. A student who has been dismissed because of low academic standing from another institution of higher learning may not apply for admission as an Adult Special student until at least twelve months after such dismissal.
7. A student who holds a degree from an accredited institution may not apply as an Adult Special student.

Admission of Foreign Students on F-1 (Student) Visa Status

Memphis State University is authorized under Federal law to enroll non-immigrant, alien students on "F-1" student visas.

International students should write to the Office of Admissions for information on application procedures, qualifications, and admission to the University. All transcripts, test scores and other credentials must be accompanied by an English translation of these documents and must be on file in the International Student Office at least two months prior to the opening date of the intended term of entry.

Requirements:

1. All foreign applicants whose native tongue is not English are required to take the Test of English as a Foreign Language (T.O.E.F.L.) or its equivalent. The student should write T.O.E.F.L., Educational Testing Service, Princeton, New Jersey 08540, U.S.A., requesting information and registration forms. In addition, all freshman foreign students should also take the Scholastic Aptitude Test (S.A.T.) or its equivalent. The student should write — S.A.T., C.E.E.B., Educational Testing Service, Box 592, Princeton, New Jersey, 08540, U.S.A., for examination information. Satisfactory scores on both the S.A.T. and the T.O.E.F.L., or their equivalent, are required for admission.
2. A student on the F-1 visa should supply sufficient evidence of financial support for himself and for all

members of his family who will accompany him to Memphis. This requires that he certify that his intent is to attend the University full-time and that no employment will be required.

3. A foreign student applicant must be in good physical health as certified by a licensed physician on the form provided by the University.
4. The foreign student must become familiar with the regulations of the Immigration and Naturalization Service and assume responsibility for complying with these regulations.

Admission of Audit Students

Persons who are not enrolled for credit courses may register for audit courses with the approval of the Dean of Admissions and Records and the appropriate department chairman. These students must have the equivalency of high school graduation or be 21 years of age or older.

Admission of Senior Citizen Audit Students

Persons over age 60 who are not enrolled for credit courses may audit courses on a space available basis. These students may attend classes at no maintenance charge. However, special or laboratory fees may be charged where required. Approval to audit the course must be secured from the appropriate department chairman.

Former Students

Former students who wish to return to the University in the same category as they previously attended must file an application for readmission. This form should be secured, completed, and returned to the Records Office. If the student has enrolled at another college since last entering Memphis State University, he must have a transcript and a Personnel Evaluation form forwarded

to the Admissions Office. An applicant will receive favorable consideration only if he is eligible for readmission under all University regulations, including the grade point average for transfer students.

Credit For Service in the Armed Forces

Veterans who have completed one year or more of full-time extended active military service will be excused from taking the required physical education activity courses; and, in addition, will be allowed six semester hours of health and physical education credit upon presentation of a copy of their report of separation (DD Form 214) to the Admissions Office. The veteran may apply two additional semester hours credit in physical education activity courses (total applicable toward degrees not to exceed eight semester hours).

The Transfer Affairs Section of the Admissions Office should be consulted to determine whether additional credit may be allowed for courses offered through the United States Armed Forces Institute or other service schools. The maximum amount of credit accepted for applicable U.S.A.F.I. courses and/or correspondence and extension courses is 33 semester hours, and 20 semester hours for selected service schools. An official evaluation of service credit is not made until a student enrolls as a regular undergraduate student.

Residency Classification

All determinations concerning classification of in-state and out-of-state students for the purpose of paying fees are made by the Office of Admissions and Records. Guidelines used in classifying students for fee paying purposes are available in the Office of the Director of Admissions.

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Fees and Charges

Expenses at University

The matter of expenses while attending the University is of importance to every student. It is difficult, however, to give specific information about yearly expenditures; expenses vary according to the nature of the curriculum, the place of residence (whether in Tennessee or in another state or country), and the student's own habits and needs. In any student body there are so many different tastes, as well as such a wide range of financial resources, that each student must determine his budget in keeping with his own needs and financial condition. It is possible to live simply, and to participate moderately in the life of the student community, on a modest budget. The best help the University authorities can offer the student in planning his budget is to inform him of certain definite expense items and to acquaint him with others for which he will in all probability have to provide.

The information in this section concerning tuition, fees, deposits, etc., is applicable only to students enrolled in the undergraduate colleges and departments of the University. Similar information for students in The Graduate School and The School of Law is available in the bulletins of those schools.

The listing of any fee or incidental charge in this catalog does not constitute a contract between the University and the student. Because of rapidly changing conditions it may become necessary to alter a fee structure before the next edition of the *Bulletin* is published. As a condition of registration each student will pay the fees in effect at the time he registers.

Application Fee.

Each student submitting an application for admission to the University must pay, at the time he submits his application, a non-refundable fee of \$5.00.

Maintenance Fee.

All students, whether resident or non-resident, pay a maintenance fee of \$16.00 per semester hour, not to exceed a maximum of \$187.00. Students paying the maximum fee are entitled to admission to home athletic events and certain health services, concerts, plays, social and other student-sponsored activities, and a subscription to *The Helmsman*, student newspaper.

Tuition.

No charge is made for tuition to bona fide residents of the State of Tennessee; non-

residents are charged \$420.00 per semester (for full-time students) or \$36.00 per semester hour (for part-time students). Tuition is in addition to the maintenance fee.

The Office of Admissions and Records is charged with the responsibility of assigning a residency classification to each student using regulations provided by the Board of Regents. The student may appeal the decision to the Committee on Residency. Residency regulations of the Board of Regents and information on appeals procedures are available in the Office of Admissions and Records.

Fees for audits will be assessed on the same basis as fees for credit courses.

The Summer Session.

The Summer Session consists of two separate terms of approximately six weeks each, plus an extended term for specified courses. Fees for the Summer Session are determined solely on a semester hour basis. The semester hour charge is \$16.00 for maintenance fees and \$36.00 for non-resident tuition.

Courses in Applied Music.

The fee for applied music shall be \$25.00 per semester for each one-half hour lesson.

Refund of Fees.

FALL AND SPRING SEMESTERS: If a student withdraws from the University within seven days from the beginning of classes for the fall and spring terms, a refund will be made of 80% of his maintenance fee and tuition or music fee (if any). Each week thereafter, the amount will be reduced 20%. The same refund schedule applies to students who drop to an hourly load below full-time. The applicable percentage then applies to the difference between the new fees calculated on an hourly basis and actual fees paid. *All other fees are non-refundable.*

SUMMER: Students are requested to register for all three terms of The Summer Session at the beginning of the first term, if possible. If a student withdraws from the University within three days from the beginning of classes for the first term, a refund is made of 80% of the maintenance fee and tuition or music fee (if any) applicable to first term classes. Each three school days thereafter, the amount of refund will be reduced by 20%. If a student withdraws from second term classes anytime before second term classes begin, a full refund of maintenance fee and tuition or music fee (if any) applicable to the second term will be made. This refund

will be reduced to 80% if the student withdraws within three days after beginning of classes for the second term and will be reduced an additional 20% each three days thereafter.

Withdrawals or drops from extended term courses will be refunded on the basis of a 20% reduction each four days instead of three, as in the six-week term.

Residence Halls.

Charges for rooms in University residence halls are indicated below. For information concerning application for rooms, see page 26.

Residence Halls	Per Semester	Per Six Week Summer Term	Per Five Week Summer Term	Per Eleven Week Ext. Sum. Term
Browning Hall‡	155	58	48	106
Browning Hall †	180	68	56	124
Hayden Hall‡	155	58	48	106
Hayden Hall†	180	68	56	124
McCord Hall‡	155	58	48	106
McCord Hall†	180	68	56	124
Rawls Hall‡	195	73	61	134
Rawls Hall†	220	83	68	151
Richardson Towers‡	250	94	78	172
Richardson Towers†	280	105	88	193
Robison Hall‡	195	73	61	134
Robison Hall†	220	83	68	151
637 Normal‡	250	94	78	172
637 Normal†	280	105	88	193
612 Goodman‡	250	94	78	172
612 Goodman†	280	105	88	193
Smith Hall‡	170	64	53	117
Smith Hall†	195	73	61	134
West Hall‡	170	64	53	117
West Hall†	195	73	61	134

All room charges are subject to change without notice.)

All rates include telephone and post office box, but not long distance telephone bills.)

‡ double room, † single room

Air Conditioned

The following policy covers residence hall contracts, deposits, and rental fees:

1. All residence hall contracts are for the academic year or for the entire summer session.

2. Each application for residence hall accommodations must be accompanied by a deposit of \$50.00. This deposit shall remain on file with the University throughout the occupancy of housing facilities, and is reduced by the amount of any unpaid damages or any other financial obligation due to the University at the time residence hall space is vacated.

3. An initial residence hall reservation request must be confirmed by a properly negotiated contract with deposit.

4. Students who wish to retain their room and hall priority for subsequent semesters must notify the housing office in writing by July 1 for the fall semester, by December 1 for the spring semester, and by May 1, for summer sessions.

5. A housing contract can be cancelled and a refund of the \$50.00 deposit made only if the Housing Office receives a signed cancellation request on or before:

July 1 for contracts effective for the fall semester

December 1 for contracts effective for the spring semester

May 1 for contracts effective for the summer session or any portion thereof.

After these dates full refund of the \$50.00 deposit will be made only for the following reasons:

A. A student is denied admittance or readmittance to the University.

B. A student is prevented from entering the University because of medical reasons, such reasons confirmed in writing by a licensed physician or the University Health Service.

C. Residence Hall space is not available.

Students failing to cancel their contracts by the dates listed in paragraph 5 above or for the reasons specified in (A), (B), or (C) will receive a refund of \$30.00.

Students who fail to claim an assigned room or who fail to notify the Housing Office in writing of their intention to cancel by the announced ending of a check-in period will automatically forfeit the \$50.00 deposit regardless of the reason such assignment was unclaimed.

6. Refunds of residence hall rent after classes begin will be prorated on a weekly calendar basis only when the student is forced to withdraw from the residence hall because of medical reasons, such reasons being supported by a written statement from a licensed physician or the University Health Service.

7. Students assigned as sole occupants of double rooms in order to satisfy their requests for a single room will be assessed the single-room fee.

8. Residence hall rental fees for the second summer term that are paid at the beginning of the first term of The Summer Session

will be refunded to students who withdraw from the University before second term classes begin.

Married Housing.

The University has 126 apartments for married students located on South Campus approximately one mile from the central part of the campus. These are 70 two-bedroom and 56 one-bedroom apartments. Some apartments are built specifically for paraplegic students. All apartments are furnished with electric stove, refrigerator, carpeting and garbage disposers.

The monthly rental rates are: one bedroom apartment—\$120.00; two bedroom apartment—\$140.00. Electrical utilities are paid by tenant.

Application forms may be obtained from the University Housing Office in Room 105, Scates Hall, Main Campus. A \$5.00 application fee is required when the application is submitted. A \$50.00 deposit is required upon acceptance of assigned apartment.

Meals.

The University cafeterias, student centers, and vending areas, open to all students, provide wholesome food at reasonable prices. Cost of meals per student is estimated at \$3.90 per day.

Air Force ROTC Deposit.

A uniform deposit of \$10.00 and a \$5.00 activity fee are required of each student who enrolls in the Air Force ROTC program. The uniform deposit, less charges for uniform loss or damage, will be refunded at the end of the academic year or at the beginning of a semester in which the student is not enrolled in the ROTC program.

Laboratory Deposits.

Certain courses in chemistry require breakage deposits from \$7.50 to \$15.00 per semester, depending upon the course. Any unused portion of these deposits will be refunded.

Physical Education Deposits.

Students enrolled in physical education courses must make a deposit of \$6.00 on the lock and towel issued them. This deposit, less a service charge of \$1.50 per semester, will be refunded upon return of the lock and towel.

Late Registration.

Students who do not complete registration (including the payment of fees) during the

official registration period will be charged \$5.00 for the first day after the official registration period and \$1.00 per day thereafter.

Adding and Dropping Courses.

A charge of \$3.00 per course will be made for each course which is added or dropped after the student has completed registration.

Transcripts.

One transcript of the student's academic record at Memphis State University is furnished free; a charge of \$1.00 is made for each additional copy requested. Transcripts are issued only at the request of the student or his authorized agent. No transcript will be provided for a student who has any financial indebtedness to the University.

Diploma Fee.

Each candidate for a degree from Memphis State University pays a \$15.00 fee to cover cost of the diploma, rental of cap and gown and incidentals connected with the commencement exercises. This fee must be paid thirty days before graduation.

Automobile Registration.

Each person who expects to operate and park any motor vehicle on the campus must pay \$5.00 for an official permit, valid from September through August, and register the automobile in the security office (Room 130 Administration Building). Proof of ownership must be presented when registering the automobile. Residence hall occupants should ask for a special resident decal when registering their automobiles.

Identification Cards.

The University issues to each student an identification card, which bears his photograph, social security number, and certification that he is enrolled as a student in the University. The card is required for registration, the borrowing of library books, and other purposes. *The card remains the property of Memphis State University and will be surrendered upon request of a university official.* A student will be charged \$10.00 to replace a card that has been damaged, stolen, or lost. A student will be charged \$2.00 to make any change in data on his card.

Part-time students who are enrolled for at least six semester hours, may obtain full-time I.D. card validation on payment of (a) an additional fee of \$20.00 OR (b) the difference between the maintenance fee paid and the maximum full-time undergraduate maintenance fee, whichever is less. (Also, see section on STUDENT LIFE AND FINANCIAL AID.)

Bad Checks.

A \$4.00 service charge will be assessed for each bad check, whether given in payment of fees or cashed by the University for the personal convenience of the student. The University will decline to accept checks from any student who has checks returned by his bank more than once.

Music Locker Deposit.

Music students are required to have a locker for storage of University-owned musical instruments or equipment. Personal instruments may also be stored in lockers. A deposit of \$3.00 for one semester or \$4.00 for two semesters is required on each locker issued. This deposit, less a service charge of \$1.50 per semester, will be refunded upon return of the lock. Students will be expected to pay for any damages.

Summary of Expenses

This table is applicable only to students in the undergraduate colleges and departments; charges for The Graduate School and for The School of Law are detailed in the bulletins of those schools).

Fall and Spring Semesters

	Residents	Non-Residents
Per semester (full-time students).....	\$187.00	\$607.00
Per semester hour (part-time student)	\$ 16.00	\$ 52.00

Student Housing

(See listing, page 21)

Applied Music Courses

(See page 20)

Incidental Charges

Adding courses, per course	\$ 3.00
Application for admission, per application	5.00
Automobile registration, per automobile	5.00
Diploma, payable once	15.00
Dropping courses, per course	3.00
Late registration	5.00
for first day after official registration period;	
\$1.00 per day thereafter	
Transcripts, per copy after first copy	1.00
Air Force ROTC activity fee, per year	5.00
Audiovisual Lab (undergraduate), per semester	5.00
Audiovisual Lab (graduate), per semester	10.00
School and College Ability Test	5.00
Residual American College Test	8.00
Orientation Services (Pre-College Counseling)	7.50

Deposits

Air Force ROTC Uniform	\$10.00
(refundable, less charges for loss or damage)	
Dormitory rooms	\$50.00
(refundable, less charges, upon termination of occupancy)	
Laboratory breakage	Variable
(refundable less charges)	
Physical Education Lock & Towel	\$ 6.00
(refundable less service charge of \$1.50 per semester plus loss or damage)	
Music Locker Deposit, per semester	\$ 3.00
per year	\$ 4.00

Additional Charges

The University reserves the right to increase the charges listed herein or to add new ones whenever such increases or additions are found to be necessary.

4

Student Life and Financial Aid

Student Conduct and Disciplinary Proceedings

It is assumed that applicants for admission to Memphis State University are mature adults, and every consideration will be shown them as such until, by their own acts, they forfeit the confidence reposed in them. Rules of government and regulations in regard to general conduct are, of course, necessary. The rules and regulations at Memphis State University are of such nature as to secure ready cooperation on the part of students in making them effective. These rules and regulations are outlined in the Student Handbook, distributed to all students at the time of initial registration and every student is required to be knowledgeable of the Code of Conduct and Disciplinary Proceedings and adhere to the stated regulations.

Student Housing

The University operates six residence halls for men and five residence halls for women. No one is required to live in a residence hall, and students who wish to do so should make application at the earliest possible date. Application forms may be obtained from the Residence Life Office and completed applications should be returned to the Residence Life Office. For information concerning residence hall rents and deposits see page 21.

Housing Policy.

Students living in the residence halls must be registered as full-time students unless they have special permission from the Director of Residence Life. Married students must have permission granted by the Director of Residence Life to live in the residence halls. If a resident ceases to attend classes for any reason except illness, he will be asked to withdraw from the residence halls and the University. If a student chooses to withdraw from the University, he must vacate his residence hall accommodation immediately upon completion of the withdrawal procedure. It is the prerogative of the Director of Residence Life to refuse a room assignment to any applicant or to terminate the occupancy of any resident when it is felt that there is justifiable cause.

The Student Identification Card

The University issues to each student an identification card, which bears his photograph, social security number, and certifica-

tion that he is enrolled as a student in the University. The card remains the property of Memphis State University and must be returned to the University when a student withdraws, graduates or fails to re-enroll.

Inquiries about student identification cards should be made in the Office of Student Development, 111 Scates Hall.

The card, with the current validation sticker, is required for the borrowing of library books, admission to or approval to pick up or purchase student tickets to athletic and social events, the sale of used text books and other official purposes.

The card is also required to gain admission to the Registration Center each registration period. Prior to reaching the Registration Center students are asked to remove all previous and out-dated validation stickers from the back of the card. Students are cautioned against removing the immediate past validation sticker until they are ready to register.

If an ID Card is lost or stolen the student has twenty-four hours to file the proper report with the Office of Student Development and/or the Security Office. In all cases, a student will be required to have a replacement card made.

The replacement fee is \$10.00 for a card that has been damaged, stolen, or lost. A student will be charged a \$2.00 fee to make any change in data on his card.

The card, as a part of the withdrawal procedure must be surrendered to the proper official before his withdrawal from the University can be considered complete. If the student has lost his card he must pay the \$10.00 replacement fee or his withdrawal will be incomplete and a "Hold" will be placed on his packet for succeeding terms.

Fraudulent use of the ID card will result in disciplinary action. The card is issued to the individual student and must not be loaned to another person for any reason. If the card is loaned to another person, enabling that person to gain admission to athletic, social and cultural events of the University, the validation will be voided to prevent the student from using his card to gain admission to such events for a stated period of time.

Automobiles on Campus

Each person who expects to operate and park any motor vehicle on the campus of Memphis State University must register it in the Security Office and receive an official permit. Permits are valid from September through August. All students must show proof of title of vehicles upon registering au-

omobiles with the Security Office.

Limited parking space necessitates close regulation of traffic. Each student is responsible for acquainting himself with the campus traffic and parking regulations, copies of which are available in the Security Office.

Health Service

The University maintains, on the main campus, adequate health service which is staffed by qualified doctors of medicine and registered nurses, offering out-patient treatment only. Students are financially responsible for hospitalization or medical care beyond that offered by the Health Service. Students are urged to make arrangements for such care, in consultation with the Health Center staff, and in any case must notify the Health Center without delay.

Health Service Record:

Each undergraduate student is required, as a condition of admission to the University, to file with the Health Center a medical history and report of physical examination on a Health Service Record signed by a doctor of medicine. The required health service record form is provided by the University to each applicant for admission.

Eligibility:

All full-time undergraduate students of the University are eligible to receive services provided by the Health Center. Graduate, law, and part-time students who have filed with the Health Center the required Health Service Record and who have validated identification cards are eligible to receive services provided by the Health Center. No services are offered to faculty and staff except on an emergency or advisory basis.

Emergency Service:

Emergency service will be afforded in the event of any campus related emergency situation. Except in cases of emergency, students without a health card on file in the Health Center will not be treated.

Student Insurance:

Since major care is occasionally needed on emergency basis and on short notice, students are urged to discuss this eventuality with their parents. Health and Accident Insurance is issued by a private insurance company authorized and approved by the University. Details concerning this insurance are available at the time of registration and from the office of the Vice President for Student Affairs.

Counseling Service

The University Counseling Center, located in Scates Hall, provides personal and vocational counseling for University students. Those students who need advice concerning personal problems or their occupational choice can make contact with the Counseling Center by going to 204 Scates Hall and asking to see a counselor. Students may be referred to the Counseling Center by members of the faculty or administrative staff when a student's problem seems to merit the attention of a counselor trained specifically in the area of personal or vocational counseling.

Placement Service

The University Placement Service provides assistance to students and alumni in securing full-time, permanent employment. Services provided include: permanent personnel credentials, occupational information, occupational library, on-campus interviews and job listings. Registration with Placement is required prior to being referred for employment and should be completed two semesters prior to graduation.

Similar services are offered by the Teacher Placement Office. This office serves students in the Teacher Education Program and alumni who desire information concerning job vacancies in all areas of education.

Part-time employment for students is provided through a branch office of the Tennessee Department of Employment Security. Attempts are made to place students in part-time employment which is in keeping with their ultimate employment goals.

Bookstore

The University Bookstore, located in the University Center, is owned and operated by the University for the convenience of its students, faculty, staff, and their guests. In addition to textbooks and supplies required or recommended for every course in the University, the Bookstore also stocks clothing, cosmetics, notions, physical education uniforms, stationery, rental typewriters, and gift items; it is the only source for purchase of the official Memphis State University class ring.

Post Office

The University Post Office, located on the first floor of Jones Hall, has post office boxes available for rent by students and faculty. Students living in University housing have

post office boxes located in these facilities, charges for which are included in the residence hall rent. Student mail should be addressed to the proper post office box number, Memphis State University, Memphis, Tennessee 38152.

Athletic Programs

The University sponsors a three-phase athletic program, intramural, extramural and intercollegiate. The intramural and extramural programs are under the supervision of the Department of Health, Physical Education, and Recreation. Policies for intercollegiate athletics are set by the University Committee on Athletics.

The intramural program operates throughout the year and provides students with opportunities to compete in seasonal sports either as individuals or as members of teams from the various student organizations. Individual competition is offered in tennis, shuffleboard, badminton, table tennis, archery, handball, racquetball, golf, billiards, wrestling and swimming. Team participation is offered in softball, bowling, basketball, volleyball, and track. Recreational equipment may be borrowed from the recreational loan office.

The extramural program provides students an opportunity to further develop skills in sports which they have acquired in the Physical Education classes and Intramurals. Instructors in the Physical Education Department serve as coaches for teams competing in various sports such as badminton, handball, racquetball, volleyball, weightlifting and wrestling. The teams compete on the intercollegiate level as well as attending open tournaments. Funding for these teams is from the Division of Student Affairs.

The intercollegiate program sponsors teams in football, basketball, baseball, track, golf, tennis, and gymnastics. These teams compete in a regular schedule with teams from other recognized institutions of the same scholastic level as Memphis State University.

Student Development

The Division of Student Development, within the large area of Student Affairs, is available to serve the environmental needs of students. Student Development is conceptual and not process oriented. The offices of Veterans Affairs, Orientation and Special Services, Placement, Counseling, Educational Support Program, and Withdrawal Counseling are

organizationally related to this division. Student Development offers assistance in the areas of career planning, study skills, study group work, volunteer service, Peer Counseling, Tutoring, Student Leadership Skills, Student Leadership courses, Workshop on Human Relations Concerns, Administrative and Student Communications and assistance in academic areas. We serve as a catalytic function in coordinating various academic resources available and in assisting the members of the collegiate community in communicating about educational processes, both personal and collective.

Campus Recreation

The new Physical Education and Recreation Complex serves as a center for campus recreation. Year-round recreational swimming is offered daily in two olympic swimming pools. Also included in the new complex are two large gymnasiums, a combative room, weight room with stationary weight machines, a steam room, a sauna room, nine air-conditioned handball courts, and locker rooms which may be used during campus recreation hours. The new facility has outside adjacent intramural-recreation playing fields and fourteen tennis courts.

The field house also serves as another center for campus recreation. Included in this complex are four gymnasiums, a weight room, six handball courts, a dance studio and locker rooms. Adjacent to this facility is an outside all-weather track and intramural recreation playing fields and ten tennis courts.

Free play, reserved play, special activities and scheduled events constitute a major part of the campus recreation program.

The Director of Campus Recreation maintains an office in Room 128 of the Physical Education and Recreation building on Echols Street. Information may be obtained by calling or visiting this office.

Alumni Association

The Memphis State University Alumni Association maintains active contact with former students for the mutual benefit of alumni and the University.

All students who have completed at least one semester, and are no longer enrolled in the University, are automatically members of the Association. There are more than 100,000 Memphis State alumni.

The Alumni Association annually conducts a fund drive. Proceeds are used for schol-

ships, teacher supplements, and other improvements for the University.

The Association is organized nationally. It is governed by a 33-member Board of Directors elected by the general alumni membership and alumni chapter presidents on a geographical basis and by special interest.

The Alumni Association coordinates all university events involving alumni. It publishes *The Columns* magazine six times a year.

Co-Curricular Activities

A variety of co-curricular activities, under competent supervision and direction, is included in the University's program and furnishes valuable experience and training for students. Participation in co-curricular activities is a privilege extended only to students who are in good standing and who meet the particular requirements of the various organizations. Invitations to membership, when required, are extended by the individual organizations.

The following activities and services are provided free to full-time students: *The Helmsman*, *Phoenix*, *Student Handbook*, *DeSoto* (if student has picture made), intramurals, athletic events, and most cultural events on campus unless a reserved seat is desired.

No attempt is made in the following section to present an exhaustive or detailed account of all organizations and their activities. Full information is provided in the *Student Handbook*, distributed to all students at registration. Copies are available in the offices of the Vice President for Student Affairs.

STUDENT GOVERNMENT. The Student Government Association is composed of officers, a senate, a cabinet, and a judiciary elected annually by the student body. It exercises responsibility in those areas of student life delegated to it by the University and represents student opinion in working with the administration toward the good of the University.

PUBLICATIONS. Students write and edit *The Helmsman*, semi-weekly newspaper; *The DeSoto*, University yearbook; *The Phoenix*, the literary magazine; and the *Memphis Statesman*, a laboratory publication of the Department of Journalism.

ART. The Department of Art sponsors exhibitions of art works throughout the year. The galleries in Jones Hall and Brister Library display the work of national and local talent in addition to faculty shows and annual student exhibit. Lectures and films on art are also a part of the department's yearly program.

MUSIC. Qualified students, whatever their majors, may participate in the numerous musical groups organized and directed by the Department of Music, including the University Symphony Orchestra, the Music Education Orchestra, the University Bands (marching, concert, and stage), and a variety of choral groups and small instrumental ensembles. The department pre-

sents an extensive offering of concert recitals by faculty, students, and visiting artists. The Memphis State String Quartet and the Memphis State Woodwind Quintet present an annual series of chamber music programs. The department also presents major opera and oratorio productions.

SPEECH AND DRAMA. Qualified students are invited to audition for roles in the plays produced each year by the Department of Speech and Drama. The department now produces six major productions during the academic year; in addition, it sponsors a Lunch Box Theatre, a student organized and operated experimental theatre; Readers' Theatre, designed to present concert readings and programs of oral interpretation; original script programs; and the forensics program, affording students opportunities to participate in debate, extemporaneous speaking, oratory, after-dinner speaking, oral interpretation, and group discussions. From this latter group are chosen those students who represent the University in its extensive intercollegiate forensics program. The department has a major program in radio, television, and film, and other phases of broadcasting, as well as on-the-air announcing and performances. During the summer the department sponsors a program of plays, productions of original scripts, a Speech Institute for high school students, and a communications conference.

THE GOODWYN INSTITUTE LECTURES. The Goodwyn Institute, founded and endowed by William A. Goodwin, philanthropist and former citizen of Memphis, provides a series of free lectures and addresses covering a wide variety of subjects. The aim of the institute is to offer to the citizens of Memphis and the students of the University authoritative and accurate information on all kinds of practical and cultural subjects. Public forums frequently follow the lectures, all of which are held in the University Center. Admission is free, and reserved seat tickets may be obtained in the office of the Director of the Goodwyn Institute.

RELIGIOUS ACTIVITIES. Religious activities of the campus are under the guidance of the Coordinator of Religious Affairs with policy direction being given by a standing committee of students, faculty, and administration. Students originate activities through a Religious Activities Commission which functions in cooperation with the Student Government Association. Several religious bodies maintain meeting facilities adjacent to the campus, each supervised by its own staff; these groups provide activities adapted to the needs of the University community and designed to aid in the continuing religious growth and development of faculty and students. The organized religious groups include the Baptist Student Union, Barth Episcopal Student Organization, Chi Alpha, Christian Science Organization, Disciples Student Fellowship, Hillel, Koinonia Club, Newman Foundation, Wesley Foundation, and Wittenberg Society. The Religious Activities Policy Committee plans lectures and activities (including a traditional Christmas ceremony) at appropriate times during the year.

SCHOLARSHIP, LEADERSHIP, AND PROFESSIONAL ORGANIZATIONS. Many national honorary societies, devoted to encouraging high standards of scholarship, leadership, and professional competence, maintain active chapters on the campus. In addition, most departments and subject-matter areas sponsor local clubs to provide majors and other interested students with experiences and activities not always available in the classroom. Organizations petitioning for membership in a national society maintain all standards required for affiliates. Local organizations operate under chart-

ers issued by the Student Government Association; revocation of a charter entails loss of University recognition and sanction. Detailed information concerning these organizations, including requirements for membership, purposes, and specific activities, will be found in the Student Handbook and from sponsoring departments.

SOCIAL FRATERNITIES AND SORORITIES. Seventeen national fraternities maintain chapters at the University; Alpha Epsilon Pi, Alpha Tau Omega, Kappa Alpha, Kappa Alpha Psi, Kappa Sigma, Lambda Chi Alpha, Omega Psi Phi, Phi Gamma Delta, Phi Kappa Theta, Phi Sigma Kappa, Pi Kappa Alpha, Pi Kappa Phi, Sigma Alpha Epsilon, Sigma Chi, Sigma Phi Epsilon, Phi Beta Sigma and Phi Kappa Psi. Most chapters own houses off the campus and offer limited rooming facilities to upperclassmen. Student supervision and coordination of their activities are provided through the Interfraternity Council.

Fifteen national sororities maintain chapters at the University: Alpha Delta Pi, Alpha Gamma Delta, Alpha Kappa Alpha, Alpha Phi, Alpha Xi Delta, Delta Gamma, Delta Sigma Theta, Delta Zeta, Gamma Phi Beta, Phi Mu, Pi Beta Phi, Sigma Delta Tau, Sigma Gamma Rho, Sigma Kappa, and Zeta Phi Beta. Most have suites in the Panhellenic Building. Student supervision and coordination of activities are provided through the Panhellenic Council, and the Intersorority Council.

University coordination of fraternity activities and sorority activities is provided through the Department of Student Activities.

Honors Assembly

Those students who have shown outstanding qualities in leadership and scholarship are recognized each spring at Honors Assembly. This presentation of awards and scholarships is under the sponsorship of Omicron Delta Kappa and Mortar Board, national leadership honor societies for men and women.

Awards.

THE DEPARTMENT OF ENGLISH offers an award to the English major whose work demonstrates an unusually high order of academic excellence. In identifying the recipient, a departmental committee reviews the credentials of English majors who are graduating with honors, and the committee may select one whose work is clearly distinguished.

THE PHI CHAPTER OF CHI BETA PHI, national honorary scientific society, annually awards a plaque to the student who has attained the highest average grades during his four years of study in each of the disciplines of biology, chemistry, geology, mathematics, physics, and psychology.

THE ZETA ETA CHAPTER OF PI SIGMA ALPHA, national honorary Political Science society, annually awards a plaque and a subscription to the American Political Science Association Review to the outstanding senior majoring in Political Science.

THE STUDENT GOVERNMENT ASSOCIATION presents at each commencement convocation a plaque to the graduating senior man and woman who have attained the highest scholastic average.

ALPHA LAMDA DELTA HONOR SOCIETY annually presents the Maria Lenord Award to the senior member of the society with the highest scholastic average.

PANHELLENIC COUNCIL SOPHOMORE ACADEMIC AWARD is presented annually to that sophomore member with the highest scholastic average.

THE WOMEN'S ASSOCIATION OF THE UNIVERSITY makes an award at each convocation to the woman member of the senior class who, graduating with honors, shows the highest scholastic attainment.

ALPHA KAPPA PSI, professional business fraternity annually awards a certificate of merit to a student member who has excelled in the study of business and who has served the Fraternity in an outstanding manner.

DELTA SIGMA PI, international business fraternity, annually awards a scholarship key to the man in The College of Business Administration graduating with the highest scholastic average in business subjects.

THE MEMPHIS CHAPTER OF THE TENNESSEE SOCIETY OF CERTIFIED PUBLIC ACCOUNTANTS presents a plaque each year to the graduating student who has the highest overall scholastic average among all accountancy majors.

THE MEMPHIS CHAPTER OF THE SOCIETY OF CHARTERED PROPERTY CASUALTY UNDERWRITERS annually awards \$50 and a plaque to the outstanding student in the field of insurance. In considering recipients, the CPCU Chapter Awards Committee considers the student's scholarship and other University related activities.

PHI GAMMA NU, professional sorority in business each year presents a scholarship key to the woman business graduate who has maintained the highest scholastic average in The College of Business Administration.

THE NATIONAL BUSINESS EDUCATION ASSOCIATION annually awards a certificate of merit, a one-year membership card in the Association and a one-year subscription to the N.B.E.A. Forum magazine to the outstanding graduating senior who has majored in the field of business education.

THE SOCIETY FOR ADVANCEMENT OF MANAGEMENT presents each year a \$50 award to a SAM member who is in need of financial assistance and who has served the organization in an exemplary manner.

THE WALL STREET JOURNAL annually awards a plaque and a year's subscription to the *Journal* to the most outstanding graduate in the field of finance and one in economics.

THE DEPARTMENT OF ELEMENTARY EDUCATION makes an annual award of a plaque to the outstanding senior majoring in Elementary Education.

THE DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND RECREATION makes three awards each year; one to the outstanding woman Physical Education major; one to the outstanding man Physical Education major; and one to the outstanding senior majoring in Recreation.

THE MSU CHAPTER of KAPPA DELTA PI, professional honorary society in education, each year awards \$10 to the junior majoring in education who has attained the highest academic average, and a plaque to the senior majoring in education who has attained the highest academic average.

THE MSU CHAPTER of the STUDENT NATIONAL EDUCATION ASSOCIATION, each year presents a plaque to the student who has demonstrated outstanding scholarship and made the greatest contribution to the chapter.

THE COLLEGE OF EDUCATION, DEAN'S AWARD is made annually to the outstanding graduating senior in education. The recipient receives a plaque and has his name inscribed on a large plaque which is mounted on the wall in the College of Education building. The award is based on scholarship, professionalism, leadership, and service to the University, the College of Education, and/or professional organizations.

HOLIDAY INNS, INC. makes an annual award to the graduating senior in Home Economics who has attained the highest academic average.

LEGION OF VALOR BRONZE CROSS OF ACHIEVEMENT recognizes one outstanding Air Force ROTC senior cadet in the southeast area for performance and achievements as an AFROTC cadet.

AMERICAN FIGHTER ACES ASSOCIATION AWARD recognizes the outstanding graduating AFROTC pilot candidate in the southeast based on performance and achievements as an AFROTC cadet and performance in the Flying Instruction Program.

THE PRESIDENT'S AWARD is presented annually to the MSU Freshman or Sophomore AFROTC cadet who has demonstrated outstanding attributes of leadership and high moral character. Selection is made by AFROTC with final approval by the University President.

AIR FORCE ASSOCIATION AWARD recognizes the outstanding graduating AFROTC cadet at the University.

University Programs

University Programs is part of the educational program of the University. It is composed of students selected and appointed with the purpose of providing social, cultural, recreational and educational activities and events that appeal to all tastes. University Programs endeavors to develop the individual, broaden his interest, stimulate creativity, encourage display of talents and stress leadership and group interaction. Participation in University Programs is open to all students who meet University qualifications. Talent shows, Miss America Preliminary, big time entertainment, forums, lectures, movies, dances, fashion shows, art exhibits, speakers, tours, game tournaments, and travel are just a few of the many activities planned by University Programs.

Student Aid Office

The University Student Financial Aid Office, located in Scates Hall, provides financial assistance for students in the form of scholarships and grants, loans and student employment. This office counsels with students about college expenses and financial aid opportunities.

In addition to the basic financial aid application, all applicants for financial assistance must submit the American College Testing Program Family Financial Statement. Both forms may be obtained through the Student Aid Office upon request. The ACT Family Financial Statement is also available in most high school guidance offices.

The preferred application deadline for first time applicants is April 1. Applications are acknowledged as they are received, and award notices are mailed around July 1.

All inquiries concerning financial aid should be addressed to the Director of Student Aid unless some other procedure is specifically indicated in the following descriptions of scholarships and loans.

Scholarships

The University awards several hundred scholarships each year in varying amounts from \$50 to \$700. Most scholarships awarded cover the amount of registration fees, but the stipend is determined by the student's need for financial assistance. Scholastic achievement, personal and leadership qualities and need are the factors utilized in evaluating applicants and determining the value of the scholarship offered. Scholarships are awarded for the academic year and are not available for summer school. Freshmen applying for scholarships must rank in the top twenty-five per cent of their high school graduating classes. Currently enrolled students must have at least a 2.5 overall grade point average.

Honors Scholarship Program.

In order to provide recognition and financial assistance to outstanding students desiring to attend Memphis State University, an Honors Scholarship Program is available. A limited number of scholarships are awarded annually in the amount of \$400 each for the academic year.

These scholarships are available to students who are currently high school seniors or who will be transfers from a community college. High school seniors must rank in the top five per cent of their high school graduating class and have a minimum ACT composite score of 25. Community college transfer students should have attained a 3.5 minimum grade average on previous college credit attempted. All applicants will be ranked by ACT scores, high school rank or

college grade point average. The only other selection factors taken into consideration are scholastic and leadership qualities and activities.

Special Scholarships.

ARMED FORCES COMMUNICATIONS AND ELECTRONICS ASSOCIATION (AFCEA) SCHOLARSHIP: AFCEA awards one \$500 scholarship annually to a sophomore AFROTC cadet for undergraduate college or university study in a course relating to AFCEA's sphere of interest (Electrical, Electronics or Communications Engineering; or technical photography). The winning cadet receives two checks for \$500 each—one for use in the junior year, one for use in the senior year. Inquiries should be directed to the Department of Aerospace Studies.

AFROTC COLLEGE SCHOLARSHIP PROGRAM: Scholarships covering full tuition, laboratory fees, incidental fees, reimbursement for textbooks and \$100 per month in nontaxable pay are available to those enrolled in the Aerospace Studies program. Such scholarships may be awarded for two, three, or four years and must be applied for during the school year preceding their activation. Four-year scholarships are available only to those qualified to enter the flying training. Eligible students apply to Air Force ROTC (SDS), Maxwell AFB, AL 36112, not later than 15 November of their senior year in high school. Applications for other scholarships (2nd and 3rd year) are handled through the Department of Aerospace Studies.

ALPHA DELTA KAPPA, ALPHA CHAPTER, annually awards a \$200 scholarship to a woman student in her junior or senior year who is a resident of Shelby County and is preparing to enter the field of teaching. **ALPHA DELTA KAPPA, LAMBDA CHAPTER,** annually awards a scholarship in the amount of \$250 to a woman student in the junior or senior year who is preparing to enter the field of teaching.

AMERICAN SOCIETY OF WOMEN ACCOUNTANTS SCHOLARSHIP FUND provides one scholarship annually in the amount of \$350 to a junior or senior accountancy major. This scholarship is based on scholarship ability and financial need.

THE R. C. ANDERSON SCHOLARSHIP FUND was established by the late R. C. Anderson, the interest from whose estate is to be used to provide scholarships for young men in their freshman and sophomore years who are residents from Benton, Decatur, or Henderson County.

THE DEPARTMENT OF ART annually awards a number of scholarships to students who demonstrate an ability in this area. Inquiries should be addressed to the chairman of the department.

THE ASSOCIATED GENERAL CONTRACTORS OF MEMPHIS INDUSTRY ADVANCEMENT FUND SCHOLARSHIP, established in 1973, provides a \$500 grant with preference given to a student majoring in Construction Engineering Technology at MSU.

THE ASSOCIATED GENERAL CONTRACTORS OF MIDDLE TENNESSEE CONSTRUCTION INDUSTRY ADVANCEMENT FUND SCHOLARSHIP was established in 1974. The \$500 grant is made to a student from the Middle Tennessee area majoring in Construction Engineering Technology and plans a career in that profession.

BAND SCHOLARSHIPS, varying in amounts from \$50 to \$250 are awarded annually to University band students. Inquiries should be addressed to the Director of Bands.

THE ELEANOR B. O'NEILL SCHOLARSHIP FUND is provided by the T. W. Briggs Welcome Wagon Foundation. Two scholarships at \$500 each are awarded annually to students preparing for careers in advertising, public relations, or journalism. In addition to the current scholarships, the Foundation is in the process of ending two scholarships to assist students in these career areas.

THE MEMPHIS CHAPTER, FINANCIAL EXECUTIVES' INSTITUTE SCHOLARSHIP of \$250 is awarded annually to a second-semester junior in the College of Business Administration. Ability, need, and an interest in controllership or financial management are important criteria.

THE GENERAL UNIVERSITY SCHOLARSHIP FUND provides scholarships varying in amount and duration to outstanding high school graduates.

THE C. M. GOOCH SCHOLARSHIP FUND—This fund was established from proceeds of the estate of the late Mr. C. M. Gooch. The purpose of this fund is to provide grants to students who without such assistance would not be able to attend college. The maximum a student may expect to receive in a calendar year is \$300. The student must be in good academic standing and must show need for assistance as determined through application procedures of the Student Aid Office.

THE MEMPHIS STATE UNIVERSITY HAIR SCHOLARSHIP FUND was established in perpetuity by the authors of the Broadway musical *HAIR* in honor of the Memphis State University Theatre production of the show in 1970. Scholarships are awarded annually on the basis of financial need and promising talent to majors in Speech and Drama. Application should be made to the chairman of the Department of Speech and Drama.

THE A. ARTHUR HALLE MEMORIAL SCHOLARSHIP FUND annually provides two scholarships of \$300 each to outstanding high school graduates for the freshman year only.

THE HERFF ENGINEERING SCHOLARSHIPS provided annually through the Herbert Herff Estate are available to beginning and currently enrolled students who have a demonstrated aptitude for engineering. Applications for these scholarships are submitted through the Herff College of Engineering.

THE HOSPITAL PUBLICATIONS, INC. SCHOLARSHIP FUND is maintained by the Public Relations Division of Hospital Publications, Inc. Two scholarships of \$500 each are provided annually to junior or senior journalism students interested in the public relations area and who plan to make a career in hospital public relations.

THE ED HUMPHREYS SCHOLARSHIP FUND annually provides scholarships in varying amounts to outstanding high school graduates.

THE W. F. JAMESON MEMORIAL SCHOLARSHIP is awarded annually to a freshman student in the Herff College of Engineering. The recipient of this scholarship must intend to pursue a career in construction engineering.

THE JOSEPHINE CIRCLE SCHOLARSHIP, in the amount of registration fees, is awarded annually. The award is made on the basis of scholastic record, personality, future plans of the applicant, and need.

THE LEO LEVY SCHOLARSHIP FUND annually provides scholarships in varying amounts to outstanding high school graduates.

THE ETHEL LEWIS SCHOLARSHIP is an award sponsored by the Girls Friday Association of Memphis State University. This award in the amount of the annual registration fee is available to a freshman or sophomore woman student majoring in office administration or preparing for a career as a business teacher.

THE VARIETY CLUB—ROBERT S. JOHNSON SCHOLARSHIP was endowed in 1974 to honor the late noted writer for the *Memphis Press Scimitar*. A \$500 scholarship is given to a junior or senior majoring in journalism and seeking a career in some phase of that profession. Both financial need and scholarship are factors in the selection of the recipient.

LUMBERMEN'S CLUB OF MEMPHIS SCHOLARSHIPS annually provide two scholarships of \$200 each to outstanding students majoring in Forest Products Technology.

THE JOE A. MAGDOVITZ SCHOLARSHIP was established in 1974 to honor Joseph A. Magdovitz of Memphis. The \$500 scholarship is awarded to a student majoring in the College of Business Administration and who has financial need and scholastic ability and is a resident of Shelby County, Tennessee, or DeSoto County, Mississippi.

THE JAMES E. McGEHEE MORTGAGE COMPANY SCHOLARSHIP was endowed in 1966 by the McGehee Mortgage Company with a \$10,000 donation. Interest from the investment of these funds is used to award an annual scholarship to an outstanding high school graduate.

THE P. H. MANNING SCHOLARSHIP FUND was established by the late Professor P. H. Manning, who left the bulk of his estate to be used by the State Board of Education to provide scholarships for young men students meeting certain conditions set forth in his will. The scholarships of \$100 each are given to young men from Carroll, Decatur, Gibson, and Henderson counties.

THE MIKE McGEE MEMORIAL SCHOLARSHIP FUND maintained by the Memphis Press Club provides one or more scholarships of \$250 each year. These scholarships are awarded to journalism majors of any class with a minimum grade average of 2.7 upon approval of the Memphis Press Club scholarship committee. Applications are submitted through the Department of Journalism.

THE MEMPHIS ADVERTISING FEDERATION provides an annual undergraduate assistantship for a student majoring in advertising either in the department of journalism or the department of marketing. This assistantship pays a monthly stipend of \$200 and the recipient is assigned to work with a professor in the department which makes the award. Applications are submitted to the respective departments.

THE MEMPHIS AMATEUR BOXING ASSOCIATION SCHOLARSHIP FUND provides two scholarships annually in the amount of \$500 each. Priority is given to full-time students who are members of this Association. The purpose of this scholarship is to encourage academic achievement, to foster an interest in amateur

boxing in the Memphis area and to assist students who need help with educational expenses.

THE MEMPHIS HIGH SCHOOL ALUMNI SCHOLARSHIP FUND annually provides a number of scholarships to cover the cost of registration fees. Recipients of these scholarships must be graduates of Memphis high schools.

THE MEMPHIS HOUSEWARES CLUB provides an annual scholarship in the amount of registration fees to a student majoring in Marketing.

THE MEMPHIS LEGAL SECRETARIES ASSOCIATION SCHOLARSHIP FUND provides one scholarship annually in the amount of \$500 to a junior or senior student majoring in Office Administration or Secretarial Sciences and who intends to enter the Legal Secretary Profession. This scholarship is awarded on the basis of scholastic ability and financial need.

THE MEMPHIS STATE UNIVERSITY FACULTY-STAFF SCHOLARSHIP FUND was established in 1971 as an endowment program. Several scholarships are awarded annually on the basis of financial need and scholastic ability. The Fund is increased each year by gifts from MSU faculty and staff.

THE MEMPHIS STATE UNIVERSITY ANNUAL FUND each year provides a sum of money to be awarded to students with outstanding academic records. These scholarships vary in amounts from \$400 to \$700 with the actual stipend determined by the student's need for assistance and academic potential. The Fund is supported by gifts from alumni and friends of the University.

THE BILLY J. MURPHY SCHOLARSHIP FUND was established in 1974 to honor MSU Athletic Director Billy Murphy for his long service to the school. The \$700 scholarship award is made to a Memphis area student who has demonstrated financial need and shows scholastic ability.

THE ORMAN J. PIERCE SCHOLARSHIP in the amount of annual registration fees is awarded to a student in the junior year majoring in engineering technology.

THE SCRIPPS-HOWARD FOUNDATION — EDWARD J. MEEMAN SCHOLARSHIP FUND provides two scholarships annually in the amount of \$500 each to junior or senior journalism majors who demonstrate outstanding academic promise and financial need. Students must be pursuing an academic curriculum which would qualify them for a journalism career in the broadcasting or newspaper field.

THE SERTOMA CLUB—ROBERT TALLEY JOURNALISM SCHOLARSHIP was established to honor a long-time member of the editorial staff of the *Memphis Commercial Appeal*. Each year the Sertoma Club of Memphis awards a scholarship valued up to \$350 to an advanced journalism student who has done outstanding work at Memphis State University. Applications should be submitted to the dean of The College of Arts and Sciences.

THE SOCIAL WELFARE DIVISION SCHOLARSHIP FUND is maintained by the Opportunity Foundation Corporation and the State of Tennessee. Several scholarships in the amount of \$500 each are awarded annually to full-time juniors or seniors majoring in Social Welfare. Recipients are selected jointly by the faculty in the Division of Social Welfare and the Student Aid Office. Awards are based on scholastic standing and financial need.

THE TENNESSEE ASSOCIATION OF BROADCASTERS SCHOLARSHIP FUND provides one annual scholarship of \$300. This scholarship is awarded to the full-time junior or senior Radio-Television major with the highest cumulative grade point average for the previous semester.

THE TENNESSEE SOCIETY OF CERTIFIED PUBLIC ACCOUNTANTS annually awards a number of scholarships of \$250 each to accounting majors with good academic averages. These scholarships are awarded on a competitive basis in relation to scholarship, extra-curricular activity, character and financial need.. Applications are submitted through the Department of Accountancy.

THE MEMPHIS CHAPTER OF THE TENNESSEE SOCIETY OF PROFESSIONAL ENGINEERS AND THE MEMPHIS STATE UNIVERSITY FOUNDATION jointly sponsor two scholarships annually for a junior and senior year engineering student. Applications for these scholarships are submitted through the Herff College of Engineering.

BRUCE TUCKER MEMORIAL ASSOCIATED GENERAL CONTRACTORS SCHOLARSHIP annually made to one student in the junior year, pursuing a civil engineering or construction technology degree for \$500 per annum.

THE HATTIE G. WATKINS SCHOLARSHIP FUND provides five scholarships at \$500 each, annually to students on the basis of scholastic standing and financial need. These scholarships are awarded to students who are employed part-time to help finance educational expenses.

THE HORACE H. WILLIS MEMORIAL SCHOLARSHIP of \$250 annually is awarded from time to time to an incoming freshman on the basis of need for financial assistance and evidence of academic promise.

THE WHIRLPOOL MANUFACTURING TECHNOLOGY SCHOLARSHIP FUND provides two \$350 scholarships annually to junior and senior students majoring in Engineering Technology with interest in metal products manufacturing.

Supplemental Educational Opportunity Grant Program

The Supplemental Educational Opportunity Grant Program is a federally subsidized program whereby direct gift awards may be made to undergraduate students with exceptional financial need. Normally, Educational Grants are awarded as a part of a financial package since the amount a student may receive cannot exceed one-half his established need. Students applying for Educational Grants must demonstrate academic or creative promise; the stipend may range from \$200 to \$1000 based on the student's established need.

Law Enforcement Education Program

The Law Enforcement Education Program, as enacted by the Omnibus Crime Control and Safe Streets Act of 1968, offers assistance in the form of loans and grants to policemen

desiring to continue their education in the law enforcement field. This program also provides assistance in the form of loans to those students who intend to pursue law enforcement as a career.

National Direct Student Loan Program

The National Defense Education Act of 1958 provided funds to institutions of higher education for the purpose of making low interest long-term educational loans available to students who demonstrate academic promise and who have a need for financial assistance. These loans bear no interest until nine months after a student graduates or interrupts his course of study; then the interest rate is three per cent of the unpaid balance with a maximum repayment period of ten years. Repayment may be deferred for service in the Peace Corps or Vista.

Nursing Student Loan and Scholarship Program

The Nursing Student Loan and Scholarship Program is designed to increase the opportunities for students seeking careers in nursing by providing scholarship assistance and long-term, low interest loans. These programs are available to students who need assistance to pursue a course of study leading to an Associate Degree in Nursing.

Loan Funds

The University maintains a number of small loan funds for assisting students with emergency type loans. A listing of these is as follows:

THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN LOAN FUND of \$200, administered by the Memphis branch of the AAUW, is available to women students recommended by the University.

THE GENERAL EVERETT R. COOK ARNOLD AIR SOCIETY LOAN FUND was established to provide financial assistance in the form of short-term loans for students enrolled in the Professional Officer Course of the Air Force Reserve Officers Training Corps.

THE GENERAL UNIVERSITY LOAN FUND provides short-term, low interest loans up to \$200 for those students in emergency situations.

THE KAPPA LAMBDA SIGMA AND PHI LAMBDA DELTA LOAN FUND of \$206 was presented by the Kappa Lambda Sigma sorority and the Phi Lambda Delta fraternity in memory of those members of Phi Lambda Delta who died in World War II.

THE DELTA OMICRON CHAPTER OF PHI DELTA KAPPA sponsors a loan fund of \$500, available in \$12 loans to full-time undergraduate seniors and full-time graduate students who are planning to be teachers.

TENNESSEE ASSOCIATION OF PUBLIC ACCOUNTANTS LOAN FUND was established to enable a needy junior or senior student in the Department of Accountancy to remain in the University. Loans are non-interest as long as student remains in the University.

THE GENERAL RALPH H. WOOTEN LOAN FUND was established for the purpose of providing low-interest educational loans to students enrolled in the Air Force Reserve Officers Training Corps.

THE ZONTA CLUB OF MEMPHIS LOAN FUND of \$250 is available to eligible junior and senior women. Applicants' names are submitted to a committee of the Zonta Club for approval and selection.

University Revolving Student Loan Fund.

The University Revolving Loan Fund is established for the purpose of providing low-interest, long-term educational loans to assist students with college related expenses. This fund consists of donations by individuals and organizations interested in providing a means whereby students in need of financial assistance can secure such assistance.

Student Employment

There are many employment opportunities available through the University. The University operates two programs of student employment on campus: the College Work-Study Program and the Regular Work Program. Students seeking employment should contact the University Student Employment Office in Scates Hall (Room 314). Applications for employment may be filed at any time during the year. The Tennessee Employment Department maintains an office in Room 105 of the University Center for assisting students with off-campus employment.

Other Forms of Student Assistance

THE TENNESSEE TUITION GRANT PROGRAM — Students who are residents of the state of Tennessee may apply for a Tennessee Tuition Grant. These grants are awarded to students for the amount of registration fees and never to exceed \$1000. If a student's need is less than the cost of registration, as determined by filing the American College Testing Program Family Financial Statement, then the student may expect to receive no more than his actual established need. In order to apply, a student must submit a financial statement to the:

Tennessee Student Assistance Agency
246 Cordell Hull Building
Nashville, Tennessee 37219

The ACT Code number for the Tennessee Student Assistance Agency is 4015. Applica-

tions for this grant may be obtained through the Student Aid Office or by writing to the above address. Determination as to grant recipients is made by the Agency in Nashville. For more information, write to the Tennessee Student Assistance Agency.

Basic Educational Opportunity Grants.

The Basic Educational Opportunity Grant (BEOG) Program was authorized under the Education Amendments of 1972. Other aid may be given in addition to the Basic Grant, as this program is intended to be the "floor" of a student's financial aid package.

The maximum yearly grant eligibility for each student is \$1400 less the amount the family and student can be expected to contribute toward educational expenses. Other limitations on payment are related to the costs of attendance at the institution where the student enrolls. The Basic Grant cannot exceed one-half the educational costs.

There are several reliable plans under which parents may make loans to help defray the cost of college expenses. These plans provide loans at nominal rates of interest and are repayable in monthly installments. Two such plans are the College Aid Plan, Inc. and the Tuition Plan, Inc. Parents interested in securing additional information about college financing of this type can obtain more information by writing:

College Aid Plan, Inc.
1008 Elm Street
Manchester, New Hampshire 03101
The Tuition Plan, Inc.
Concord,
New Hampshire 03301

The Tennessee Educational Loan Corporation, in cooperation with the federal government, guarantees 100 per cent of loans made by Tennessee banks or other lending institutions to students from Tennessee who need to borrow money for their college education. This program enables lending institutions to provide long-term, low interest loans to students with a guarantee of receiving payment. In most cases the federal government will pay the interest on these loans while the student is enrolled in college, and repayment does not begin until the borrower leaves college. Applications may be obtained from participating lending institutions and will be furnished by the University upon request. Similar programs known as Guaranteed Student Loans or Federally Insured Student Loans are available for non-residents through their home states. The Student Aid Office maintains a listing of all state agencies.

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Academic Regulations

The Academic Year

The academic year begins in late August or early September and covers a period of forty-eight weeks divided into two semesters and a summer session. Each semester is approximately eighteen weeks in length. There is a Summer Session with one three-week term, two terms of from five to six weeks, and an extended term.

Orientation, Counseling, and Registration

An orientation and academic advising program for all new freshmen is held during the summer preceding fall registration. The sessions are conducted by the Student Affairs Division in order to acquaint entering students with various programs of study, general University regulations, and registration procedures. Students are assigned advisers who aid them in selecting appropriate courses. *Assistance from the adviser, however, does not relieve the student of the responsibility of studying the Bulletin himself and fulfilling all of the requirements therein for his particular goal.* It is expected that by the time a student has attained senior standing he will consult with the dean of his college in regard to the fulfilling of requirements for his chosen degree.

The Schedule of Classes, published a few weeks before the beginning of each semester and available from the office of the Dean of Admissions and Records, contains a detailed outline of the registration procedure and course changes and additions made since the publication of the *Bulletin*. Students are urged to study these schedules carefully and to keep them available for immediate reference during the registration period and throughout the semester. All students are expected to register on the dates indicated in the calendar; although registration is permitted after these dates, a late registration fee is charged, and there is no reduction in other fees.

In no case is credit allowed in any course for which the student is not duly registered; and all courses for which the student is registered are recorded as passed (with a letter grade), "T," credit, failed, incomplete, or withdraw. No student will be granted credit for a course which is not properly entered on his official registration material. Registration is not complete until all fees for the semester have been paid.

Classification of Students

Classification of students is based on the number of credit hours earned as shown in the table below.

Classification	Semester Hours
Freshman	0-24
Sophomore	25-54
Junior	55-84
Senior	85 or more
Special	Students not working on a degree

Students who have completed the required number of hours to be classified as juniors but who have not completed their basic requirements in the Lower Division should schedule these uncompleted requirements during the first semester following in which such courses are available in order to avoid a possible delay in graduation.

Credit Hours and Maximum Load.

The unit of credit at Memphis State University is the semester hour; a semester hour is defined as the credit earned for the successful completion of one hour per week in class for one semester; or two hours per week of laboratory for one semester. (A course which gives three semester hours credit will normally meet for three lecture or recitation hours per week; or for two lecture or recitation hours and two laboratory hours per week; or for some other combination of these.) Each lecture hour presupposes a minimum of two hours preparation on the part of the student.

The minimum credit hour load for classification as a full-time student and the maximum loads are found in the table below:

FULL-TIME CLASSIFICATION AND MAXIMUM LOAD

Term	Minimum Hours	Maximum Hours
Fall or Spring	12	*18
Pre-Summer	3	4
First or Second Summer	4	7
Extended Summer only	8	14
Extended and First or Second	8	9
Extended and First and Second	9	14

*This does not include the required physical education activity course. A student who has a B (3.0) average or better for a semester may, with the permission of the dean of his college, schedule a maximum of

twenty-one hours for the following semester.

The maximum course load for any combination of concurrent summer terms is ten semester hours. The student's course load for the entire summer session may not exceed 14 semester hours, excluding credit earned in the Pre-Summer Term or special courses which do not overlap one of the three following terms: First Summer, Second Summer, or Extended Term. (This may differ from requirements for the Veterans' Administration. Questions should be directed to the Coordinator of Veterans' Affairs.)

Grades and Quality Points

Grades.

At the end of each semester or summer term, instructors report to the Records Office the standing of all students in their classes. The grade of a student in any course is determined by his class standing and his examination, combined in such proportion as the instructor in charge of the course may decide. Class standing in any course is determined by the quality of the student's work, the regularity of his attendance, and the thoroughness of his preparation.

The instructor's evaluation of the student's work is expressed by the following letter grades which are converted to quality points for the purpose of averaging grades.

GRADES AND QUALITY POINTS

Grade	Quality Points	Grade	Quality Points
A, Excellent	4	T (See below)	0
B, Good	3	CR, Credit	0
C, Satisfactory	2	W, Withdrew	0
D, Poor	1	AD, Audit	0
F, Failure	0	S, Satisfactory	0
I, Incomplete	0	U, Unsatisfactory	0

The grade of I (incomplete) indicates that the student has not completed the course for some unavoidable reason that is acceptable to his instructor. Unless the student completes the requirements for removal of "I" within forty-five days from the end of the semester or summer term in which it was received, the grade of "I" will be changed to an F, regardless of whether the student is enrolled or not. Extensions may be granted if the instructor's absence from the campus makes it impossible for the student to remove the incomplete.

All grades, with the exception of "I", when reported, can be changed only by the instructor who reported them and then only after approval by the faculty Committee on Entrance and Credits. There is a Grade Appeals procedure described below.

In order that students may be permitted to complete independent studies courses in variable time periods which might exceed a regular enrollment period, the "T" grade has been introduced. The following procedure governs the use of the "T" grade:

1. Prior to the registration period, the professor obtains approval of his chairman and dean to use the "T" grade in a course(s).
2. The dean notifies the Records Office of courses for which the "T" grade may be awarded.
3. At the end of the regular term, the faculty member has the following options:
 - a. Award grades A-D.
 - b. Award an "I" grade if the faculty member feels that the work can be completed in 45 days. (If an "I" grade is awarded, a runner with the student's name on it will be sent to the faculty member at the end of 45 days. The faculty member *must record* either an A-D or the "T" grade to prevent the computer from automatically assigning an "F".)
 - c. Award a "T" grade. If the "T" grade is awarded, the student must re-register for the course in order to earn credit. The "T" grade is not used in the computation of GPA.

A student has the privilege of repeating a course in an attempt to improve the grade previously made. The grade he makes the last time the course is taken is the grade that will be considered as the final grade. A student may not attempt the same course more than three times for the purpose of obtaining a passing grade or a higher grade.

All courses for which the student is registered are recorded as passed (with a letter grade), "T", failed, withdrew, credit, or incomplete. In no case is credit allowed in any course for which the student is not duly registered. No student will be granted credit for a course which is not properly entered on his official registration card.

Quality Points.

In computing a student's scholarship ratio, or quality point average, all courses attempted are included except credit-no-credit, audit, incomplete, and satisfactory-unsatisfactory courses and "T" grades. As an example: a student carrying five three-semester-hour courses for a total of 15 semester hours makes the following grades: A, B, C, T, F; he has thus accumulated quality points in the amount of 12, 9, 6, 0, 0, for a total of 27. In computing his quality point average, the number of hours attempted (except "T" grade (12) is divided into the qual-

ity points earned (27) for an average of 2.25.

Student Grade Appeal Procedure

This appeal procedure is designed to provide any undergraduate or graduate student at Memphis State University with a clearly defined avenue for appealing the assignment of a course grade which he or she believes was based on prejudice, discrimination, arbitrary or capricious action, or other reasons not related to academic performance. In all cases the complaining student shall have the burden of proof with respect to the allegations in his complaint and in his request for a hearing. If any party fails to pursue timely any step of the procedure, the disposition of the student's complaint made in the last previous step shall be final. The procedure will be terminated at the level at which the Instructor and the Student are brought into agreement on the appealed grade. All correspondence and records will be retained in the office in which the complaint is finally resolved.

Step 1 The student shall first consult with the instructor in an effort to provide a satisfactory resolution of his complaint. In the event the student cannot schedule a meeting with the instructor, he may contact the department chairman who will schedule the meeting between the student and the instructor. The only exception to this procedure is the case where the instructor has been terminated by the University or is unavailable so that it is impossible to complete Step 1 within the allotted forty-five days. In this case the student may proceed directly to Step 2.

Step 2 If the complaint is not resolved in Step 1, the student may present his complaint in writing to the chairman of the department in which the course was offered within *forty-five* days from the end of the term during which the grade was received. The department chairman will attempt to resolve the complaint in consultation with the instructor and the student within a *fifteen-day* period dating from the formal presentation of the written complaint. The department chairman may, at his discretion, counsel with the faculty of the department.

If the department chairman was the instructor of the course involved in the complaint or if for any reason the chairman disqualifies himself, the written complaint of the student shall be submitted to the dean of the college.

The student's grade may be changed in Step 2 of the appeal procedure by the written consent of the instructor and the student.

Step 3 If the complaint cannot be resolved at the level of Step 2 within the prescribed fifteen-day time period, the student, within *five* days following the end of such period, may request in writing that the Chairman forward his complaint to the Dean. The Chairman must forward the student's complaint to the Dean within *five* days. The Chairman will provide the Dean with a copy of all correspondence and records pertaining to the complaint.

The Dean may utilize any resources available to his office to resolve the grade conflict within a *fifteen-day* period. The Dean's decision in this matter will be formally announced at a meeting of the Dean, the Chairman, the Instructor, and the Student. If the Dean and Chairman are in agreement that the grade should be changed, either raised or lowered, the Dean shall be empowered to change the grade without the Instructor's consent. Otherwise the grade shall remain as recorded.

Either the student or the Instructor may appeal the decision made under Step 3 within *fifteen* days by filing a written request for a hearing before the University Grade Appeals Committee. In the event of such an appeal the decision shall be stayed pending the completion of the procedure in Step 4. The Dean must be provided a copy of the hearing request.

Step 4 The written request for a hearing before the University Grade Appeals Committee should state the factual basis for the appeal of the Dean's decision. If the Committee finds the Student's or the Instructor's request merits a hearing, the Committee shall notify the Student, the Instructor, the Chairman and the Dean of the time and the location of the hearing. If the Committee finds that the request does not merit a hearing, the Student and the Instructor shall be so notified.

The University Grade Appeals Committee shall function as a review board. Based on its appeal review process, the committee shall make recommendations for action to the Vice President for Academic Affairs. The Vice President shall make the final decision. He may utilize any resources at his disposal to assist him in deciding the appeal. He shall have the power to allow the assigned grade to stand or to raise or lower the assigned grade. His decision must be formally announced to all parties and the committee. The time schedule allotted for completion of action by the committee and the Vice President shall be *fifteen* days.

The University Grade Appeals Committee shall be composed of seven members and seven alternates constituted as follows:

If the matter involves a graduate student—

A Chairman designated by the Vice President for Academic Affairs, a faculty member and alternate designated by the Dean of the Graduate School, two faculty members and two alternates elected by the Graduate Council. Three students and three alternates selected through the Graduate Student Association.

If the matter involves an undergraduate student—

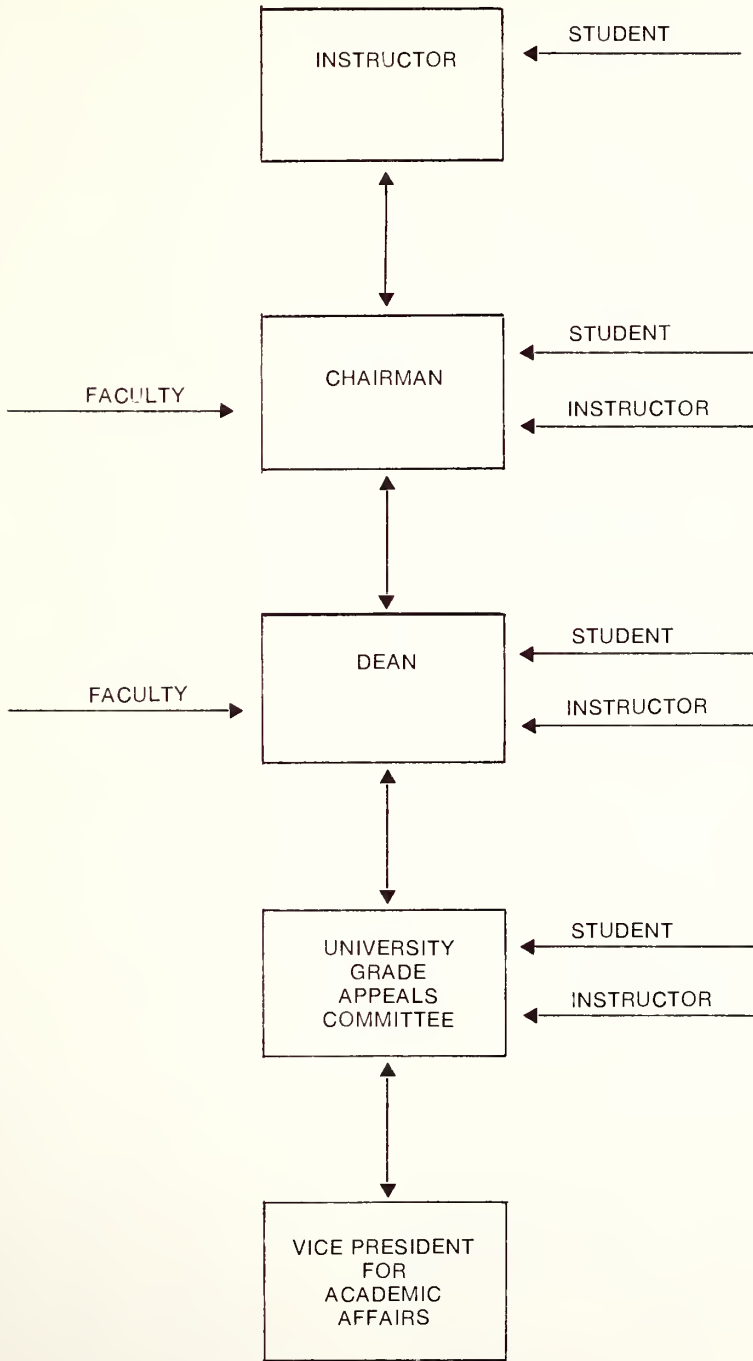
A Chairman designated by the Vice President for Academic Affairs, a faculty member and alternate designated by the Dean of the college involved, two faculty members and two alternates elected by the Academic Senate. Three students and three alternates selected through the Student Government Association.

The Vice President for Academic Affairs shall make and publish rules of procedure for the filing and consideration of a request for hearing, the presentation of written and oral statements and evidence, the conduct of the hearing, and the issuance of its findings and determination.

Although the primary responsibility of the committee is to review appeals, the committee will report any obvious discriminatory or capricious conduct on the part of either the student or the instructor to the appropriate Vice President for his consideration and action.

A flow diagram of the steps to be followed during the appeals procedure is found below.

Figure 1. Flow Diagram of the Appeals Procedure



Class Attendance

Students at Memphis State University are expected to give their scholastic obligations first consideration. Prompt and regular class attendance is considered necessary for satisfactory work. It is expected that a student will regard an engagement to attend classes as he would any other engagement or conference with an instructor. All reasons for absence should be submitted as soon as possible to the instructor. The satisfactory explanation of absences does not in any sense relieve the student from responsibility for the work of his course during his absence. The instructor in charge of a course determines in all instances the extent to which absences and tardiness affect the student's grade. Absences are counted from the first scheduled meeting of the course.

Absence from the final examination without the permission of the instructor incurs a mark of F.

Correspondence or Extension Credit

Memphis State University accepts a limited number of credits earned by correspondence and/or extension, provided that such credits are taken from an institution which is a member of the University Extension Association, The Teachers College Extension Association, or the appropriate regional accrediting association. Memphis State University offers some work by extension but none by correspondence.

Prior to a student's initial registration at Memphis State University as a regular undergraduate (for official definition of "regular undergraduate," see page 15), the Office of the Dean of Admissions and Records will, at the time the student applies for admission, determine the acceptability of extension and/or correspondence credits earned at other institutions. After the student has been admitted as a regular undergraduate, whether he is a beginning freshman or a transfer student, he will not be given credit applicable to any Memphis State University degree for subsequent correspondence or extension courses unless he has obtained, *prior to his enrollment in such courses*, written permission from the dean of the college in which he is majoring.

No student is permitted to enroll for correspondence or extension courses while he is carrying a maximum load at Memphis State University.

Not more than one-fourth of the semester hours applied on the bachelor's degrees may

be earned by correspondence or extension or a combination of the two.

A student who has completed the two semesters of required residence in his junior and senior years and who lacks *no more* than four semester hours toward completion of degree requirements may earn these additional credits by acceptable correspondence or extension work, or by residence at another approved institution. (For details of residence requirements, see page 47.)

Advanced Placement Credit

Memphis State University participates in the Advanced Placement Program of the College Entrance Examination Board. A maximum of 24 semester hours may be given to qualified students on the basis of the examinations conducted by the Board. To be eligible for credit, an entering freshman must place in group three, four, or five of the CEEB Advanced Placement Tests.

Credit By Examination

Almost all courses in the undergraduate curricula, except for those of laboratory, research, and performance variety, are available for credit by examination. Students who believe they have already mastered the material of a particular course offered at Memphis State may take a departmentally administered examination for credit in that course. Students should consult the department chairman to make application and to obtain information concerning the courses offered.

The following regulations govern the granting of credit by examination:

1. Any enrolled student—full-time, part-time, or extension—who is in good academic standing may make application to take an examination for credit. A student who has been admitted but has not yet registered for courses at Memphis State will have the credit earned by examination posted after he has enrolled. Examinations may not be given to students in sequential courses numbered lower than those the student has already completed.
2. Permission to take a credit examination must be obtained from the chairman of the department in which credit is sought and from the dean of the college in which the student is seeking a degree. When permission is granted and after payment of the cost of the examination, the Dean of Admissions and Records will issue an official permit for the examination.
3. The fee for taking the examination is \$15.00 minimum and an additional \$5.00 for each credit hour over three.
4. The form of the examination, the method of administering it, and the time of examination are left to the discretion of colleges and departments.

5. To receive credit, the student's examination grade should be a grade equivalent of at least a C. There are no restrictions governing the number of credit hours which may be earned through credit by examination. Credit is indicated on the student's record as Cr.

Credit by Placement Examination.

In departments in which placement examinations are given, a student may elect to receive credit for certain sequential courses numbered lower than the course in which the student was placed as the result of the examination. Recording of credit may be requested by the student upon completion of the course in which he was placed and is contingent upon his having earned a grade of C or higher in the course. The fee for recording the credit is the same as that for taking an examination for credit.

Audit Courses

Students who are registered for one or more classes at Memphis State University may also register to audit a course with the approval of their adviser and the chairman of the department in which the course will be offered. Auditors are not required to prepare lessons or papers, or take examinations. They are not to take part in class discussions or laboratory or field work. Since there is no attempt to evaluate the student in terms of quality of work or attendance, the student's record merely reflects that he was approved to audit the course.

Persons who are not enrolled for credit courses may register for audit courses with the approval of the Dean of Admissions and Records and the department chairman. These persons must have graduated from high school or be 21 years of age or older.

Students enrolled for credit courses may take no more than one audit course per semester. Persons who are not enrolled for credit courses may register for a maximum of three courses with the approval of the department chairman.

Fees for audits will be assessed on the same basis as fees for credit courses. Persons aged sixty or older may register free for audit courses on a space-available basis.

Credit-No-Credit Courses

The University, wishing to encourage mature students to broaden their range of interest without jeopardizing their grades, allows any student who has earned at least 60 semester hours with a minimum grade point average of 3.0 to enroll in courses outside

his major area on a credit-no-credit basis. The approval of the dean of his degree-granting college is necessary. The student is limited to one course per term and may not accumulate more than twelve semester hours on a credit-no-credit basis.

After a student has registered on a credit-no-credit basis, he may not change this course registration to reflect a letter grade and quality points. The student who completes successfully a credit-no-credit course will receive the appropriate number of hours as credit toward his graduation; these hours will not be used in the computation of his grade point average.

Adding and Dropping Courses

After the official registration period is over, the student may make adjustments in his schedule through the process of adding and/or dropping courses. Courses may be added only during the first five days of classes (three days in the six-week summer term and four days during the extended term). A student may drop any course or courses up to the final withdrawal date as specified in the University Calendar for that term. A fee of \$3.00 is charged for each course added or dropped. To stop attending a class without officially dropping the course incurs the grade of F.

Withdrawal from University

Any student who wishes to officially withdraw from the University must do so in person through the Office of Student Affairs. The student must complete an application for withdrawal and turn in his student identification card at the time of withdrawal. Failure to officially withdraw will result in the student receiving grades of F for the courses in which he is enrolled. Students enrolled in The Evening Division should report their withdrawals to the Records Office. Students enrolled in The Graduate School should report their withdrawals to the office of the Dean of The Graduate School.

Withdrawal from the spring and fall semesters is not permitted after the 15th class day immediately preceding the first day of final examinations. Withdrawal from the terms of The Summer Session is not permitted within four class days of final examinations.

Scholastic Standards

The Dean's List. The Dean's List is composed of those students who complete a minimum

of fifteen semester hours with a grade point average of at least 3.4.

Graduation. A minimum of 2.0 grade point average on all work attempted is required for graduation.

Academic Status and Retention

At Memphis State University, the academic status of a student is denoted by one of four conditions:

- (1) GOOD STANDING
- (2) ACADEMIC DEFICIENCY
- (3) ACADEMIC PROBATION
- (4) ACADEMIC SUSPENSION

Policies and procedures related to each of these conditions are outlined in the following comments.

Good Standing.

A student is in GOOD STANDING so long as the number of grade points earned is equal to twice the number of cumulative hours attempted. This is equivalent to a 2.00 average.

Academic Deficiency.

The status of ACADEMIC DEFICIENCY signals that a student has a cumulative grade point average of less than 2.00 but that his grade point deficiency is not sufficiently large to warrant his being placed on academic probation as defined in this policy statement.

Academic Probation.

A student will be placed on ACADEMIC PROBATION at the completion of any regular semester or summer session when twice the

total cumulative hours *attempted* exceeds the total quality points *earned* by 18. There is one exception to this policy. A student will not be evaluated for academic probation until he has attempted at least 12 semester hours. A student may clear his academic probation by reducing his grade point deficiency to 18 or less by residence work taken at Memphis State University.

Academic Suspension.

A student on academic probation who during his next term of enrollment fails to reduce his grade point deficiency to 18 or less will be placed on ACADEMIC SUSPENSION for not less than one regular semester or summer session. There is one exception to this policy. A student on academic probation will not be placed on academic suspension at the end of any semester or summer session during which he earns twice as many grade points as hours attempted for that term. This is equivalent to a term average of 2.00.

Following his second academic suspension, a student will be readmitted only on special approval by the Committee on Readmission on the basis of adequate evidence of ability, maturity, and motivation; this student must be out of Memphis State University one calendar year before his application for readmission will be considered.

NOTIFICATION OF ACADEMIC STATUS

Official notification of academic status is by means of the grade report processed to each student at the end of the regular semester or summer session. The academic status will be stated at the end of the report of grades according to one of the four conditions given previously.

6

Graduation from the University

Degrees Offered

The degrees conferred by Memphis State University are offered through The College of Arts and Sciences, The College of Business Administration, The College of Education, The Herff College of Engineering, The School of Law, and The Graduate School, as follows:

The College of Arts and Sciences: *Bachelor of Arts, Bachelor of Science, Bachelor of Science in Chemistry, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science in Medical Technology.*

The College of Business Administration: *Bachelor of Business Administration.*

The College of Education: *Bachelor of Science in Education, Bachelor of Music Education.*

The Herff College of Engineering: *Bachelor of Science in Civil Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Mechanical Engineering, Bachelor of Science in Engineering Technology, Bachelor of Science in Technology, Bachelor of Science in Geology.*

The Graduate School: *Doctor of Philosophy, Doctor of Education, Specialist in Education, Master of Arts, Master of Arts in Teaching, Master of Business Administration, Master of Education, Master of Fine Arts, Master of Music, Master of Music Education, Master of Public Administration, Master of Science.*

The School of Law: *Juris Doctor.*

The Department of Nursing: *Associate of Arts in Nursing.*

Courses required for all baccalaureate degrees are outlined in the section which follows; specific requirements for the individual degrees will be found in the sections of the *Bulletin* devoted to a description of the undergraduate colleges. Requirements for the Juris Doctor degree will be found in the *Bulletin* of The School of Law; requirements for graduate degrees will be found in The *Bulletin* of The Graduate School.

General Requirements.

The following requirements have been established by the University for all undergraduate degrees offered. *In addition, the student must meet the requirements for his specific degree as established by the college or department in which it is offered.*

1. *English.* (12 semester hours.) All candidates for graduation at Memphis State University are required to complete English 1101 and 1102, or their equivalent, and any two of the following: English 2101, 2102, 2103, 2104, 2105 or their equivalent. These two sequences must be scheduled in consecutive semesters through the freshman and sophomore years or until completed. English 1101 and 1102 must be taken in sequence; no

credit will be allowed for English 1102 until 1101 has been completed successfully.

2. *History.* (6 semester hours). The State requires that students who did not earn one unit in American History in high school take it during their first or second year at the University. All students must complete successfully History 2601 and 2602, or their equivalent. These courses are not open to students who have earned less than 25 semester hours credit. This requirement is waived for students enrolled in The Herff College of Engineering except for those who did not earn at least one unit in American History in high school.

3. *Science.* (6 semester hours). All students must complete successfully a minimum of six semester credits in a natural, physical, or engineering science.

4. *Physical Education.* Four semesters of physical education activity courses are required of all regular undergraduate students during the first four semesters in the University except for the regular undergraduate student who is part-time or who is taking the majority of his hours in the evening. These students are not exempt from the four semester hours of required physical education courses and are encouraged to schedule these courses as early as possible during their college residency.

The student may select the activity courses of his choice. With the exception of Physical Education 1001 (Conditioning), the student may not take the same activity course for credit more than once. He may receive credit in Physical Education 1001 for one or two terms, but he may not receive more than one semester hour of credit for this course during any one term.

A student may reduce the number of required physical education courses by the number of courses in Air Force ROTC completed with a passing grade. Two semesters of physical education may be waived for students who are members of the Memphis State University Marching Band for two semesters. Band members are required to take a minimum of 2 semesters of physical education and may not receive waivers for both band and Air Force ROTC.

No student other than a physical education major or minor or a recreation major may apply more than four semester hours of physical education to the minimum degree requirement of 132 semester hours. A veteran receiving as much as six semester hours of health and physical education for service experience may apply two extra one hour service courses credits toward the minimum of 132 semester hours required for graduation.

A student unable, for medical or other reasons, to take regular physical education is required to register for an adaptive class, or otherwise follow recommendations of the Office of Health Services.

If the Memphis State University evaluation of the record of a transfer student shows no credit for or participation in physical activity courses or ROTC, he must complete activity courses according to the following schedule:

With 1 through 12 semester hours of credit, four activity courses.

With 13 through 24 semester hours of credit, three activity courses.

With 25 through 39 semester hours of credit, two activity courses.

With 40 through 54 semester hours of credit, one activity course.

With 55 or more semester hours of credit, a student is not required to take physical education courses at Memphis State University. If the Memphis State University evaluation of the record of a transfer student shows credit for or participation in physical education or

ROTC, he must either (1) take physical education activity courses at Memphis State University to bring the total to four semesters (less the number of semesters of ROTC taken) or (2) complete requirements according to the above schedule, whichever is smaller.

5. *English Proficiency.* Every student at Memphis State is required to demonstrate his proficiency in English by making a grade of C or better in English 1101 and 1102 (or their equivalents, in the case of transfer students).

6. *Quality Point Average.* To receive a bachelor's degree from any of the colleges in the University, a student must have a quality point average of at least 2.000 (i.e., two quality points for every semester hours attempted); for the method of computing the quality point average, see page 39. If for any reason a student offers more than 132 semester hours credit for graduation, the ratio of two quality points to one semester hour of credit must be maintained. To attain this standard the candidate must have a C average on all courses attempted in the University. Students who enter Memphis State University with advanced standing are required to maintain an average of C on all courses taken here.

7. *Residence Requirements.* A student will satisfy residence requirements for graduation by completing, at Memphis State University, 33 of the final 66 semester hours which are required for his degree. In addition, the student must meet the residence requirements for his specific degree as established by the college in which it is offered. Exceptions to residence requirements can be authorized by the appropriate dean.

Residence requirements for specific degrees within each college may be found in the section of the *Bulletin* beginning on page 49. For more details, the student should inquire in the office of the dean of the appropriate college.

Graduation With Distinction

Students who have fulfilled all graduation requirements, who have completed a minimum of forty-five semester hours at Memphis State University prior to their final semester, and who have been in residence for a minimum of three semesters prior to their final semester are eligible for designation as honor graduates. Those who have a quality point average of 3.25 and less than 3.5 will be graduated *cum laude*; those who have a quality point average of 3.5 and less than 3.8 will graduate *magna cum laude*; those who have a quality point average of 3.8 or above will be graduated *summa cum laude*. (In computing averages for honors, the grades of both semesters of the graduating year will be included.)

A transfer student, in order to be eligible must have made the required average on all work taken at Memphis State University and must, in addition, have an over-all average

which meets the honors requirements: the final average may in no instance be higher than that made at Memphis State University.

A student who already holds a baccalaureate degree is not eligible for these distinctions.

University Honors Program

The University Honors Program is being developed as a new four-year course of study for students of high academic ability. It is coordinated by the University Honors Council, a committee of faculty and honors students. Those completing this program will graduate either with University honors or with honors in a particular college or department offering an honors curriculum. The Honors Program consists of special course offerings in both the lower and upper divisions and is closely coordinated with college and department honors curriculums where these exist. In addition to the required honors coursework, honors candidates must complete honors theses or comparable senior honors projects.

Prospective and current students of the University whose academic records are distinctly above average are invited to contact the Director, University Honors Program, for further details concerning their eligibility to participate and for more specific information on program benefits and requirements.

Catalog Applicability

The degree requirements published in the undergraduate catalog issue of the Memphis State University *Bulletin* are valid for seven years from the beginning of the academic year to which the catalog applies. A student may complete his degree under the provisions of any valid MSU catalog provided the effective date of that catalog is not earlier than his initial admission to MSU or some other accredited institution of higher learning. (This issue of the catalog is valid *until* fall of 1982.)

Pre-Professional Degree Program

A student who completes six semesters of undergraduate work before entering certain professional schools may, upon evidence of satisfactory completion of the first year of

work in the professional school, be granted a baccalaureate degree from Memphis State University, provided that all the following provisions are met *before the student enrolls in the professional school*:

1. Formal application for his Memphis State University degree must be made to the dean of the college in which the student is enrolled.
2. The choice of a professional school must be approved in writing by the dean of the college in which the student is enrolled.
 - a. The minimum requirements for entrance to professional school must be sixty semester hours of undergraduate work.
 - b. The professional school must be accredited by the recognized national association in its field or must be an integral part of a university accredited by the appropriate regional association.
3. The last two semesters of pre-professional work must be done at Memphis State University.
4. The candidate must complete 99 semester hours in a pre-professional curriculum.
5. The candidate must complete, in his pre-professional curriculum, at least 24 semester hours in courses numbered above 2999, including at least 6 semester hours in his major field.
6. The candidate must meet all freshman and sophomore requirements of the degree curriculum.
7. The candidate must complete a minimum of 24 semester hours in his major area and 18 semester hours in his minor area.

The candidate in the pre-professional degree program should notify the dean of his college of his intentions no later than the beginning of his sophomore year and should, with the guidance of his adviser, plan his program at that time.

Second Bachelor's Degree

A student who has completed the requirements for one bachelor's degree may receive a second bachelor's degree upon the completion of the curriculum prescribed for the second degree from any of the valid catalogs. (The term "second degree" means a different degree, *i.e.*, one with a different title, rather than an additional major within the same degree.)

Requirements for Teacher Certification

An undergraduate student can receive a certification to teach in the elementary or secondary schools of Tennessee by completing all degree requirements in one of the following programs:

1. For programs leading to full certification in all areas except secondary, the student must enroll in the College of Education.

These programs will lead to a Bachelor of Science in Education Degree.
2. For programs leading to full certification at the secondary level, the student may enroll either (a) in the College of Education or (b) in the College that offers a major in a specific subject for which certification is desired.
 - a. College of Education: The student must complete one or more endorsement areas and all other degree requirements outlined on page 81.

Such a program will lead to a Bachelor of Science in Education Degree or a Bachelor of Music Education Degree.
 - b. Other Colleges: The student must complete the major program and all degree requirements of the college in which he is officially enrolled. In addition, he must complete requirements for a minor in Secondary Education, consisting of General Education (45 semester hours), Professional Education (24-33 semester hours) and a major endorsement in one specific subject. The requirements are listed in Sections I, II, and V beginning on page 81.

Such a program will lead to a degree designated by the college in which the degree is taken.

A student in any of the programs described above must (1) file an application to the teacher education program in Room 215, College of Education (see page 77); (2) fulfill the requirements and application procedures for the student teaching program (see page 78); and (3) register in the Teacher Certification and Placement Office (see page 48). For the method of computing the required 2.25 grade point average(s) in the endorsement(s), see page 39.

Graduate, special, and transfer students who wish certification should confer with the Director of Certification concerning their individual requirements, particularly the credit to be allowed on courses taken elsewhere or at an earlier time.

7

Colleges, Schools and Divisions

The College of Arts and Sciences

WALTER RHEA SMITH, Ph.D., *Dean*

JAMES F. PAYNE, Ph.D., *Assistant Dean*

Room 217, 219, Mitchell Hall

Purposes

The College of Arts and Sciences has three distinct functions within the framework of the University.

1) Its primary function is to offer a strong liberal arts program designed to help the student prepare himself for life in his own cultural setting by acquiring the means and the desire continually to enlarge his intellect and deepen his insights. "The purpose of education," wrote John Stuart Mill, "is to make capable and cultivated human beings. Men are men before they are lawyers, physicians, or manufacturers; and if you make them capable and sensible men, they will make themselves capable and sensible lawyers and physicians." It is the earnest belief of The College of Arts and Sciences that the essential preparation for any profession or vocation is a thorough foundation in those major fields of human interest which are included in the humanities, the natural sciences and the social sciences. The program of liberal studies at Memphis State University aims to provide the student with a store of factual knowledge; to introduce him to varying sets of principles; to stimulate him to think about and to evaluate these facts and principles; and to encourage him to order his own affairs and those of his society with the talent, insight, and discrimination which he develops.

2) The College of Arts and Science offers this kind of education, not only to the candidates for its own degrees, but also to the students of other colleges of the University, all of whose degree plans call for courses in the liberal arts.

3) A third important function of the college is to offer preparatory courses for students interested in careers in medicine, dentistry, nursing, teaching, law, and other professions; specific pre-professional programs, designed to prepare students to qualify for admission to professional schools, are available.

Organization of the College

Departments.

The College of Arts and Sciences comprises

seventeen departments: Anthropology, Art, Biology, Chemistry, English, Foreign Languages (French, German, Greek, Italian, Latin, Portuguese, Russian, Spanish), Geography, History, Journalism, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology, and Speech and Drama. The Institute of Criminal Justice is an academic unit within the College of Arts and Sciences. Requirements for the majors and minors offered by these departments are listed in the section beginning on page 62.

CONCENTRATION GROUPS

The various offerings of the seventeen departments of The College of Arts and Sciences are organized into three concentration groups:

HUMANITIES: art, English, French, German, Greek, history, Italian, journalism, Latin, mathematics, music, philosophy, psychology, Russian, Spanish, speech.

NATURAL SCIENCES: biology, chemistry, geology (administered by The Herff College of Engineering), physical geography, mathematics, physics.

SOCIAL SCIENCES: anthropology, economics (administered by The College of Business Administration), geography (other than physical), history, philosophy, political science, psychology, sociology.

Lower and Upper Divisions.

The Lower Division comprises the freshman and sophomore years, the first four semesters of undergraduate work; courses in the lower division are numbered from 1000 through 2999. The Upper Division comprises the junior and senior years, the last four semesters of undergraduate work; courses offered in the Upper Division are numbered above 2999.

The Institute of Governmental Studies and Research.

(Department of Political Science)

The Institute of Governmental Studies and

Research is a research and service agency operating in close coordination with the academic program of the university. It provides research and consulting assistance to government agencies at the local, regional, state, national, and international levels. The focus of the Institute is upon public policy research and the dissemination of information of value to public decision makers. Working directly with the faculty of the Department of Political Science and with the availability of the faculty resources of other departments, the Institute undertakes functions of research and service germane to public policy and governmental affairs. The functions of the Institute include:

I. **Research:** The Institute sponsors public policy research in order to develop and disseminate new knowledge related to both theory and practice. It enters into contracts for "institutional" research in addition to encouraging members of the faculty to engage in individual research. Research findings are published in the Institute's Public Affairs Newsletter, and in periodic monographs.

II. **Consulting, advisory, and technical assistance:** The Institute renders services to a wide spectrum of decision-makers, including private citizens and organizations as well as officials and government agencies, on a contractual basis. These activities also help to relate teaching and research to the present and future needs of public institutions and provide expanded research opportunities for faculty and students.

III. **Community Service:** The Institute is actively engaged in community service by conducting post-graduate and professional training programs, institutes, and seminars for those already in public service. Of special interest to the Institute is the academic program which prepares students for employment in public service by placing them as interns with governmental agencies. This affords practical experience in the area of public service to graduate students, especially those interested in a public service career in Tennessee.

Chucalissa Indian Village and Museum.

(*C. H. Nash Museum*)

This prehistoric Indian village 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 opera-

tions. The courses taught are listed in the Department of Anthropology offerings. Chucalissa is located 17 miles from the main campus, west of Highway 61 South, at Mitchell Road. The facility is open to the public throughout the year.

Admission

Requirements for admission to The College of Arts and Sciences are those set up for the University as a whole; see page 14.

Residence Requirements

University residence requirements are explained in detail on page 47. A transfer student in The College of Arts and Sciences must earn at least 6 semester hours in residence in his major subject and at least 3 semester hours in his minor.

Foreign Language Requirements

Specific requirements in foreign language for the degrees offered by The College of Arts and Sciences are as follows:

- A. **BACHELOR OF ARTS AND SCIENCE:** Twelve semester hours, or the equivalent, in one foreign language.
- B. **BACHELOR OF SCIENCE IN CHEMISTRY:** German 1101, 1102, 2201 and 2203.
- C. **BACHELOR OF FINE ARTS AND BACHELOR OF SCIENCE IN MEDICAL TECHNOLOGY:** Six semester hours in one foreign language.
- D. **BACHELOR OF MUSIC:** See page 59 for specific language requirements.

A student already having proficiency in a foreign language taught at Memphis State University (attained through high school or college courses, military service, private study, foreign residence, etc.) should enroll in a course at the level for which his training qualifies him. He can best determine this initial course by taking the proficiency test which is given at the beginning of each semester. (Detailed information is available from the chairman of the Department of Foreign Languages.) A student taking the proficiency test can apply immediately for the hours of credit warranted by the test score. If he chooses not to take the proficiency test, he may enroll in any course above the beginning one and upon completing it with a grade of 'C' or better apply for credit for the preceding courses. In either case, he *must make*

written application to the chairman of the Department of Foreign Languages (application forms are available in the Foreign Language office). This regulation shall apply only to the lower division, and credit gained in this manner shall not exceed 12 semester hours in any one language with no more than 3 hours being allowed for each course.

This regulation will also apply to a student whose mother tongue is a foreign language taught at Memphis State University, with the following modifications: lower-division credit will be given only when he has made a grade of C or better in one upper-division course, other than 3301 or 3302, and when he has demonstrated the English proficiency required for graduation (see page 47 for details). He then must make *written application to the chairman of the Department of Foreign Languages.*

Pre-Professional Training

Standing committees of the faculty are available to advise students interested in preparing for careers in various professional areas; committee members, representing departments of the University in which pre-professional training is given, advise students concerning specific programs required by the various professional schools. A student who completes successfully six semesters of undergraduate work before entering an accredited professional school may, upon presentation of evidence of satisfactory completion of the first year of professional education, be granted a baccalaureate degree from Memphis State University, provided that the requirements set forth in the pre-profession degree program described on page 47, are met. The advisory committees are as follows:

Pre-Medical — This committee advises students interested in careers in medicine, dentistry, nursing, pharmacy, optometry, veterinary medicine, medical technology, and related fields in the health sciences.

Pre-Law — In general accredited law schools have not adopted specific requirements for pre-law education; they do, however, emphasize certain courses as being conducive to the development of the broad cultural background necessary for the successful study of law. Students enrolling in The College of Arts and Sciences for their pre-law training are encouraged to enter immediately one of the degree programs offered by the college.

Pre-Social Welfare—The student who wishes to prepare for admission to a graduate school of social work or who plans to go directly from college into a social welfare or social work agency will complete the requirements for the baccalaureate degree with a major in social welfare (sociology). Specialized courses will be chosen in conference with the adviser. See social welfare major on page 66.

Academic Programs

Degrees Offered.

The College of Arts and Sciences offers six degrees: the Bachelor of Arts, the Bachelor of Science, the Bachelor of Fine Arts, the Bachelor of Music, the Bachelor of Science in Chemistry, and the Bachelor of Science in Medical Technology. Requirements for these degrees are outlined in the section beginning on page 56.

The following is an outline, by departments, of all majors and concentration areas offered by The College of Arts and Sciences

ACADEMIC PROGRAMS

Department	Major	Concentrations Within Major	Degree Offered
Anthropology	Anthropology		Bachelor of Arts Bachelor of Science
Art	Art	(1) Art Education (2) Graphic Design (3) Interior Design (4) Painting, Sculpture, Printmaking	Bachelor of Fine Arts
	Art History		Bachelor of Arts
Biology	Biology	(1) Botany (2) Microbiology (3) Invertebrate Zoology/ Entomology (4) Vertebrate Zoology	Bachelor of Arts Bachelor of Science

Department	Major	Concentrations Within Major	Degree Offered
Chemistry	Chemistry		Bachelor of Arts Bachelor of Science Bachelor of Science in Chemistry
	Physical Science		Bachelor of Arts Bachelor of Science
Institute of Criminal Justice	Law Enforcement	(1) Corrections (2) General Law Enforcement (3) Police Administration	Bachelor of Arts
Economics	Economics		Bachelor of Arts
English	English		Bachelor of Arts
Foreign Language	French		Bachelor of Arts
	German		Bachelor of Arts
	*Russian		Bachelor of Arts
	Spanish		Bachelor of Arts
	Latin		Bachelor of Arts
Geography	Geography		Bachelor of Arts Bachelor of Science
History	History		Bachelor of Arts
Journalism	Journalism	(1) Advertising (2) Broadcast Journalism (3) News Editorial (4) The Magazine (5) Press Photography (6) Public Relations	Bachelor of Arts
Mathematics	Mathematics	(1) Algebra & Analysis (2) Applied Mathematics (3) Computer Science (4) Statistics	Bachelor of Arts Bachelor of Science
Music	Performance	(1) Brass Instruments (2) Opera (3) Organ (4) Percussion (5) Piano and/or Harpsichord (6) Strings (7) Voice (8) Woodwinds	Bachelor of Music
	Musical Arts	(1) Church Music (Choral) (2) Church Music (Organ) (3) Composition (4) Music History (5) Music Theory	Bachelor of Music
	Applied Music		Bachelor of Arts
	Music History & Literature		Bachelor of Arts
Philosophy	Philosophy		Bachelor of Arts
Physics	Physics		Bachelor of Arts Bachelor of Science
Political Science	Political Science		Bachelor of Arts
	Public Administration		Bachelor of Arts
Psychology	Psychology		Bachelor of Arts Bachelor of Science
Sociology	Sociology		Bachelor of Arts
	Social Welfare		Bachelor of Arts

A major in Russian requires a second major in addition.

Department	Major	Concentrations Within Major	Degree Offered
Speech and Drama	Speech and Drama	(1) General Speech (2) Radio-TV-Film (3) Rhetoric and Communication Arts (4) Theatre & Oral Interpretation	Bachelor of Arts
	Theatre	(1) Performance (2) Production	Bachelor of Fine Arts
Interdepartmental Programs	Comparative Literature		Bachelor of Arts
	Medical Technology		Bachelor of Science in Medical Technology
**International Studies	†Urban Studies		Bachelor of Arts
	†Latin American Studies		Bachelor of Arts
	International Relations	(1) American Foreign Policy (2) Western Europe (3) Latin America (4) Asia (5) Soviet (6) Sub-Saharan Africa (7) Middle East and North Africa	Bachelor of Arts
	African Studies		Certificate

**See also the listing for the College of Business Administration.

† Collateral major recommended.

INTERDEPARTMENTAL PROGRAMS.

Comparative Literature.

The program in Comparative Literature is conducted through the cooperation of the Departments of English, Foreign Languages (Classics, French, German, Italian, Russian, and Spanish), History, Philosophy, and Speech and Drama. The program gives qualified students the opportunity to study Western Literature within an international context while developing simultaneously a particular competence in two specific literatures. The program offers a broad range of courses and allows the individual student considerable freedom in structuring his major. While studying the two literatures of his choice, the student may wish to concentrate on an aspect of Western Literature common to both. He might, for example, concentrate on a period (e.g., the Renaissance) or a movement (e.g., Naturalism) or a genre (e.g., the epic). Whatever the student's program in Comparative Literature, he can expect to acquire a broader sense of literary history and tradition than may be derived from the study of a single literature.

Courses offered by the program fall into four general classes:

1. Courses in foreign literature read in English translation. These courses are taught entirely in English and do not re-

quire the use of a foreign language.

2. Courses in foreign literature read in the original language. Proficiency in the foreign language is required.
3. Courses in English and American Literature.
4. Special courses related to literature in the areas of history, philosophy, and theatre.

For the major in comparative literature see page 62.

Criminal Justice.

The Institute of Criminal Justice is an academic unit within The College of Arts and Sciences. The major in law enforcement leads to the Bachelor of Arts degree; it is an interdisciplinary program combining liberal arts courses and introductory professional courses. The purpose of the Institute's program is to prepare men and women presently serving or preparing to serve society in the field of criminal justice to the extent that such specialization is compatible with the philosophy of The College of Arts and Sciences. In addition, the Institute of Criminal Justice provides short courses, seminars, conferences, in-service courses, and other programs which are relevant to the criminal justice field. Students pursuing a degree in this field must meet the University admission

requirements. For the major in law enforcement see page 63.

International Studies.

AFRICAN STUDIES. Memphis State University's interdisciplinary program in African Studies, coordinated by the University's Office of International Studies, is open to students majoring in another interdisciplinary field or in a traditional discipline in any of the undergraduate colleges. Those who successfully complete the program will be awarded the Certificate in African Studies. The student's record will reflect the award of this certificate.

The African Studies certificate program is designed to serve the needs of students seeking a general education that emphasizes knowledge of this important world area, those who plan to teach in the elementary or secondary schools, and those who plan to do graduate work in an African or Afro-American field.

The candidate for the Certificate in African Studies will take courses in the fields of African anthropology, geography, history, and politics. There are no special language requirements for the program, but students planning to do graduate work in the field are urged to acquire a working knowledge of French or Portuguese. All students enrolled in the certificate program are encouraged to take advantage of opportunities for study or travel in Africa.

Admission to the program is by consent of the African Studies Adviser. The adviser will assist the student in planning his program in accordance with the requirements and his special interests. Requirements are listed on page 62. The African Studies Adviser is Monte R. Kenaston, Department of Anthropology.

INTERNATIONAL BUSINESS. A program leading to the degree of Bachelor of Business Administration with a major in International Business is offered within the College of Business Administration. Several departments of The College of Arts and Sciences participate in the program. The International Business Adviser is John J. Reid, Department of Economics. For a description of the program and degree requirements, see page 65.

INTERNATIONAL RELATIONS. The International Relations program provides the opportunity to bring the knowledge of several additional disciplines to bear upon a focal point of human relationships and problems

which cross national and cultural boundaries. The program is designed to serve the student who seeks knowledge of the range of contemporary and possible future problems which confront international society and understanding of alternative national and cultural perspectives on solutions to those problems. The program also serves the needs of students planning a career in the Foreign Service or related agency of the Federal Government and students preparing for employment abroad in the private sector, in international organizations, private or public.

International relations is offered as a major only. The program emphasis is on the course work in history, political science, economics, and geography, with contributions from other social science disciplines. Within the program the student is required to concentrate a part of his work in the field of American foreign policy or in one of six areas of the world. Students are encouraged to pursue the study of a foreign language and to seek opportunities for travel and study abroad. The student's program should be planned in consultation with the International Relations Adviser. Course requirements are listed on page 64. The International Relations Adviser is Alan R. Thoeny, Department of Political Science.

LATIN AMERICAN STUDIES. The Latin American Studies program offers an interdisciplinary approach to the study of Spanish and Portuguese America. It is designed primarily to serve the needs of students who are planning a career in Latin America or who will work with public or private institutions in capacities that require a broadly based knowledge and understanding of Latin America. It is also structured to meet the needs of students who wish to prepare for graduate study in programs permitting a Latin American concentration, either within a traditional discipline or in an advanced interdisciplinary program. This program is centered on the Spanish and Portuguese languages and Latin American geography, history, literature, and politics. Appropriate courses in anthropology, art, economics, and sociology are also included in the program.

The student may elect Latin American studies as a major or minor. It is strongly recommended, but not required, that the student electing to major in this interdisciplinary field satisfy requirements for a collateral major in one of the traditional disciplines represented in the program. The student is advised that proficiency in spoken Spanish and Portu-

guese is very desirable for those contemplating a career in Latin America. He is also advised to travel in Latin America and to participate in Memphis State University study-abroad programs in that area. The student's program should be planned in consultation with the Latin American Studies Adviser. Course requirements are listed on page 65. The Latin American Studies Adviser is John A. Sobol, Department of Geography.

Urban Studies.

Because of the growing need to prepare students for life in complex urban environments, as well as to understand better the problems associated with urban living, the College of Arts and Sciences has established an interdisciplinary program in Urban Studies.

The program is offered through the cooperation of the Departments of Anthropology, Economics, Geography, History, Political Science, and Sociology. The program provides students with opportunities to study the city within a multi-disciplinary framework. It also gives students opportunities to examine the problems of the city (e.g., housing, pollution, transportation, congestion, etc.) first hand and not simply within the confines of the classroom.

The student may elect Urban Studies as a major or minor. It is recommended, but not required, that the students majoring in Urban Studies choose a collateral major in one of the traditional disciplines represented in the program. The student's program should be planned in consultation with the Urban Studies Adviser. Course requirements are listed on page 67. The Urban Studies Adviser is Geraldine Terry, Department of Sociology.

TEACHER PREPARATION.

Students enrolled in a degree program of The College of Arts and Sciences who wish to prepare themselves for teaching careers in the secondary schools of Tennessee may meet the state certification requirements while pursuing their chosen majors. Detailed certification requirements are outlined under Requirements for Teacher Certification beginning on page 62. An application to enter the teacher education program must be filed with the education analyst, room 211-A, The College of Education.

Degree Requirements.

BACHELOR OF ARTS

To qualify for the degree of Bachelor of Arts the student must complete a minimum of 132 semester hours with a quality point average

of 2.0 (on a scale in which the grade of A has a quality point value of 4; B, 3; C, 2 and D, 1). Of the 132 semester hours required for graduation, at least 45 semester hours must be in courses from the Upper Division (those numbered above 2999). Not more than 42 semester hours in any one subject will be counted toward a degree. Not more than 18 semester hours (excluding required physical education) may be taken outside The College of Arts and Sciences except for courses required for either (1) a minor or (2) teacher certification, but not both. Detailed requirements are as follows:

English 1101, 1102 with a minimum grade of C; and two of the following: 2101, 2102, 2103, 2104, 2105.

Foreign language: 12 semester hours, or the equivalent in one foreign language; for details see page 51.

History 2601, 2602.

One semester of one natural science, and one two semester sequence in a second natural science.

Courses from which these must be selected are Biology 1200, 1600; Chemistry 1051, 1052; or Chemistry 1111, 1112; Geography 1101, 1102; Geology 1101, Geology 1101; Geology 1101, 1201, (not more than two semesters may be taken in geography and/or geology courses to meet this requirement); Physical Science 1031, 1032; Physics 1111, 1112, or 1811, 1812 or 2111, 2112, or 2511, 2512.

One semester of one social science, and one two semester sequence in each of two other social sciences. (15 semester hours)

Courses from which these must be selected are Anthropology 1100, 1200; Economics 1010 or 2110 and 2120; Geography 2301, 2311; History 1301, 1302; Political Science 2211, 2301, or 2211, 2501; Psychology 1101, 1102; Sociology 1111, 1112.

Mathematics 1181, 1182; or 1211, 1212; or 1321, 2321 or 1203, 1312; or 1203, 2291; or 1203, 2611; or Philosophy 1111, 1611.

Two of the following courses: Art 1101; Music 1131; Speech 1551.

Physical Education: for details see page 46.

Completion of requirements for any major offered in The College of Arts and Sciences.

Electives to bring the total to 132 semester hours.

BACHELOR OF SCIENCE

The Bachelor of Science degree may be awarded only to students majoring in one of the following disciplines: anthropology, biology, chemistry, geography, mathematics, physics, or psychology. Students majoring in anthropology, geography, or psychology (for the Bachelor of Science degree) must minor in either biology, chemistry, mathematics, or physics.

To qualify for the degree of Bachelor of Science the student must complete a minimum of 132 semester hours with a quality

point average of 2.0 (on a scale in which the grade of A has a quality point value of 4; B, 3; C, 2; and D, 1). Of the 132 semester hours required for graduation at least 45 semester hours must be in courses from the Upper Division (those numbered above 2999). Not more than 42 semester hours in any one subject will be counted toward a degree. Not more than 18 semester hours (excluding required physical education) may be taken outside The College of Arts and Sciences except for courses required for either (1) a minor or (2) teacher certification, but not both. Detailed requirements are as follows:

English 1101, 1102 with a minimum grade of C; and two of the following: 2101, 2102, 2103, 2104, 2105.

Foreign language: 12 semester hours, or the equivalent, in one foreign language; for details see page 51.

History 2601, 2602.

Mathematics 1181, 1182; 1211, 1212; or 1321, 2321; or 1203, 1312; or 1203, 2291; or 1203, 2611.

One of the following two-semester sequences: Biology 1200, 1600; Chemistry 1051, 1052; Chemistry 1111, 1112; Geography 1101, 1102; Geology 1101, 1201; Physics 1111, 1112; or 1811, 1812; or 2111, 2112; or 2511, 2512.

Six semester hours from each of two of the following areas: anthropology, economics, geography (excluding earth science courses and Geography 3501, 3502, and 3511), history (excluding History 2601 and 2602), philosophy, political science, psychology, and sociology.

One of the following courses: Art 1101; Music 1131; Speech 1551.

Physical Education: for details see page 46.

Completion of the requirements for a major in one of the following disciplines: anthropology, biology, chemistry, geography, mathematics, physics, or psychology.

Students majoring in anthropology, geography, or psychology (for a Bachelor of Science degree) must complete a minor in either biology, chemistry, mathematics, or physics.

Electives to bring the total to 132 semester hours.

BACHELOR OF SCIENCE IN CHEMISTRY

To qualify for the degree of Bachelor of Science in Chemistry, the student must complete a minimum of 132 semester hours with a quality point average of 2.0 (on a scale in which the grade of A has a quality point value of 4; B, 3; C, 2; and D, 1). Of the 132 semester hours required for graduation, at least 45 semester hours must be in courses from the Upper Division (those numbered above 2999). Not more than 18 semester hours (excluding required physical education) may be in courses outside The College of Arts and Sciences except for courses required for teacher certification. Detailed requirements

are as follows:

English 1101, 1102 with a minimum grade of C; and two of the following: 2101, 2102, 2103, 2104, 2105.

Foreign language: German 1101, 1102, 2201, and 2203.

History 2601, 2602.

Mathematics 1212, 1321, 2321, 2322.

Physics 2111, 2112 (by permission); or 2511, 2512.

Chemistry 1111, 1112, 3200, 3301, 3311, 3312, 3411, 3412, 3601, 3602, 3603, 4111, 4220, 4900, and five additional hours in senior chemistry courses. A maximum of three hours credit in advanced electives in physics or mathematics can be substituted for equal credit in senior chemistry courses.

Three semester hours from one and six semester hours from another of the following areas: anthropology, economics, geography (excluding earth science courses and Geography 3501, 3502, and 3511), history (excluding History 2601 and 2602), philosophy, political science, psychology, and sociology.

One of the following courses: Art 1101; Music 1131; Speech 1551.

Physical Education: for details see page 46.

Completion of the requirements for a minor in biology, physics or mathematics.

Electives to bring the total to 132 semester hours.

BACHELOR OF FINE ARTS (IN ART)

The Bachelor of Fine Arts in Art is a professional degree, the requirements for which provide the student with a greater opportunity for specialization in art than he has under the other baccalaureate programs; for this degree a total of 142 semester hours is required for graduation, 90 of which must be in professional course work. A minimum grade of C is required in all art courses; the student must maintain an overall quality point average of 2.0 (on a scale in which a grade of A has a quality point value of 4; B, 3; C, 2; and D, 1). The specific degree requirements are divided into five groups: (1) general education (2) basic art courses (3) courses in one of the four concentration areas (4) elective courses in art and (5) elective courses other than art to bring the total to 142 semester hours.

(1.) General education courses:

English 1101, 1102 with a minimum grade of C; and two of the following: 2101, 2102, 2103, 2104, 2105.

Foreign language: 6 semester hours in one language.

History 2601, 2602.

One two-semester sequence course (6 semester hours or more) in biology, chemistry, Geography 1101, 1102; mathematics, or physics.

Physical Education: for details see page 46.

(Art education majors must also complete all general education courses outlined in section II of

the Requirements for Teacher Certification as list on page 48.)

(2.) Basic art courses:

Art 1311, 1314, 2313 (Drawing).
Art 1201, 1204, 2201, 2202 (Design).
Art 2101, 2102 (Art History).

Art History: 12 semester hours in upper-division art history courses. Interior Design majors are required to take Art 3101, 3102; Art Education majors are required to take only Art 4167 and 4168).

(3.) Concentration Areas:

a. Painting, Sculpture, and Printmaking:
Art 2314, 4321 (Drawing and Painting).
Art 2351, 3351, 4351 (Printmaking).
Art 2511, 3511, 4511 (Sculpture).
Art 3331, 3332, 4331, 4332 (Painting).
Art 4521 (Ceramics).
Art 4611 (Senior Problem).

b. Graphic Design:
Art 2213 (Lettering and Layout).
Art 2221 (Graphic Production).
Art 2311 (Perspective).
Art 2351 (Printmaking).
Art 3221, 3222, 4221, 4222 (Graphic Design).
Art 3223 and 3541 (Packaging and Display).
Art 4321 (Drawing and Painting).
Art 4341, 4342 (Illustration).
Art 4611 (Senior Problem).

c. Interior Design:
Art 2311 (Perspective).
Art 2231, 2232, 3231, 3232, 4231, 4232 (Interior Design).
Art 4233, 4234 (Interior Rendering).
Art 4235, 4236 (Interior Design Research).
Art 4551, 4552 (Working Drawings).
Art 4611 (Senior Problem).

d. Art Education:
Art 2314, 4521 (Drawing and Ceramics).
Art 3411, 3413, 3421, 4421 (Art Education).
Art 4424 (Textiles).
Educational Foundations 2011, Educational Psychology 2111 and 3121, Elementary Education 4821, Secondary Education 4441 and 4841.

(4.) Art electives: 9 semester hours.

(5.) Elective courses other than art to complete the total of 142 semester hours. These courses will be chosen by the student in consultation with his adviser and the chairman of the Department of Art.

BACHELOR OF FINE ARTS (IN THEATRE)

The Bachelor of Fine Arts degree is a professional degree program specifically oriented for students whose *certain* interests and abilities *strongly* suggest the potential for pursuing careers as professional production artists in the resident, professional, or academic theatre. To expand the student's creative powers and deepen his commitment to a vocation in the theatre, the B.F.A. program offers the student (1) a basic probing of all the arts and crafts of the theatre; (2) an exploration in depth of one area of special interest; (3) the opportunity to participate

creatively as a theatre artist through extensive production experience. Two areas of specialization are offered: I. Performance and II. Production. Students entering the B.F.A. program will elect one of these two areas for concentrated study. The student will normally begin his specialized training at the beginning of his junior year.

ADMISSION

Admission to the B.F.A. program in Theatre Arts is based on selective procedures. Entrance into the performance area is based on auditions and interview. The audition interviews are held twice yearly, near the end of each semester. The audition will consist of three scenes of approximately 2 minutes duration; one dramatic; one comic; and one from period literature (period pantomimes not acceptable). Following a group of scenes a critique session will be held. Applicants will be notified within a few days that they have been accepted into the program, accepted for one more semester on a probation basis, or advised to pursue another degree program.

An interview, also, is required for admission to the production area. The student will submit a portfolio of his graphic work. This may consist of sketches, costume plates, elevations, light plots, ground plans, etc. Should the student not possess such a portfolio, the student may be requested to execute a relatively simple design project in his selected area of study.

REMAINING IN THE B.F.A. PROGRAM

The fact must be emphasized that admission to the B.F.A. curriculum does *not* imply student's permanent tenure in the program. At the end of each semester the student is expected to audition and his work will be assessed by the theatre faculty. His artistic growth, his development of technical facilities, his continuing commitment to creative excellence—all will be evaluated. Permission to continue in the program will be based upon this evaluation.

TRANSFER OF CREDIT

In certain cases students may be admitted at an advanced level of the B.F.A. training program. Such admission will be based upon (1) the student's previous course work in Theatre Arts, particularly in the area of his special interest; (2) the student's previous creative involvements in production experience; (3) letters of recommendation from former Theatre Arts instructors and/or directors.

ors. Even if admitted to an advanced standing, the student will be required to remedy previous course deficiencies.

ADVISING

Upon admission to the B.F.A. program, each student will be assigned a faculty adviser. The student must secure three faculty members to serve on his committee.

For this degree, 134 semester hours are required for graduation, at least 74 of which must be in theatre courses. A minimum grade of C is required in all theatre courses; the student must maintain an overall quality point average of 2.0.

General Education courses:	
English 1101, 1102 with a minimum grade of C; and two of the following: 2101, 2102, 2103, 2104; 2105	(12)
Foreign Language: 6 semester hours in one language	(6)
History 2601, 2602	(6)
One two-semester course (6 semester hours or more) in biology, chemistry, geology, mathematics, physical geography, or physics	(6)
Physical Education: 4 semester hours	(4)
	<hr/> 34 SH

Basic Theatre Core courses:	
Speech 1211 Voice and Diction	(3)
Speech 1411 Basic Oral Interpretation	(3)
Speech 2501 Stage Movement I	(3)
Speech 2502 Stage Movement I	(3)
Speech 2531 Acting I	(3)
Speech 2541 Stage Make-up	(2)
Speech 3521 Directing I	(3)
Speech 3551 History of the Theatre	(3)
Speech 3552 History of the Theatre	(3)
Speech 4011 Performance and Production (see note below)	(6)
	<hr/> 32 SH

Concentration Areas:

The Major: Concentration Areas (choose a or b):

a. Performance	
Speech 2411 The Art of Oral Interpretation	(3)
Speech 2412 Advanced Oral Interpretation	(3)
Speech 2511 Stagecraft I	(3)
Speech 2532 Acting I	(3)
Speech 3401 Performance Laboratory (Four semesters)	(4)
Speech 3451 Interpreter's Theatre	(3)
Speech 3501 Production Laboratory (Four semesters)	(4)
Speech 3502 Stage Movement II	(3)
Speech 3503 Stage Movement II	(3)
Speech 3522 Directing I	(3)
Speech 3531 Acting II	(3)
Speech 3532 Acting II	(3)
	<hr/> 38 SH

b. Production

Speech 3401 Performance Laboratory (Two semesters)	(2)
Speech 3501 Production Laboratory	

	(Six semesters)	(6)
Speech 3511 Stagecraft II		(3)
Speech 3512 Stagecraft II		(3)
Speech 3561 Theatrical Design I		(3)
Speech 3562 Theatrical Design I		(3)
Speech 4511 Stage Lighting I		(3)
Speech 4512 Stage Lighting I		(3)
Speech 4561 Stage Costuming I		(3)
Speech 4562 Stage Costuming I		(3)
Speech 4563 Theatrical Design II		(3)
Speech 4564 Theatrical Design II		(3)
Speech 4591 Theatre Management		(3)

41 SH

4. Electives

Elective courses (not more than 12 semester hours in Speech and Drama) chosen in conference with the student's adviser to complete the total of 134 semester hours.

NOTE: Production and Performance Internship (see course description on page 199). The intent of this degree requirement and course is to provide the student experience in a full-time theatre production situation. Off-campus participation for a summer (following the junior year) is an essential element of the B.F.A. degree program. Details are to be planned in advance in conference with the student's B.F.A. committee.

BACHELOR OF MUSIC

The Bachelor of Music is a professional degree, the requirements for which provide the student with a greater opportunity for specialization in music than he has under the other baccalaureate programs; as many as 92 of the 132 semester hours required for graduation may be in music. A minimum grade of C is required in all upper-division music courses; the student must maintain an overall quality point average of 2.0 (on a scale in which a grade of A has a quality point value of 4; B, 3; C, 2; and D, 1). The specific degree requirements are divided into five groups: (1) general education (2) basic music courses (3) courses required for one of the thirteen majors as outlined (4) music electives and (5) elective courses other than music and music education to bring the total to 132 semester hours.

Detailed requirements are as follows: figures in parentheses indicate semester hours credit.

1. General education courses (34-36 semester hours)
 - English 1101, 1102 with a minimum grade of C; and two of the following: 2101, 2102, 2103, 2104, 2105.
 - Foreign language: 6 semester hours in one foreign language; for details see page 51 (6).
 - History 2601, 2602 (6).
 - A two-semester sequence course (6 semester hours or more) in biology, chemistry, Geography 1101, 1102; geology, mathematics, or physics (6-8).
 - Physical Education; for details see page 46.
2. Basic music courses (36 semester hours)
 - Music 1051, 1052, 3061, and 3062 (22)
 - Music 3131, 3132; History of Music (6)

Major ensembles; for details see page 183 (8).
Piano proficiency; for details see page 179.

3. Majors (Choose one.)

a. Performance

Concentration Areas (Choose one.)

- (1) Brass instruments (45 semester hours).
Individual instruction in major instrument (32).
Individual instruction in two secondary brass instruments (4).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music Education 1912, Class Instruction in Woodwind Instruments (2).
Music 3236, Instrumental Conducting (3).
Music 3301, 4301, Junior and Senior Recitals (NC).
Small ensembles, 4 semesters required, to be chosen from those listed on page 183 (4).
- (2) Opera: (47 semester hours)
Individual instruction in voice (16).
Applied Music Workshop, 8 semesters required (NC).
Music 0001 (NC).
Music 4121, 4122, Song Repertory (4).
Music 3801, 4801, Junior, Senior Recitals (NC).
Note: The junior recital will be satisfied by public performance of a major operatic role.
Music 3825, Dramatic coaching (8).
Music 3882, Opera Workshop (4).
Music 3883, Opera Soloists (2).
Music 3884, Opera Production Laboratory (4).
Music 4133, The Opera and the Music Drama (3).
Foreign Language: 6 hours, at least 3 hours in German and 3 hours in Italian (6).
- (3) Organ: (56 semester hours)
Individual instruction in organ (40).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music 3401, 4401, Junior and Senior Recitals (NC).
Music 4137, Judeo-Christian Music (3).
Music 4138, History of Liturgies (3).
Music 4237, Console Conducting (3).
Music 4238, Service Playing (3).
Small ensembles, 4 semesters required, to be chosen from those listed on page 183 (4).
- (4) Percussion: (45 semester hours)
Individual instruction in percussion (32).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music Education 1312, Class Instruction in Brass Instruments (2).
Music Education 1711, 1712, Class Instruction in String Instruments (2).
Music Education 1912, Class Instruction in Woodwind Instruments (2).
Music 3236, Instrumental Conducting (3).
Music 3501, 4501, Junior and Senior Recitals (NC).
Small ensembles, 4 semesters required, to be chosen from those listed on page 183 (4).
- (5) Piano and/or Harpsichord: (47 semester hours).
Individual instruction in piano and/or harpsichord (40).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music 3601, 4601, Junior and Senior Recitals (NC).
Music 4160, Piano Pedagogy (3).
Small ensemble, 4 semesters required, to be

chosen from those listed on page 183 (4):

- (6) Strings: (46 semester hours)
Individual instruction in major instrument (32).
Individual instruction in two secondary string instruments (4).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music 3035, Orchestration (3).
Music 3236, Instrumental Conducting (3).
Music 3701, 4701, Junior and Senior Recitals (NC).
Small ensemble, 4 semesters required, to be chosen from those listed on page 183 (4).
 - (7) Voice: (45 semester hours)
Individual instruction in voice (24).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music 4121, 4122, Song Repertory (4).
Music 3801, 4801, Junior and Senior Recitals (NC).
Music 3884, Opera Production Laboratory, 2 semesters required (2).
Music 4133, The Opera and the Music Drama (3).
Music Education 4236, Choral Materials, Literature and Techniques (2).
Foreign language: 6 semester hours in two foreign languages other than the foreign language selected in the general education group (6).
Small ensemble: 2 semesters of Opera Workshop and 2 semesters to be chosen from those courses listed on page 183 (4).
 - (8) Woodwinds: (50 semester hours)
Individual instruction in major instrument (32).
Individual instruction in three secondary woodwinds (6).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music Education 1312, Class Instruction in Brass Instruments (2).
Music 3035, Orchestration (3).
Music 3236, Instrumental Conducting (3).
Music 3901, 4901, Junior and Senior Recitals (NC).
Small ensemble, 4 semesters required to be chosen from those listed on page 183 (4).
- #### b. Musical Arts
- Concentration Areas (Choose one.)
- (1) Church Music (Choral Emphasis): (46 semester hours).
Individual instruction in voice (16).
Music 0001, Applied Music Workshop, 8 semesters required (NC).
Music Education 1312, Class Instruction in Brass Instruments (2).
Music Education 1711, 1712, Class Instruction in String Instruments (2).
Music Education 1912, Class Instruction in Woodwind Instruments (2).
Music Education 4236, Choral Materials, Literature and Techniques (2).
Music 3236, Instrumental Conducting (3).
Music 4101 or 4801, Senior Recital (conducting or voice) (NC).
Music 4137, Judeo-Christian Music (3).
Music 4138, History of Liturgies (3).
Music 4139, Hymnology (3).
Music 4237, Church Choir and Console Conducting (3).

Music Education 4240, Church Choir Organization and Training (3).

Small ensemble, 4 semesters required, to be chosen from those listed on page 183 (4).

(2) Church Music (Organ Emphasis): (52 semester hours)

Individual instruction in organ (24).

Individual instruction in voice (4).

Music 0001, Applied Music Workshop, 8 semesters required (NC).

Music 3236, Instrumental Conducting (3).

Music 4137, Judeo-Christian Music (3).

Music 4138, History of Liturgies (3).

Music 4139, Hymnology (3).

Music Education 4236, Choral Materials, Literature and Techniques (2).

Music 4237, Church Choir and Console Conducting (3).

Music Education 4240, Church Choir Organization and Training (3).

Music 4401, Senior Recital (NC).

Small ensemble, 4 semesters required, to be chosen from those listed on page 183 (4).

(3) Composition: (50 semester hours)

Individual instruction in applied music (12). (Normally in piano; however, other areas may be substituted after the piano proficiency has been passed.)

Music 0001, Applied Music Workshop, 8 semesters required (NC).

Music 2023, Composition (2).

Music 2024, Composition (4).

Music 4024, Composition (16).

Music 3028, 3029, Counterpoint (4).

Music 3035, Orchestration (3).

Music 3236, Instrumental Conducting (3).

Music 3239, Score Reading (3) or Music 4114, Music in the Twentieth Century (3).

Music 4039, Compositional Techniques of the Twentieth Century (3).

Music 4102, Senior Composition Recital (NC).

(4) Music history: (43 semester hours)

Individual instruction in applied music (8).

Music 3028, 3029, 3030, 3031, Counterpoint (Choose one) (2).

Advanced music history (9).

Two additional courses in the social sciences (6).

Foreign language: 12 semester hours (12).

One course in mathematics or philosophy (3).

One course in art or speech (3).

(5) Music theory: (44 semester hours)

Individual instruction in applied music (12).

(Normally in piano; however, other areas may be substituted after the piano proficiency has been passed.)

Music 0001, Applied Music Workshop, 8 semesters required (NC).

Music 2023, Composition (2).

Music 3028, 3029, 3030, Counterpoint (6).

Music 3035, Orchestration (3).

Music 3236, Instrumental Conducting (3).

Music 4030, History of Theory (3).

Music 4033, Critical Studies in Music (3).

Music 4039, Compositional Techniques of the Twentieth Century (3).

Music 4114, Music in the Twentieth Century (3).

Music Education 4236, Choral Materials, Literature and Techniques (2).

Small ensemble, 4 semesters required, to be chosen from those listed on page 183 (4).

4. Music Electives: at least 6 semester hours in upper-division music courses selected from a concentration area other than the one chosen for the major.

5. Elective courses to bring the total to a minimum of 132 semester hours. These courses will be chosen by the student in consultation with his adviser and major professor.

BACHELOR OF SCIENCE IN MEDICAL TECHNOLOGY

For students interested in careers in medical technology, The College of Arts and Sciences offers a three-year preparatory curriculum, the successful completion of which will qualify them to enter any school of medical technology approved by the American Medical Association Council on Medical Education. After completion of the curriculum in the school of medical technology, the student is eligible for examination and certification by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

The University maintains an affiliation in Memphis with the Schools of Medical Technology of the Baptist Memorial Hospital, Methodist Hospital, and St. Joseph Hospital, all of which are accredited. Only those students who enroll in the School of Medical Technology of one of these hospitals can qualify for the degree of Bachelor of Science in Medical Technology from Memphis State University. Should a student decide to enter one of these schools after completing successfully the preparatory curriculum, he should apply directly to the school of his choice nine to twelve months in advance of the time he wishes to enter. After the completion of his clinical year he may apply for the degree of Bachelor of Science in Medical Technology from this University.

Specific requirements for the preparatory curriculum in medical technology and the additional requirements for those working toward a baccalaureate degree are as follows:

English 1101, 1102 with a minimum grade of C; and two of the following: 2101, 2102, 2103, 2104, 2105

Foreign language: 6 semester hours in one language

History 2601, 2602

Psychology 1101 or Sociology 1111

Psychology 1102

Mathematics 1211 or Mathematics 1212

Biology 1200, 1600, 3500, 3070, 3800, 3730, 4440

Chemistry 1111, 1112, 3301, 3302, 3311, 3312, 3400

Philosophy 1111, 1611

Any two of the following: Art 1101, Music 1131, Speech 1551

Physical Education: See page 46 for details

IMPORTANT NOTE: *The preparatory curriculum in medical technology does NOT qualify a student for the three-year pre-pro-*

professional degree program described on page 61 of this Bulletin. Only those students who enroll in the Schools of Medical Technology of the Baptist Memorial Hospital, the Methodist Hospital, or St. Joseph Hospital, all located in Memphis, can qualify for the degree of Bachelor of Science in Medical Technology from Memphis State University.

Departmental Requirements for Majors and Minors

Listed below are the specific course requirements for all majors and minors offered in The College of Arts and Sciences. A minimum grade of C is required in every course applicable toward a major or minor (including corequisites), except in beginning courses and in sophomore English.

Every student should be aware that the mere completion of courses outlined below with a grade of C or better does not guarantee him classification as a major or minor in the discipline concerned; *he must be recommended by the chairman of the department in which the major or minor is sought.* If, in the opinion of the chairman, the quality of the student's work is not high enough, he may require additional work, the repetition of courses, or other evidences of superior scholarship.

AFRICAN STUDIES

The Certificate: 21 semester hours from the following courses: Anthropology 3242, 3342, 4742; Geography 3301, 3302; History 4281, 4282, 4283, 4284; Political Science 3308, 3309; International Studies 4301, 4302. At least one course must be taken within each of the four departmental areas (anthropology, geography, history, and political science), and the interdisciplinary sequence course, International Studies 4301-4302, is required of all candidates for the Certificate in African Studies.

ANTHROPOLOGY

The Major: 30 semester hours in anthropology courses, including Anthropology 1100, 1200, 3065, 4065; and 18 additional semester hours, at least 6 of which must be at the 4000 level.

The Minor: 18 semester hours in anthropology courses, including Anthropology 1100, 1200, and 4065.

ART

The Major in Art History: 36 semester hours in art history courses, including Art 2101, 2102, 4167, 4168, and 4611, and 21 additional semester hours, 9 of which must be from the upper division.

The Minor: 24 semester hours in art courses, 9 of which must be from the upper division.

BIOLOGY

The Major: 36 semester hours in Biology courses, including Biology 1200, 1600, 2000, 3070; Chemistry 1111, 1112, 3301, 3302, 3311, and 3312, and the election of one of the following areas of con-

centration and the meeting of the specific requirements for that area. Completion of Biology 1200 and Biology 1600 shall be required before enrolling in any upper-division course 3000 level, or above, which is acceptable for a major.

a. Botany

Biology 3240, 3500 and Biology electives (chosen in conference with the adviser), including one field course, to bring the total semester hours in Biology to 36.

b. Microbiology

Biology 3500, 3800, and Biology electives (chosen in conference with the adviser), to bring the total semester hours in Biology to 36.

c. Invertebrate Zoology or Entomology

Biology 3800, 3900, and Biology electives (chosen in conference with the adviser) to bring the total semester hours in Biology to 36.

d. Vertebrate Zoology

Biology 3610, 3620, and Biology electives (chosen in conference with the adviser) to bring the total semester hours in Biology to 36.

The Minor: 18 semester hours in Biology courses (including Biology 1200 and 1600), 7 of which must be from the upper division. Completion of Biology 1200 and 1600 shall be required before enrolling in any upper division course of 3000 level, or above, which is acceptable for a minor. Either 3100 or 4100 may be included in meeting requirements, but not both.

CHEMISTRY: (*The requirements listed below are for majors and minors for the Bachelor of Arts or Bachelor of Science degrees; for detailed requirements for the Bachelor of Science in Chemistry, a professional degree, see page 57.*)

CHEMISTRY

The Major: 32 semester hours in chemistry courses plus related courses, outlined below: Chemistry 1111, 1112, 3301, 3302, 3311, 3312, and 16 additional semester hours in chemistry courses numbered above 2999.

Mathematics 1212, 1321, 2321, 2322.

Physics 2511, 2512 (or 2111, 2112 if approved by the chairman of the Department of Chemistry).

The Minor: 20 semester hours in chemistry courses including Chemistry 1111, 1112, 3301, 3302, 3311, 3312, and a three-or-four semester hour course from the upper division.

PHYSICAL SCIENCE

A major in physical science is suggested for the students who plan to teach the sciences in high school but do not desire to major in either chemistry or physics.

The Major: 32 semester hours in chemistry and physics courses, including Chemistry 1111, 1112, Physics 2511, 2512 (or Physics 2111, 2112); and 16 additional hours in chemistry and/or physics courses from the upper division to bring the total to 32 semester hours.

The Minor: 20 semester hours in chemistry and physics courses, of which at least 8 semester hours must be from the upper division.

COMPARATIVE LITERATURE

The Major

Lower division: There are no specific lower-division requirements beyond those of The College of Arts and Sciences.

and Sciences, but the student interested in majoring in Comparative Literature is advised to advance as far as possible in the study of the foreign language of his choice before the end of the sophomore year. It would be to his advantage to gain a reading proficiency in a second language as well.

Upper division: A minimum of 8 approved courses (24 semester hours) so arranged as to provide concentration in two literatures (at least 9 semester hours in each). One of these must be a foreign literature in the original language developed into the 4000 level. Courses which may be included in a Comparative Literature major:

1. Any course listed under *Comparative Literature*.
2. Any upper-division literature course in Greek, Latin, French, German, Italian, Russian, and Spanish.*
3. Any upper-division literature course in the Department of English.
4. Classics 3413 and 3414, Speech and Drama 3551 and 3552, Philosophy 3212 and 3451, History 4501 and 4502, Music 4131 and 4133.

The Minor

Lower division: No specific requirements beyond those of The College of Arts and Sciences.

Upper division: Six courses (18 semester hours) chosen from those available to the major and approved by the director of the program.

CRIMINAL JUSTICE

The Major: Law Enforcement: 36 hours of specific courses in Law Enforcement, Sociology, Psychology, and Political Science, including Law Enforcement 1520, Sociology 1111 and 3521, and Psychology 1101 and 3102, plus courses from one of the following areas:

- a. *Corrections:* ICJ 4524, 4525, 4526; Sociology 4522; Social Welfare 2911; Political Science 3211 and 3221.
- b. *General Law Enforcement:* ICJ 4525; Sociology 3430 and 4522; Social Welfare 2911; Political Science 4212 or 4215; and Economics 2110 and 2120.
- c. *Police Administration:* ICJ 2526, 4527, 4531; Sociology 3510; and Political Science 3211, 4212, and 4215.

ECONOMICS

The Major: 30 semester hours including Economics 1010 or 2110, 2120, 3310, 3320, Mathematics 1203, and 15 additional semester hours in economics courses from the upper division as approved by the department chairman. The student has the option of substituting 6 semester hours in approved upper-division social science courses for 6 semester hours in economics from the upper division.

The Minor: 18 semester hours in economics courses, including Economics 1010 or 2110, 2120, 3310, 3320, and 2 additional courses from the upper division as approved by the department chairman.

Literature courses in the Department of Foreign Languages are offered both in English translation and in the original language may be taken only once for credit.

ENGLISH

The Major: 24 semester hours in upper-division English courses, including hours as specified from each of the following groups, each student's program to be arranged so as to provide the greatest possible chronological scope:

1. English Literature (6)
 - A. (3): English 3211, 3212, 3213, or 3214.
 - B. (3): English 3221, 3222, 3223, or 3224.
2. American Literature (3): English 3321, 3322, 4321, or 4322.
3. Major Authors (3): English 4231, 4232, 4233, or 4234.
4. Special Studies (3).
 - A. Language: English 3501, 4501, or 4602.
 - or
 - B. Genre: English 3341, 3342, 3441, 4241, 4242, 4251, 4252, or 4351.
5. Three additional upper-division English courses (9), selections to be made with approval of adviser in light of choices made from first four groups.

The Minor: 15 semester hours in upper-division English courses, including hours as specified from each of the following groups:

1. Special Studies (3).
 - A. Language: English 3501, 4501, or 4602.
 - or
 - B. Genre: English 3341, 3342, 3441, 4241, 4242, 4251, 4252, or 4351.
2. American Literature (3): English 3321 or 3322.
3. English Literature (3): English 3211, 3212, 3213, 3214, 3221, 3222, 3223, or 3224.
4. Major Authors (3): English 4231, 4232, 4233, or 4234.
5. One additional upper-division English course (except one from the century chosen in the Group 3 option) (3).

Students who intend to pursue graduate studies are strongly advised to take courses both in Shakespeare and in Milton or Chaucer and to take courses both in genre and in language.

NOTE: Students who wish to satisfy the requirements for both English major and for endorsement to teach English in high school within the minimum of 24 hours must choose either English 3321 or 4321; and either 3322 or 4322 from Group 2; English 4232 or 4233 from Group 3; and English 3501, 4501, and 4602 from Group 4A.

FOREIGN LANGUAGES: The Department of Foreign Languages offers majors and minors in French, German, Latin, Spanish and Comparative Literature. Minors are also offered in Greek, Italian, and Russian.

Requirements for majors and minors are as follows:

FRENCH

The Major: 24 semester hours in upper-division French courses, including French 3301 (or 3302), 3401, 3411, 3412. Completion of at least two of these four courses is required before enrolling in other upper-division French courses.

The Minor: 12 semester hours in upper-division French courses.

GERMAN

The Major: 24 semester hours in upper-division German courses, including German 3301 (or 3302), 3410, 3411, and 3412. Completion of at least two of these four courses is required before enrolling in other upper-division German courses.

The Minor: 12 semester hours in upper-division German courses.

GREEK

The Minor: 9 semester hours in upper-division Greek courses.

ITALIAN

The Minor: 12 semester hours in upper-division Italian courses.

LATIN

The Major: 18 semester hours in upper-division Latin courses. Six semester hours in Elementary Greek are recommended in addition.

The Minor: 9 semester hours in upper-division Latin courses.

RUSSIAN

The Major: 24 semester hours in upper-division Russian courses, beginning with 3301 and 3302. The Russian major must be taken in conjunction with a major in another field.

The Minor: 12 semester hours in upper-division Russian courses.

SPANISH

The Major: 24 semester hours in upper-division Spanish courses, including Spanish 3301 (or 3302), 3411, 3412, and 3511 (or 3512). Completion of at least two of these courses is required before enrolling in other upper-division Spanish courses.

The Minor: 12 semester hours in upper-division Spanish courses.

FRENCH (See Foreign Languages).

GEOGRAPHY

The Major: 32 semester hours in geography courses, including Geography 1101 and 1102 (or Geology 1101), and 24 additional semester hours, at least 18 of which must be taken from the upper division. Credit must be shown in each of these areas: regional, topical (systematic), and technique.

The Minor: (a) Geography: 20 semester hours in geography courses, at least 9 of which must be taken from the upper division.

GERMAN (See Foreign Languages).

HISTORY

The Major: 30 semester hours in history courses, including History 1301, 1302, 2601, 2602, and 18 additional semester hours from the upper division with a maximum of 12 semester hours in any one field (United States, Latin American, European, African, Far Eastern).

The Minor: 24 semester hours in history courses, including History 1301, 1302, 2601, 2602, and 12 additional semester hours from the upper division.

INTERNATIONAL RELATIONS

The Major: 30 semester hours, including Economics 4340, 4350; Political Science 2501, 4501, 4508, and 3505 or 4504; International Studies 4601; and

three courses, in at least two disciplines, from one of the following areas of concentration:

(a) *American Foreign Policy:* Economics 3510; Geography 4421; History 3802, 4811; Political Science 2301, 3506, 4302, 4506; either Political Science 3505 or 4504.

(b) *Western Europe:* Geography 3401, 4304; History 3200, 4145, 4461, 4462, 4502; Political Science 3302, 4507.

(c) *Latin America:* Geography 3314, 3315, 4314, 4315; History 3212, 4230, 4240, 4250; Political Science 3306, 4306, 4503.

(d) *Asia:* Geography 4306; History 3291, 4292, 4294; Political Science 3307, 4307.

(e) *Soviet Union:* Geography 4305; History 4162, 4163; Political Science 4305, 4502, 4505.

(f) *Sub-Saharan Africa:* Anthropology 3242, 4742; Geography 3302; History 4281, 4283, 4284; Political Science 3308.

(g) *Middle East and North Africa:* Geography 3301; History 4282, 4284; Political Science 3309.

NOTE: The student electing the major in International Relations is advised to take the following courses to insure that he has an adequate background for the required courses in the major: Economics 1010, 2110; Geography 2301, 2311; History 1301, 1302.

JOURNALISM

(The following areas of concentration are available)

ADVERTISING

33 semester hours in journalism courses, including Journalism 1011, 1012, 2111, 2211, 2300, 3210, 3221, 3222, 4100, 4101 or 4222, and 3 additional hours in Journalism.

The Minor: 18 semester hours in journalism courses as follows: Journalism 1011, 2111, 2300, 3210, 3221 and either 4100 or 3222.

BROADCAST JOURNALISM

Journalism 1011, 2111, 2112, 3221, 3331; any two of the following: Journalism 3340, Speech 2821, 3842, 4891, and sufficient additional electives approved by faculty adviser to accumulate a minimum total of 30 semester hours.

THE MAGAZINE

30 semester hours in journalism courses, including 1011, 1012, 2111, 2211, 2300, 3111, 3114, 3116, 3117, and three additional semester hours from the upper division.

The Minor: 18 semester hours in journalism courses as follows: Journalism 1011, 1012, 2300, 3114, 3116, and one additional upper-division course from the magazine major.

NEWS-EDITORIAL:

30 semester hours in journalism courses, including Journalism 1011, 1012, 2111, 2112, 2300, 3112, 3113, 4001, 4005, and 3 additional semester hours from the upper division.

The Minor: 18 semester hours in journalism courses as follows: Journalism 1011, 1012, 2111, 3112, 2300 and one additional upper-division course from the news-editorial major.

PRESS PHOTOGRAPHY:

33 semester hours in journalism courses, includ

ing Journalism 1011, 2111, 2112 or 3114, 3011, 3111, 3340, 4001, 4008, 4009, 4222 and 3 additional hours in Journalism.

The Minor: 18 semester hours in journalism courses as follows: Journalism 1011, 2111, 3011, 3111, 4008, and one additional upper-division course from the press photography major.

PUBLIC RELATIONS:

30 semester hours in journalism courses, including Journalism 1011, 2111, 2112 or 3114, 3111 or 3340, 3112, 3221, 4001, 4222, 4232, and three additional semester hours to be chosen from 3113, 4002, 4003, or 4242.

Note: All journalism students must have typing proficiency before admission to courses numbered 2000 and above.

Practical experience is available to all journalism students on *The Helmsman*, a semi-weekly newspaper; *The Statesman*, a weekly departmental publication; *The DeSoto*, University yearbook; or in one of the following activities: University Public Information Office, Athletic Publicity Office, Alumni Publicity Office, Photo Service Department. Qualified majors will be chosen for senior-year internships with Memphis newspapers, magazines, advertising-public relations agencies, and broadcasting stations.

LATIN (See Foreign Languages).

LATIN AMERICAN STUDIES

The Major: 24 semester hours, including 21 hours from the group of core courses and 3 hours from the group of electives listed below:

(a) *Core Courses:* Geography 3314, 3315; History 3211, 3212; International Studies 4201; Political Science 3306; Portuguese 3511 or Spanish 3511 or 3512.

(b) *Elective Courses:* Anthropology 3232, 3332; Art 4162, 4163; Economics 3510; Geography 4314, 4315; History 3200, 3231, 4230, 4240, 4250; Political Science 4306, 4503; Sociology 3900; Spanish 4561, 4562.

NOTE: The student must have a reading knowledge of Spanish or Portuguese (to the proficiency level expected upon completion of the second year college course) to satisfy the requirements of the major. It is recommended that he obtain a collateral major in one of the traditional disciplines represented in the program.

The Minor: 12 semester hours, including Geography 3314 or 3315; History 3211, 3212; Political Science 3306.

NOTE: The foreign language requirement for the minor is the same as for the major.

MATHEMATICS

The Major: 36 semester hours in mathematics courses, including Mathematics 1321, 2321, 2322, 3111 and 4241; Chemistry 1111 and 1112 or Physics 2511 and 2512; and completion of the requirements in one of the following areas of concentration:

(a) *Algebra and Analysis:* Mathematics 4261, 4262; two of the following courses—Mathematics 4351, 4361 or 4411; and 6 semester hours of upper-division electives in the mathematical sciences.

(b) *Applied Mathematics:* Mathematics 3391, 4391, 4392; and 9 semester hours of upper-division electives in the mathematical sciences.

(c) *Computer Sciences:* Mathematics 4710, 4711, 4721; and 6 semester hours of upper division electives in the mathematical sciences.

(d) *Statistics:* Mathematics 4710; Statistics 3631, 4611, 4613; 4612 or 4631; and 3 semester hours of upper-division electives in the mathematical sciences.

The Minor: 18 semester hours in mathematics courses, including either Mathematics 1321, 2321, and 2322; or 6 semester hours from the upper division.

MUSIC

The Major: 34 semester hours in basic music courses plus the completion of the requirements for a major; specific courses are outlined below:

(a) *Basic music courses (34 semester hours)*
Music 1051, 1052, 3061 (16).
Music 3131, 3132 (6).
Applied music, 8 semester hours (8).
Music ensemble, 4 semester hours (4).
Music 0001, Applied Music Workshop, 8 semesters (NC).

(b) *Areas of concentration (choose one).*

1. Applied Music (8 semester hours).
8 semester hours of individual instruction in upper division courses.
2. Music History and Literature (8 semester hours).
Additional courses in music history as suggested by the student's adviser.

The Minor: 20 semester hours in basic music courses plus the completion of the requirements for a minor; specific courses are outlined below:

(a) *Basic Music Courses (20 semester hours).*
Music 1051, 1052 (10).
Music 3131, 3132 (6).
Individual instruction in piano, organ, voice, or orchestral instrument (4).
Music 0001, Applied Music Workshop, registration is required each semester in which applied music is elected.

(b) *Areas of Concentration (Choose one)*

1. Applied Music (4 semester hours)
4 semester hours of individual instruction in upper-division courses.
2. Music History and Literature (6 semester hours)
Two or more courses as recommended by the student's adviser.

PHILOSOPHY

The Major: 30 semester hours in philosophy courses, including Philosophy 1111, 1611, 2411 or 3511, 3211, 3311, and 15 additional hours.

The Minor: 18 semester hours in philosophy courses, including Philosophy 1111, 1611, and 12 additional semester hours, at least 9 of which must be from the upper division.

PHYSICAL SCIENCE (See Chemistry)

PHYSICS

The Major: 32 semester hours in physics courses, including 2511, 2512 (Physics 2111, 2112 are acceptable but not recommended) and additional upper-division courses.

Mathematics 1321, 2321, 2322, and 3391, or equivalent courses.

The Minor: 20 semester hours in physics courses, including Physics 2511, 2512 (Physics 2111, 2112 are acceptable but not recommended), and additional upper-division courses.

POLITICAL SCIENCE

The Majors:

POLITICAL SCIENCE: 30 semester hours in political science courses, including Political Science 1101, 2211, either 2301 or 2501 and a minimum of 21 additional semester hours at least 18 of which must be from the upper division. Only 9 semester hours of internship courses may be counted toward the 30 semester hour requirement.

PUBLIC ADMINISTRATION: 30 semester hours in political science courses including Political Science 2211, 3213, 3601, and 21 additional semester hours, 12 of which are to be selected from the following: Political Science 3211, 3224, 4213, 4214, 4221, 4224, 4231, 4602, 4603, 4604, 4611, and 4702. Only 9 semester hours of internship courses may be counted toward the 30 semester hour requirement.

The Minor: **POLITICAL SCIENCE:** 18 semester hours in political science courses, including Political Science 1101 and at least 6 semester hours from the upper division.

PSYCHOLOGY

The Major: 32 semester hours in psychology courses, including Psychology 1101, 1102, 2301, 2302, 4101, and 16 additional semester hours, of which at least 6 must be from other 3000 level courses and at least 4 must be from 4200 level courses. It is strongly recommended that psychology majors complete all lower-division courses prior to enrolling in any upper-division course.

The Minor: 20 semester hours, including Psychology 1101, 1102, 2302, and 10 additional hours.

RADIO-TELEVISION-FILM (See Speech and Drama)

SOCIOLOGY**SOCIOLOGY**

IMPORTANT NOTE: A student who elects to major in either sociology or social welfare may not minor in the other.

The Major: 30 semester hours in sociology courses, including sociology 1111, 1112, 3311, 3322, 4209 or 4210; and 15 additional semester hours, at least 9 of which must be taken from the upper division. No more than three semester hours toward a major will be accepted from social welfare courses.

The Minor: 18 semester hours in sociology courses, including Sociology 1111, 1112, and 12 additional semester hours, at least 6 of which must be taken from the upper division.

SOCIAL WELFARE

The Major: 30 semester hours in Sociology, Social

Welfare, and related fields, including Sociology 1111; Social Welfare 2911, 3901, 3902, 3903, 3904, 4830; and at least nine additional hours, to be approved by advisor.

The Minor: 18 semester hours in Sociology and Social Welfare courses, including Sociology 1111, Social Welfare 2911, 3901, 3902, and six additional semester hours in Social Welfare courses.

SPANISH (See Foreign Languages)

SPEECH AND DRAMA:

SPEECH AND DRAMA: (*The requirements listed below are for the majors and the minors in speech and drama for the Bachelor of Arts degree; for detailed requirements for the Bachelor of Fine Arts degree in theatre, see page 58.*)

Concentration Areas:

GENERAL SPEECH: 36 semester hours in speech courses, including Speech 1211, 1311, 1411, 1551, 1781, 2511, 2531, 3301 or 3401 or 3501 (two semesters), and 13 additional semester hours from the upper division.

RADIO-TELEVISION-FILM: Journalism 1011, Speech 1781, 1782, 3823, 3824, and 3881 (20 hours), and at least one course from each of these three groups (9 hours):

(A) 4810, 4811, 4831, 4871.

(B) 4851, 4852, 4853, 4854, 4857.

(C) 3371, 3372, 4101, 4362.

and sufficient electives approved by the faculty adviser to accumulate a minimum of 33 hours, but not more than 18 hours in production courses (3821, 3823, 3824, 3831, 4842, 4892).

RHETORIC AND COMMUNICATION ARTS: 30 semester hours in rhetoric and communication arts courses, including 1781, 2321 or 2322, 2781. No more than 12 semester hours of courses numbered below 3000 may be used to satisfy the 30 hours major requirement.

THEATRE AND ORAL INTERPRETATION: 35 semester hours in speech and drama courses, including Speech 1211, 1411, 1551, 2511, 2531, 3401, or 3501 (two semesters), and 18 additional semester hours chosen from the following: Speech 2411, 2512, 2532, 2541, 3451, 3461, 3511, 3512, 3521, 3522, 3531, 3532, 3551, 3552, 3561, 3562, 4421, 4431, 4441, 4451, 4511, 4512, 4531, 4532, 4561, 4562, 4563, 4564, 4571, 4581, 4591. Specific course requirements for theatre emphasis or oral interpretation emphasis will be determined in conference with adviser. Theatre majors must obtain permission from adviser to work in theatres outside the University.

The Minor (General Speech): 22 semester hours in speech courses, including Speech 1211, 1311, 1411, 2321, 2511, 3301 or 3401 or 3501, and 6 additional hours from the upper division.

Speech minor for Business Administration majors: 18 semester hours in speech courses including Speech 1211, 1311, 2322, 2331, 3011, 3341.

Speech minor in Oral Interpretation: 18 semester hours in speech courses, including Speech 1211, 1411, 2411, 4421 (or 4431), and six hours chosen from the following: 2412, 3451, 3461, 3551, 3552, 4441, 4451, 4551, 4581.

URBAN STUDIES

The Major: Urban Studies 4001 and 4412, plus 12 hours from the group of core courses and 15 hours from the courses outlined under section (b), for a total of 33 hours.

a. *Core Courses.* Anthropology 4411, Economics 4510, Geography 4431, History 3871, Political Science 3224, and Sociology 4410.

b. *Elective Courses.* Anthropology 4250, 4752, Economics 3210, 4750, Civil Engineering 3100, 3200, Geography 3211, History 4881, Political Science 4221, 4224, and Sociology 4620, 4812.

The Minor: 18 semester hours to include Urban Studies 4001 plus five other courses from the group of electives and core courses. These latter

courses are to be determined in consultation with the Urban Studies Adviser.

General: It is recommended that the urban studies student take nine of the fifteen hours of lower division social science requirements from the following courses: Anthropology 1200, Economics 1010, Geography 2311, Political Science 2211, Psychology 1101, and Sociology 1111. NOTE: Anthropology 1200, Economics 1010, and Sociology 1111 are prerequisites for the other courses required in those three departments.

NOTE: A student may double major in Urban Studies and a department participating in the Urban Studies program and count courses common to both toward the completion of both majors in the College of Arts and Sciences.

The College of Business Administration

HERBERT JOHN MARKLE, B.B.A., M.A.,
Ph.D., *Dean*

*Room 432, The College of Business
Administration Building*

Purposes

The function of The College of Business Administration is to provide the basic education necessary to prepare a person to enter the profession of business. A significant characteristic of the college is that it provides for concentration in the basic areas of economics and business, not as a substitute for, but as a part of a broad liberal education. From forty to sixty per cent of the course work taken for the Bachelor of Business Administration degree (a required minimum of 40 per cent) is taken in such areas as the humanities, the natural and physical sciences, and the social sciences.

The undergraduate and graduate programs of the College are fully accredited by the American Assembly of Collegiate Schools of Business.

Areas of Professional Training.

The College of Business Administration offers a wide selection of general and specialized fields, each of which has programs designed to prepare students for a variety of careers:

Careers in Accountancy: Accounting is a vital activity in any business. The increased complexity of financial records resulting from federal regulations and the expanded use of automation necessitates a highly technical background for persons who prepare financial reports. It administers the testing program of The American Institute of Certified Public Accountants, the national scope of which enables students to check their individual ratings with national averages. Graduates with a major in accounting are qualified to take the Certified Public Accountants' examination in Tennessee; students desiring a career in public accounting are encouraged to intern with a public accounting firm in their senior year.

Careers in Economics: A sound understanding of our economic system is essential for today's businessman. In addition, business employs the professional economist for forecasting and explaining the effect of changing economic variables. Many economists are employed by government for com-

parable reasons. Training in economics is designed to increase awareness of economic problems and encourage the student to analyze alternative solutions for himself.

Careers in Finance, Insurance, and Real Estate: Due to the greatly increased recognition given to managing the financial operations of a business, with its increased complexity and newer techniques, considerable demand has developed for those skilled in managing the financial flows of a business.

The risk factor involved in both business and life is beyond man's control. To meet this challenge courses in insurance can be highly rewarding for the college graduate. The department offers preparation for careers in property insurance, life insurance, and risk management.

The ever-increasing growth in population, with a constant supply of real estate, demands that the businessman have a working knowledge of real estate problems. Courses are offered to prepare students for both private practice and to function as an integral part of a business organization.

Careers in 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.

Effective adaptation of management to such emergent conditions as the continued growth of science and technology, population, and large scale organization demands a thorough knowledge of management process theory.

The management programs of study are designed to provide professional preparation in the management of business and economic affairs. Opportunities are increasing, as well, in governmental agencies, foundations, hospitals, and other types of organizations.

Careers in Marketing: One of the phenomena observed among college graduates is their frequent gravitation toward careers in marketing despite the field for which they prepared while in college. The Department of Marketing provides an educational experi-

ence for those who are interested in such areas as retailing, wholesaling, industrial marketing, purchasing, advertising, sales management, logistics, and marketing research. Careers in marketing provide a high degree of freedom, mobility, security, challenge, and a high level of monetary reward.

Students who wish to teach marketing (distributive education) in high schools, technical institutes, and junior colleges should minor in Distributive Education in The College of Education. Certification requirements are listed on page 118. For information concerning careers in this field students should see the chairman of the Department of Distributive Education.

Careers as Professional Secretaries: The value of a secretary, either man or woman, with a university degree is receiving increasing recognition by business executives; the same thing is true in the field of office management. Thorough training in both fields is provided by the Department of Office Administration.

Careers in Business Education: Preparing students to teach business subjects in the secondary schools is an important function of The College of Business Administration. A student with a major in any one of the six departments of the college may qualify for a high school teaching certificate; he will minor in education and complete the certification requirements outlined on page 117. The chairman of the Department of Office Administration serves as adviser to all students in The College of Business Administration preparing for a career in business education.

Careers in International Business: The College of Business Administration, with the cooperation of the Office of International Studies, offers an interdisciplinary program leading to the Bachelor of Business Administration degree with a major in international business. The International Business Program provides the student with broad theoretical and practical skills that will prepare him to meet challenges of a career in an international business field. Students will, when possible, be afforded the opportunity of working in an international company, in this country or abroad, in order to acquire practical, first-hand knowledge of international operations.

The Pre-Law Curriculum.

A student enrolled in The College of Business Administration who wishes to prepare himself for entrance to law school will qualify for

the Bachelor of Business Administration degree. Any major in The College of Business Administration may be selected, and the regular program for that major, as outlined in the *Bulletin*, should be followed.

Organization of the College

The College of Business Administration comprises six academic departments: Accountancy; Finance, Insurance and Real Estate; Economics; Management; Marketing; and Office Administration. These departments offer a variety of majors and minors, the detailed requirements for which are listed in the section beginning on page 102. The interdisciplinary International Business Program centered in this college offers an undergraduate major in International Business; requirements are listed in the section pertaining to departmental requirements. In addition there are two research departments: Bureau of Business and Economic Research, and Center for Manpower Studies.

The college curriculum is organized into a lower division and an upper division:

THE LOWER DIVISION comprises the freshman and sophomore years, the first four semesters of University work. Courses offered in the lower division are numbered from 1000 through 2999, and the student must register consistently for all lower division requirements until they are completed.

THE UPPER DIVISION comprises the junior and senior years, the last four semesters of undergraduate work; courses offered in the upper division are numbered from 3000 through 4999.

Laboratory Facilities.

The College of Business Administration provides 14 laboratories for development of facility in business: five accounting laboratories with individual tables for students; six secretarial laboratories, four for typewriting and two for general secretarial and office practice; one laboratory for data processing; one laboratory for statistics, equipped with adding machines and calculators; and laboratory work on electronic data computers. In addition the facilities of the Bureau of Business and Economic Research are available for research laboratory training.

Bureau of Business and Economic Research.

The Bureau of Business and Economic Research conducts research designed to con-

tribute to economic and business knowledge. The primary emphasis of the Bureau effort is on Memphis, Tennessee, and the Mid-South. The Bureau has four specific functions:

1. To develop and disseminate data on current business and economic conditions.
2. To furnish to business concerns and governmental agencies special studies which will contribute to economic development.
3. To develop economic base studies for various counties and regions in an effort to help them plan the economic development of their area.
4. To train graduate students in business and economic research and to provide research facilities for faculty members.

The Bureau maintains the Mid-South Information Center. This Center contains approximately 20,000 books, censuses, periodicals, studies, and brochures, and has numerous files which contain statistical data provided by national, state, and local sources. In addition to regional economic data, there is also extensive information available on business, agriculture, labor, population, finance, government, and resources. There is a working arrangement between this Center and the main library of Memphis State University and books and other information available in the Cossitt-Goodwyn Technical Library of Memphis can be obtained on a loan arrangement.

Center for Manpower Studies.

To offer graduate instruction in manpower topics within an interdisciplinary framework including economics, education, management, political science, psychology and sociology. Opportunities for student research projects, including theses, and an internship program will be provided by the Center. The instructional program will be provided on an interinstitutional basis with Memphis State University and the University of Mississippi.

In addition the Center will sponsor and conduct research on problems of manpower

allocation, policy and alternatives to existing practices.

Admission

Requirements for admission to The College of Business Administration are those set up for the University as a whole; see page 14.

A student who has attended another accredited college or university, or who has received correspondence and/or extension credit from such an institution, will be given credit for all acceptable residence work and for a maximum of 33 semester hours in acceptable correspondence and/or extension work. To be acceptable, a course must be approved by the Committee on Admissions and the quality point average must meet the minimum standards set by the University; see page 15 for details.

A student who transfers into The College of Business Administration from another degree-granting college of the University or from another educational institution will meet the requirements of the catalog in effect at the time of the transfer.

A student who has not earned credit in this College of Business Administration is not considered as having entered the College. A student who takes courses at another institution, without prior authorization from this College, is considered to be a new student for bulletin purposes.

Residence Requirements

Residence requirements for a degree in business administration are: the senior year's curriculum in business administration must be taken in residence. At least 33 hours of upper division business courses must be taken in residence; 12 of these hours must be in the major field.

University residence requirements are explained in detail on page 47.

Academic Programs

The following outline lists the major and areas of concentration for each department in the College of Business Administration.

ACADEMIC PROGRAMS

Department	Major	Concentrations Within Major	Degree Offered
Accountancy	Accountancy		Bachelor of Business Administration
Economics	Economics	(1) Economic Theory and Research (2) Quantitative Economics (3) Economics of Finance (4) Regional Development	Bachelor of Business Administration
Finance, Insurance, Real Estate	Finance		Bachelor of Business Administration
	Insurance		Bachelor of Business Administration
	Real Estate		Bachelor of Business Administration
Management	Business Management	(1) General Management (2) Production Management (3) Personnel Administration and Industrial Relations (4) Quantitative Methods and Business Systems	Bachelor of Business Administration
Marketing	Marketing	(1) Advertising (Marketing Communications) (2) Marketing Management (3) Industrial Marketing and Logistics (4) Retailing (5) Sales	Bachelor of Business Administration
Office Administration	Office Administration	(1) Secretarial (2) Management	Bachelor of Business Administration
Interdisciplinary Program	International Business		Bachelor of Business Administration

Degree Requirements.

The College of Business Administration offers the degree of Bachelor of Business Administration. To qualify for this degree the student must complete 132 semester hours with a quality point average of 2.0 (on a scale where A gives 4 quality points; B, 3; C, 2; and D, 1). Of the 132 semester hours required for graduation, at least 48 must be in business courses from the upper division (those numbered above 2999). A grade of C or better must be earned in every course applied toward satisfaction of the specific major.

All courses used to satisfy specific degree requirements of this College must be taken on a "letter-grade credit" basis or "credit by examination." Courses taken on a "Credit-No Credit" basis or "Audit" basis cannot be used to satisfy specific College requirements. "Credit-No Credit" courses cannot be repeated on a "letter-grade-credit" basis.

If a student transfers credit on business

courses which are classified as upper division level courses at this college, but were taken as lower division credit or taken at a two-year institution, these courses will be repeated or other upper division business courses taken to replace them or validation made by examination, with the approval of the department chairman of the department offering the course.

A grade of "I" on regular course work will be governed by the University policy on page 39.

General requirements for the degree include the successful completion of (I) required courses in the lower division (II) required courses in the upper division (III) requirements for a major in The College of Business Administration. A student majoring in The College of Business Administration is not required to have a minor. A minimum of 40% of the hours required for the degree must be from outside business and economics (ex-

cept for Principles of Economics) and a minimum of 40% of the hours required must be taken within the college. Requirements are outlined in detail in the sections which follow.

I. Required Courses in The Lower Division

(Figures in parentheses indicate semester hours credit. One-semester courses may be taken either semester.)

<i>First Semester</i>	<i>Second Semester</i>
See Note A.	English 1102 (3)
English 1101 (3)	Mathematics 1203 or a more advanced level course (3)
Speech 1311 (3)	See Note B.
Science (See Note B)	See Note C.
Management 1010 (3)	Physical Education (1)
Physical Education (1)	An elective course (3)
An elective course (3)	

NOTES:

- A. Typewriting ability is a basic requirement. Every student will enroll in a typewriting class during his first semester in The College of Business Administration or arrange to take a proficiency examination. If he fails the proficiency examination, he must enroll in a typewriting class the following semester; he must pass either the typewriting course or the test before he arrives at junior classification.
- B. The two science courses required do not have to be in the same discipline, but must have laboratory hours except for Mathematics. The following areas are acceptable.

Mathematics—above quality level of College Algebra
 Geography—1101 or 1102
 Geology—1101 or 1201
 Chemistry—1051 or 1052
 Physics—1111 or 1112
 Civil Engr.—2100
 Elec. Engr.—2200
 Biology—1001 or 1002

- C. One of the following courses is required:
 Psychology 1101 or Sociology 1111 or Political Science 2211
- D. Mathematics 1203 or a more advanced level course must be taken to meet the minimum mathematics requirements in The College of Business Administration. Any student having three or more units of high school mathematics should take Mathematics 1203. If a student has had less than 3 units of high school mathematics, he should take Mathematics 1000 prior to attempting 1203.

<i>Third Semester</i>	<i>Fourth Semester</i>
Accounting 2010 (3)	Accounting 2020 (3)
English 2101 (3) or 2103	English 2102 (3) or 2104
History 2601 (3)	History 2602 (3)
Economics 2110 (3)	Economics 2120 (3)
Physical Education (1)	Management 2750 (3)
An elective course (3)	Physical Education (1)
	An elective course (3)

NOTES:

- a. The student planning to major in office administration may start shorthand in the sophomore year.
- b. Men taking Air Force ROTC 2211 and 2212 may be excused from two semesters of physical education.

II. Required Core Courses in The Upper Division

Every student enrolled for the degree of Bachelor of Business Administration must complete successfully the following courses:

Economics 3610	Money and Banking (3)
FIR 3011	Business Law (3)
FIR 3130	Legal, Social and Political Environment of Business (3)
FIR 3410	Business Finance (3)
Management 3710	Business Statistics I (3)

Management 3711	Business Statistics II (3)
Management 3110	Organization & Management (3)
Management 4710	Business Policy (3)
or	
Marketing 4710	Basic Marketing (3)
Marketing 3010	Business Communications (3)
Office Administration 3510	

III. The Major

With the assistance of his adviser, each student, not later than the beginning of his junior year, will select from the list below an area of concentration. After selecting his area, the student will report to the office of the dean of The College of Business Administration for assignment to a major professor in the department in which the area is offered. The specific courses required by each department for the satisfaction of its majors are listed in the section beginning on this page.

IV. The Minor

A student majoring in The College of Business Administration is not required to have a minor. A student majoring in one of the other colleges of the University may take a minor in one of the departmental areas.

Departmental Requirements for Majors and Minors.

DEPARTMENT OF ACCOUNTANCY

The objective of the Department of Accountancy is to provide the graduate with a substantial background in accountancy which will enable him to adjust himself to any accounting situation and to advance rapidly in government, industry, or public accounting practice. The curriculum is designed to enable the student to achieve mastery of the generally accepted accounting principles and procedures as they are applied in all fields of accounting and to study modern accounting trends and techniques and the current controversial topics in his profession.

An accounting major or minor must have a grade of C or better in every course attempted in The Department of Accountancy.

The Major: Accounting 2720 (Laboratory) and 21 semester hours in upper-division accounting courses as follows:

3110 and 3120, Intermediate Accounting I and II
 3310, Cost Accounting
 4210, Advanced Accounting
 4240, Auditing
 4450, Accounting Systems
 4510, Federal Income Tax I

The Minor: For the student whose major is in another college of the University:

2010 and 2020, Fundamentals of Accounting
 2720, Accounting Laboratory
 3110, Intermediate Accounting I
 3120, Intermediate Accounting II
 Select one of the following:
 3010, Managerial Accounting or
 3310, Cost Accounting

DEPARTMENT OF ECONOMICS

The Department of Economics has two major objectives: to function as a service department for other departments in the College of Business Administration as well as the other Colleges of the University; and, to prepare students majoring in economics by providing a solid foundation in the principal areas of economics.

In general, the department attempts to give economics majors a solid background in economic theory, quantitative economics and applied economics.

The Major in Economics (THE COLLEGE OF BUSINESS ADMINISTRATION): a minimum of 21 semester hours in upper-division courses, as follows:
3210, Labor Economics
4111, Economics of Business Enterprise
3310, Microeconomic Theory
3320, Macroeconomic Theory
Three additional upper-division courses selected with the approval of the department chairman.

The Major in Economics (THE COLLEGE OF ARTS AND SCIENCES): the student will be required to meet the requirements for the Bachelor of Arts degree plus the specific major requirements:
1010 or 2110, 2120

3310, Microeconomic Theory
3320, Macroeconomic Theory
Mathematics 1203

Five additional upper-division courses, for a total of 30 semester hours, selected with the approval of the department chairman. The student has the option of substituting two approved courses in the social sciences for two upper-division economic courses.

The Minor:

For students whose major is in another college of the University:
18 semester hours in economic courses, including Economics 1010 or 2110, 2120, 3310, 3320, and 2 additional courses from the upper division as approved by the department chairman.

DEPARTMENT OF FINANCE, INSURANCE, AND REAL ESTATE

The basic objective is to provide the students with as wide a horizon of the business world as possible. Finance majors are encouraged to study either the varied aspects of managerial finance or the more applied areas of investment, and financial markets.

Students electing risk and insurance are introduced to the theory of risk and the principles underlying the insurance mechanism. An additional major objective of the insurance program at Memphis State is to imbue the students with a spirit of professionalism.

Real estate majors have the opportunity of increasing the professionalism among present and future real estate practitioners.

The Major in Finance:

A minimum of 21 semester hours in upper division courses as follows:

FIR 3710, Investments
FIR 3720, Financial Markets
FIR 4440, Managerial Finance
FIR 4610, Cases in Managerial Finance
Three additional upper-division courses selected with the approval of the department chairman.

The Minor in Finance:

For the student whose major is within another college of the University:
Accounting 2010 and 2020, Fundamentals of Accounting
Economics 2110 and 2120, Economics I and II
Economics 3610, Money and Banking
FIR 3410, Business Finance
FIR 3710, Investments
One additional upper-division course approved by minor professor.

The Major in Insurance: A minimum of 21 semester hours in upper-division courses, as follows:
FIR 3810, Principles of Risk and Insurance
FIR 4810, Property and Casualty Insurance
FIR 4820, Life and Health Insurance
A minimum of 4 additional upper division courses selected with the approval of the department chairman.

The Minor in Insurance:

For the student whose major is within another college of the University:
Accounting 2010, Fundamentals of Accounting
Economics 2110, Economics I
FIR 3011, Business Law
FIR 3130, Legal, Social and Political Environment of Business
FIR 3810, Principles of Risk and Insurance
Two additional upper-division courses in Insurance approved by minor professor.

The Major in Real Estate: A minimum of 21 semester hours in upper-division courses, as follows:
FIR 3310, Real Estate
FIR 4310, Real Estate Law
FIR 4320, Real Estate Finance
FIR 4340, Real Estate Appraisal
A minimum of 3 upper division courses selected with the approval of the department chairman.

The Minor in Real Estate:

For the student whose major is within another college of the University:
Accounting 2010, Fundamentals of Accounting
Economics 2110, Economics I
FIR 3011, Business Law
FIR 3130, Legal, Social and Political Environment of Business
FIR 3310, Real Estate
Two additional approved upper-division courses in Real Estate:

DEPARTMENT OF MANAGEMENT

The objective of the Department of Management is to provide the student with a broad background in the field of management. With this type of background it is felt that the new graduate can, with a minimum of orientation in a particular company, understand and apply the standard management practices and techniques necessary for profitable and efficient operation of the firm.

The Major in Management: a minimum of 21 semester hours in upper-division courses, as follows:

Management 4420, Human Relations in Business
 FIR 4440, Managerial Finance
 A minimum of 15 semester hours in courses related to one of the following areas, selected with the approval of the department chairman:
 General management
 Production management
 Personnel administration and industrial relations
 Quantitative methods and business systems

The Minor in Management:

For the student whose major is in another college of the University:
 Accounting 2010 and 2020, Fundamentals of Accounting
 Economics 2110 and 2120, Economics I and II
 FIR 3410, Business Finance
 Management 3110, Organization and Management
 One approved upper-division course in Management approved by minor professor.

DEPARTMENT OF MARKETING

The objective of the Department of Marketing is to provide the student with a broad concept of the marketing process and to develop an understanding of all the factors involved in the assembly and distribution of goods and services.

By careful selection of electives, the marketing major may become certified to teach distributive education in high schools, technical institutes, and junior colleges. See page 83 for details of certification requirements, page 88 for additional information on distributive education.

The Major: a minimum of 21 semester hours in upper-division marketing courses, as follows:

3011, Marketing Management
 3012, Marketing Promotions
 4010, Marketing Administration
 4080, Marketing Research

Three additional courses in one of the marketing areas listed below:

ADVERTISING (Marketing-Communications): designed to provide an understanding of mass communication media, advertising agencies, advertising departments, advertising decisions, and other advertising activities.

3140 Advertising Fundamentals
 3170 Advertising Problems
 4150 Advertising Media and Campaigns

INDUSTRIAL MARKETING AND LOGISTICS: designed to provide an understanding of the distribution system as it pertains to the flow of goods within and without the environment.

3210 Logistics Administration
 3220 Industrial Marketing
 4220 Purchasing

MARKETING MANAGEMENT: allows a concentration in marketing without specialization. (A minimum of 9 semester hours, at least 3 hours at the 4000 course level).

3140 Advertising Fundamentals
 3210 Logistics Administration
 3320 Retail Store Management
 4410 Sales Management
 4530 International Marketing

RETAILING: this concentration gives the student a background in the operation and management of retail establishments.

3320 Retail Fundamentals
 3330 Retail Merchandising
 4330 Credit and Collections

SALES: this concentration gives the student a thorough grounding in the field of sales from basic salesmanship through sales management; the subject matter is approached from both theoretical and practical aspects.

3410 Sales Fundamentals
 4410 Sales Management
 4420 Sales Training

ELECTIVES:

3430 Sales Promotion
 3510 Marketing of Services
 3520 Contractual Marketing Systems
 3610 Transportation
 4991 Marketing Internship

The Minor:

For the student whose major is in another college of the University:

Accounting 2010 and Economics 2110; and either (1) Marketing 3010 and the 12-semester-hour marketing core; and one course from a special area; or

(2) Marketing 3010, 6 semester hours from the marketing core, and 9 semester hours from a specific area.

DEPARTMENT OF OFFICE ADMINISTRATION

The objectives of the Department of Office Administration are several: To provide the graduate with a broad background to assume an executive secretarial role in business. Also, to provide the graduate with a sufficient competency to enter and advance in the area of office management. In addition, to provide the specialization and certification for the graduate to teach business education in the public schools.

The student planning to major in office administration will take in his freshman year Office Administration 1210 and 1220, Elementary Typewriting and Intermediate Typewriting. If he has had previous training in typewriting, he will omit 1210 and take 1220 and a higher-numbered typewriting course, or one semester of an approved elective.

The student planning an area of concentration in office administration-secretarial will take in his sophomore year Office Administration, 2120 and 2130, Fundamentals of Shorthand and Intermediate Shorthand. If he has had previous training in shorthand, he will omit 2120 and take 2130 and a higher-numbered shorthand course, or one semester of an approved elective. Students planning an area of concentration in office administration-management may omit shorthand from their programs.

No more than three courses (9 semester hours) in typewriting may be applied toward satisfaction of the degree requirements by a student with high school credit in typewriting.

Not more than 12 semester hours of the basic skill courses in typewriting and shorthand (Office Administration 1210, 1220, 3250, 2120, 2130, and 3140) may be applied on a B.B.A. degree.

A student must earn a grade of C or better in typewriting or shorthand courses before he can register for the next course in the subject.

The Major in Office Administration-Secretarial Concentration: a minimum of 21 semester hours of upper-division office administration courses, as follows:

- 3140, Advanced Shorthand I
- 3250, Advanced Typewriting
- 4270, Secretarial Typing and Office Machines
- 4320, Applied Secretarial Practice
- 4330, Records Management and Control
- Two of the following courses, selected in conference with the department chairman:
- 4160, Secretarial Dictation
- 4400, Punched Card Methods
- 4401, Punched Card Applications
- 4410, Office Management I

The Minor in Office Administration-Secretarial Concentration:

For the student whose major is in another college of the University:

- 1210 and 1220, Elementary Typewriting and Intermediate Typewriting.
- 2120 and 2130, Fundamentals of Shorthand and Intermediate Shorthand.
- 3140, Advanced Shorthand.

Two or three additional approved upper-division courses in office administration.

(If the student can demonstrate proficiency in either typewriting or shorthand, he may omit either Office Administration 1210 or 2120, thus reducing the hours required for the minor from 21 to 18; a minimum of 18 semester hours is required.)

The Major in Office Administration-Managerial Concentration: a minimum of 21 semester hours of upper-division courses as follows:

- 4330, Records Management and Control
- 4400, Punched Card Methods
- 4401, Punched Card Applications
- 4410, Office Management I
- Accounting 3010, Managerial Accounting
- Two of the following courses, selected in conference with the department chairman:
- Management 4210, Personnel Administration
- Management 4420, Human Relations in Business
- Management 4750, Electronic Data Processing and Programming
- FIR 4610, Cases in Managerial Finance
- Marketing 4330, Credit and Collections
- Economics 4111, Economics of Business Enterprise

The Minor in Office Administration-Management Concentration:

For the student whose major is in another college of the University:

Accounting 2010 and 2020, Fundamentals of Accounting
Economics 2110 and 2120, Economics I and II
Office Administration 3510, Business Communications
Office Administration 4410, Office Management
Two additional upper-division courses in office administration approved by the department chairman.

THE PROGRAM IN INTERNATIONAL BUSINESS

ASSOCIATE PROFESSOR JOHN J. REID,
Adviser
Business Administration 415

The primary objective of the International Business Program is to provide the participating student with a broad interdisciplinary background which will prepare him 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 his knowledge to the solution of problems faced by the company.

The Major in International Business:

The student majoring in International Business must complete the core 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 adviser. It is recommended that he plan his program so as to acquire a working knowledge of a foreign language.

In his senior year, the student will take 21 semester hours in courses offered by the College of Business Administration, distributed as follows: 15 semester hours (5 courses) from the following group:

- Accountancy 4310, International Accounting
- Business Administration 4000, Internship in International Business
- Economics 4340, Comparative Economic Systems
- Economics 4350, International Economics
- FIR 4550, International Finance
- Management 4810, International Management
- Marketing 4530, International Marketing
- 6 semester hours (2 courses) from the following group:
- Economics 4111, Managerial Economics
- Economics 4120, Economic Forecasting
- FIR 4440, Managerial Finance
- Management 4760, Operations Research
- Management 4780, Systems Design for Business Activities
- Marketing 4080, Marketing Research

Two courses from the College of Arts and Sciences are also required in the senior year. See the adviser.

The College of Education

ROBERT L. SAUNDERS, B.S., M.S., Ed.D.,
Dean

DEVOY A. RYAN, B.S., M.Ed., Ed.D.,
Associate Dean

Room 215, The College of Education

Building

Purposes

In helping Memphis State University achieve its three broad objectives of teaching, public service, and research, the College of Education has the following specific objectives: (1) to work with public schools and appropriate educational organizations in recruiting desirable and promising candidates into the education profession; (2) to provide preparation programs which produce teachers and related school personnel sufficient in quantity and competence to help meet the needs of the state, region, and nation; (3) to provide programs and services for teachers and related school personnel already in service which enable them to acquire additional preparation needed for changing career objectives and continuous professional growth; (4) to provide effective personnel services in such areas as certification, placement, and follow-up to undergraduates, graduate students, and teachers in service; (5) to provide a comprehensive program of research and service to public schools and other related agencies in the state and region; and (6) to provide appropriate programs and services needed by Memphis State University in its efforts to continuously improve the effectiveness of teaching and learning at the University.

The College of Education provides curricula leading to the degrees of Bachelor of Science in Education, Bachelor of Science in Home Economics, and Bachelor of Music Education. Candidates for these degrees take required and elective courses within the College of Education. They also take courses in the other colleges of the University in general education and in preparation for teaching in their subject matter fields. Students who wish to matriculate in the teacher education program must satisfy the special criteria of that program in addition to the general University admission requirements. Applications for admission to the teacher education program cannot be considered until the student has completed a minimum of one and one-half years of college work to the

satisfaction of the faculty of The College of Education. For details see page 77.

Accreditation

The College of Education holds membership in the American Association of Colleges for Teacher Education. Its undergraduate programs through the Doctor's degree for the preparation of teachers and related school personnel are fully accredited by the National Council for Accreditation of Teacher Education.

Organization of the College

The College of Education offers programs in the following areas: Adult Education; Distributive Education; Educational Administration and Supervision; Elementary Education; Foundations of Education; Guidance and Personnel Services; Health, Physical Education, and Recreation; Home Economics; Library Service; Secondary Education; and Special Education and Rehabilitation. The College of Education offers a program in Business Education through The College of Business Administration; Industrial Arts Education through Industrial Technology; and Music Education through the Department of Music. The detailed requirements for these programs are listed in the section beginning on page 79.

The University Campus School (a public school comprising grades 1 through 6) and the Early Childhood Education Center-Children's School (a pre-school for children three to six years of age) are operated under the supervision of The College of Education.

The College of Education offers both lower and upper division courses. The Lower Division comprises the freshman and sophomore years, the first four semesters of University work; courses offered in the lower division are numbered from 1000 through 2999. The Upper Division comprises the junior and senior years, the last four semesters of undergraduate work; courses offered in the upper division are numbered from 3000

through 4999. Students who have completed the required number of hours and the required residence to be classified as juniors, but who have not completed their basic requirements in the lower division, must schedule these uncompleted requirements during the first semester in which such courses are available. Forty-five semester hours are required in the upper division.

An overall grade point average of 2.25 in *all* professional education courses attempted, required or elective, is required. (In a course where the grade "S" or "U" is assigned the grade of "U" will not be accepted.) Professional education courses are all undergraduate courses offered by the departments of Curriculum and Instruction, Distributive Education, Foundations of Education, Guidance and Personnel Services, and Special Education and Rehabilitation.

Bureau of Educational Research and Services.

The Bureau of Educational Research and Services coordinates educational studies, surveys, evaluations, consultant activities and information for The College of Education. Emphasis is placed on team projects related to the needs of West Tennessee and the Mid-South area and conducted through the cooperative efforts of the faculty and students of The College of Education and educators in local school systems. The primary objective of the Bureau is service, with research playing a fundamental role in the extension of this service.

Representatives of school systems, students, or other interested persons should confer with the Director of the Bureau for information about opportunities for educational research and services.

University Campus School.

The University Campus School, located east of The College of Education Building, is a public school comprising grades 1 through 6, operated by the University as a part of the public school system of the City of Memphis. It offers a broad program of training for approximately 500 students. This school also serves the teacher education program as a laboratory where varied opportunities are offered University students to study children, to study the school program, and to participate in teaching activities.

The Early Childhood Education Center-Children's School.

The Children's School, for children three to six years of age, is administered by the Co-

ordinator of the Early Childhood Education Center in the Department of Curriculum and Instruction. The school is a non-profit institution, and tuition charges are determined by the cost of operation.

Admission

Requirements for admission to The College of Education are those set up for the University as a whole; see page 14.

Admission to the Teacher Education Program.

Students who enter MSU for the first time after September 1, 1962 and who wish to prepare themselves for careers as teachers must make formal application for admission to the Teacher Education Program. Applications should be filed during the second semester of the sophomore year. If a student does not file an application during the second semester of his sophomore year, he **MUST** file one before the end of the first semester of the junior year and prior to enrollment in EDPS 3121. Students who transfer to MSU with 40 semester hours or more must file an application during their first semester of residence and prior to enrolling in EDPS 3121.

The following factors will be considered by the screening committee in determining a student's eligibility for admission to the teacher education program:

- (1) academic aptitude—acceptable scores on tests used for admission to MSU.
- (2) academic achievement — grade point average of 2.25 in professional education, 2.25 in the teaching endorsement(s), and 2.25 overall.
- (3) proficiency in English — grade point average of 2.00 in all English courses completed or at least a grade of "C" in English 1101 and 1102.
- (4) speech and hearing — acceptable scores on tests administered by Memphis State University Speech and Hearing Center.
- * (5) health
- * (6) social adjustment
- * (7) communication skills
- * (8) interest in teaching
- * (9) the desire to work effectively with students

* Information on factors 5-9 should be submitted by the student, by staff members, and by personnel in appropriate offices and centers.

- (10) Completion of 36 semester hours of the 45 semester hours in the general education program.
- (11) Completion of at least 9 semester hours in the major teaching endorsement.
- (12) Completion of EDFD 2011 and/or EDPS 2111 [or equivalent(s)].
- (13) Evidence of satisfactory performance in an early related field experience.
- (14) Specific recommendations from faculty members — professor under whom applicant completed EDFD 2011 or EDPS 2111 and professor under whom applicant has completed a course in the major endorsement, as well as the adviser.
- (15) Transfer student who transfers 40 or more semester hours to have recommendation from former college or university adviser, instructor, Department Chairman, or other official.

Once admitted to the teacher education program the student must maintain the standards required for admission. If the student falls below any of these standards, his name will be removed from the file of students matriculated in teacher education and he will be advised of this action. He may then either try to bring his record up to a level suitable for re-admission or drop out of the teacher education program.

In order to be graduated and certified to teach, a student must (1) meet all standards established for admission to the teacher education program, (2) make formal application for and be admitted to that program, (3) complete all requirements for certification, and (4) complete all degree requirements in the college of the University in which he is enrolled.

All graduates of The College of Education must be qualified for a teaching certificate with the exception of those in the following programs which are not designed for a career in teaching: Child Development, Dietetics, Merchandising, and Food Administration in the Department of Home Economics; Recreation and Park Administration in the Department of Health, Physical Education, and Recreation; and Rehabilitation Education in the Department of Special Education and Rehabilitation.

Students must be admitted to the Teacher Education Program at least one semester prior to enrolling for student teaching. Students who enroll for student teaching for the fall semester must have been admitted by

the end of the immediately preceding spring semester. Students who enroll for the spring semester must be admitted by the end of the immediately preceding summer session. (EXCEPTIONS: (1) Student with low grade(s)—A student who has filed an application for admission to the teacher education program but has not been admitted by the end of the immediately preceding spring semester or summer session because of low grades, will be allowed two weeks following the end of the semester or session to submit evidence that his grades then meet the requirements of admission. (2) Transfer student—A student who transfers from another college or university may, if enrolled for a minimum of twelve hours, apply for admission to the teacher education program during his first semester here. If he is admitted to the teacher education program that semester and if he meets all other requirements, he may be admitted to student teaching the following semester.)

Application forms for admission to the teacher education program may be secured from Room 211A, Education Building. For a detailed explanation of all requirements the student should consult with his adviser.

Directed Student Teaching

Directed student teaching, offered during the fall and spring semesters in cooperating schools, provides opportunities for observation of good teaching practices and for practical teaching experiences under the direction of supervising teachers.

A limited program of student teaching for in-service teachers is offered through the summer session. Information concerning the summer program including requirements for enrolling may be obtained from the director of student teaching. Applications should be filed by May 1 immediately preceding the summer session during which student teaching is desired.

Students preparing to teach in elementary school are required to enroll for at least nine semester hours of student teaching to be done on an all-day basis. Students preparing to teach in the secondary schools are required to enroll for at least nine semester hours of student teaching to be done on an all-day basis for one-half a semester or for three hours daily for an entire semester.

Students with a major in Early Childhood Education (K-3) are required to enroll for a fifteen hour professional semester during the first semester of the senior year. This professional semester includes Student Teach-

ing, divided between elementary and Kindergarten, and a one-week academic marathon.

NOTE: STUDENTS WHO ENROLL FOR STUDENT TEACHING MAY NOT REGISTER FOR ANY COURSE WHICH IS SCHEDULED TO MEET AT A TIME WHICH WOULD CONFLICT WITH THE STUDENT TEACHING ASSIGNMENT.

All teacher education students must observe a professional semester when they are enrolled in student teaching. During this semester, only professional courses will be taken. The professional semester for student teachers will include the following courses:

Elementary Education:
Methods: ELED 3261
Student Teaching: ELED 4821

Kindergarten:
Student Teaching: ELED 4811
NOTE: Student teaching in Elementary and Kindergarten may be taken during the same semester.

Early Childhood Education (K-3):
Student Teaching: ELED 4821 and ELED 4811
NOTE: Both must be taken during the first semester of the senior year.

Secondary Education:
SCED 4441 and appropriate elective in professional education, if not already completed
Student Teaching: SCED 4841

Distributive Education:
DTED 4630, 4641
Student Teaching: DTED 4871

Special Education:
Student Teaching: SPER 4541
NOTE: Student Teaching in Special Education and in Elementary or Secondary Education may be done during the same semester.

Beginning in the Fall, 1971, grades in student teaching will be reported as "S" (satisfactory) or "U" (unsatisfactory).

Requirements for enrolling for student teaching are as follows:

1. Filing of application with the director of student teaching during the semester prior to the one in which the student teaching is to be done. Applications for student teaching to be done in the fall semester must be filed by March 1; for the spring semester by October 15.
2. Admission to the teacher education program obtained at least one semester prior to enrolling for student teaching. (See page 77.)
3. Classification as a senior or graduate student.
4. Completion of at least one semester of residence at Memphis State University (minimum of twelve semester hours).
5. An over-all average of at least 2.00; an average in the endorsement area(s) of at least 2.25; an average of 2.25 in all professional education courses.
6. Completion of Foundations of Education 2011, 2111, and 3121.
7. Completion of Elementary Education 3241, 3251, 3271, and 4242 (for those preparing to teach in elementary schools); Elementary Education 3211 and 3411 (for kindergarten); or the appropriate secondary methods course(s) (for those preparing to teach in secondary schools).
8. Completion of either the elementary or secondary endorsement(s).
9. Approval by the applicant's adviser and by the director of student teaching.

Academic Programs

Degrees Offered.

The College of Education offers the Bachelor of Science in Education, Bachelor of Science in Home Economics, and the Bachelor of Music Education degrees. The following outline lists the majors and areas of endorsement for each department.

ACADEMIC PROGRAMS

Department	Major	ENDORSEMENTS	
		Major Endorsement	Minor Endorsement
Curriculum and Instruction ¹	Elementary Education	Elementary Education	Kindergarten
	Early Childhood Education (K-3)		
	Secondary Education	Art Education Business Education	Business Education Secretarial Practice Bookkeeping, General Business, Typewriting Economics, Consumer Education, General Business, Business Law

THE COLLEGE OF EDUCATION

Department	Major	ENDORSEMENTS	
		Major Endorsement	Minor Endorsement
Curriculum and Instruction (continued)	Secondary Education	Distributive Education English Foreign Languages French German Latin Spanish Health Education Elementary Physical Education Secondary Physical Education Home Economics Education Industrial Arts Education Mathematics Math & Phys. Science Music Education Instrumental Music School Music Science Biology Chemistry Physics General Science Earth & Space Sciences Social Studies Economics Geography Government History Sociology Special Education Educable Mentally Retarded Speech and Drama	Driver Education English Foreign Languages French German Latin Russian Spanish Health Education Elementary Physical Education Secondary Physical Education Industrial Arts Education Library Service Mathematics Psychology Science Biology Chemistry Physics General Science Earth & Space Sciences Social Studies Economics Geography Government History Sociology Special Education Educable Mentally Retarded Speech *Drama
	Distributive Education ¹	Distributive Education	Distributive Education
Health, Physical Education & Recreation ¹	Health Education Physical Education (Elementary) (Secondary) Recreation and Park Administration	Health Education Elementary Physical Education Secondary Physical Education	Health Education Elementary Physical Education Secondary Physical Education
Home Economics	Child Development Dietetics ³ Merchandising ³ (Fashion) (Home Furnishing) Food Administration ³ Home Economics Education Vocational Home Economics	Home Economics Education Vocational Home Economics	
Library Service ¹			Library Service
Music Education ² (Division of)	Music Education (General Music) (Instrumental Music) (School Music)	Music Education Instrumental Music School Music	
Special Education and Rehabilitation ¹	Special Education ¹ Rehabilitation Education	Special Education: Educable Mentally Retarded	Special Education Educable Mentally Retarded

* Not approved as a valid certification area in Tennessee.
(Areas of Concentration)

¹ DEGREE OFFERED: B.S. in Education.

² DEGREE OFFERED: Bachelor of Music Education.

³ DEGREE OFFERED: B.S. in Home Economics.

Degree Requirements

To qualify for the Bachelor of Science in Education degree the student must complete 132 semester hours with a grade point average of 2.0 (on a scale in which A has the quality point value of 4; B, 3; C, 2; and D, 1). Of the 132 semester hours required for graduation, at least 45 must be in courses from the upper division (those numbered above 2999). An overall average of 2.25 in *all* professional education courses, required or elective, is required. (In a course where the grade "S" or "U" is assigned the grade of "U" will not be accepted.) Professional education courses are all undergraduate courses offered by the Departments of Curriculum and Instruction, Distributive Education, Foundations of Education, Guidance and Personnel Services, and Special Education and Rehabilitation.

At least 60 semester hours of the credit applied on the degree must be of liberal content. Courses in the following fields will meet this requirement: anthropology, art (non-applied), biology, chemistry, economics, English, geography, geology, history, journalism (non-applied), languages, mathematics, music (non-applied), philosophy, physics, political science, psychology, sociology, and speech. The following courses offered in The College of Education will meet this requirement: Foundations of Education 2111, 2102, and 4021; Health 1102 and 1202; Home Economics 1101, 1104, 2101, and 2202.

General requirements for the degree include the successful completion of (I) the general education program, (II) the professional education program, (III) physical education activity courses, (IV) a major in The College of Education, and (V) endorsement in one or more teaching areas. Majors in Child Development, Dietetics, Merchandising, and Food Administration in the Department of Home Economics, and majors in Recreation and Park Administration in the Department of Health, Physical Education, and Recreation, and majors in Rehabilitation Education in the Department of Special Education and Rehabilitation, complete only those professional education courses (II) specified in their programs and do not complete an endorsement (V) since they are not qualifying for a teaching certificate. These requirements are outlined in detail in the sections which follow.

THE GENERAL EDUCATION PROGRAM (45 semester hours)

(Courses taken to meet the requirements of this section may, if applicable, be used to meet the requirements of Section V, below.)

English (12 semester hours): English 1101, 1102, and any two of the following: 2101, 2102, 2103, 2104, 2105.

Health and Personal Development: Health 1102 and one of the following: Home Economics 1101, Psychology 1101.

Humanities: Elective from one of the following: Art (non-applied), Foreign Languages (2000 level or above), Music (non-applied), and Philosophy.

Speech: Speech 2911 or 1411 for elementary or early childhood certification; Speech 1211 or 1311 or 1411 for secondary certification.

Natural Sciences: 9 semester hours (including one two-semester laboratory sequence) in two of the following sciences: biology, chemistry, physics, earth sciences (defined for purpose of this requirement to include Geography 1101, 1102, 4111, 4121, 4122, 4131 and any course in geology.)

Note: Laboratory sequences possible in earth sciences are Geography 1101 and 1102, or Geology 1101 and 1201, or Geography 1101 and Geology 1101.

Social Sciences: History 2601, 2602 (6 semester hours), and an elective from one of the following: anthropology, economics, geography (other than the earth science courses listed above), political science, and sociology.

Mathematics: Mathematics 1181 for elementary or early childhood certification; Mathematics 1181 or any higher-numbered mathematics course for secondary certification.

II. THE PROFESSIONAL EDUCATION PROGRAM (24-33 semester hours)

Foundations of Education 2011, 2111, 3121, and the courses in one of the following groups:

For the elementary certificate: Elementary Education 3241, 3251, 3261, 3271, 4242, and 4821 (9 semester hours), for a total of 33 semester hours.

For the early childhood (K-3) certificate: Elementary Education 3412, 4212, 4242, 4821, and 4811, for a total of 33 semester hours.

For endorsement in Distributive Education: Distributive Education 4630, 4871 (9 semester hours), 4641 and one education elective applicable for secondary school teachers, for a total of 27 semester hours.

For the secondary certificate: Secondary 4441, 4841 (9 semester hours), appropriate secondary school methods course(s)*, and one elective applicable for secondary school teachers, for a total of 27 semester hours. (Music Education 4235 may be used to satisfy the secondary education elective for students completing a major endorsement in Music Education.)

For Special Education Certificate: Special Education and Rehabilitation 3512 and 4541 (6 semester hours), in addition to the professional education courses required for either the Secondary or Elementary endorsement for a total of from 30 to 39 semester hours. The student obtaining an endorsement in Special Education is required to complete six (6) semester hours in student teaching in either Elementary Education (ELED 4821) or Secondary Education (SCED 4841). The Special Education student completing requirements for a Secondary Certificate may use the methods course — Special Education and Re-

habilitation 3512 — to satisfy the Secondary Education elective.

*NOTE: Students will be required to take appropriate specialized methods course in each endorsement area, major or minor. In several endorsement areas, additional professional courses are required. The following list identifies the methods course and additional professional education courses required for each subject area:

Art: Secondary Education 3321 (same as Art 4421)
Business: For Major Endorsement, Secondary Education 3381 and 3382

For Minor Endorsement, Secondary Education 3381 OR 3382; special section of EDUC 3901 (1 semester hour)

For Specific Endorsements, Secondary Education 3381 OR 3382, the applicable courses depending on endorsements selected.

Driver Education: No methods course is offered.

English: For Major Endorsement, Secondary Education 3341; 4341 and 4344 (additional requirements, one of which can be used to satisfy the secondary education elective.)

Foreign Language: Secondary Education 3342 (French), 3343 (German), 3344 (Latin), 3345 (Spanish), 3347 (Russian).

Health Instruction: Health 3102

Home Economics (Home Economics Education and Vocational Home Economics): Secondary Education 3383

Industrial Arts: Secondary Education 3384

Library Service: No methods course is offered.

Mathematics: Secondary Education 3351. An additional methods course, Elementary Education 3251 is required for Major Endorsement and highly recommended for Minor Endorsement.

Mathematics and Physical Science: Secondary Education 3351 and/or 3362.

Music: Secondary Education 3322

Physical Education: Physical Education 3803

Psychology: Secondary Education 3372

Science: Secondary Education 3361 (Biology), 3362 (Chemistry, Physics, General Science, and Earth and Space Science)

Social Studies: Secondary Education 3371

Speech: Secondary Education 3346

II. PHYSICAL EDUCATION ACTIVITY COURSES

Four semesters of physical education activity courses; for exceptions and details see page 46.

IV. A MAJOR IN THE COLLEGE OF EDUCATION

The student will choose one of the following majors offered in The College of Education. The specific courses required for the satisfaction of these majors are listed in the following pages.

Distributive Education
Early Childhood Education
Elementary Education
Health Education
Home Economics
Music Education
Physical Education
Recreation and Park Administration
Rehabilitation Education
Secondary Education
Special Education

V. SPECIFIC SUBJECT ENDORSEMENT

Students must complete requirements in at least one major endorsement area. The student may elect to complete requirements for more than one major endorsement or for a major endorsement and one or more minor endorsements. The minimum number of hours required for a major or minor endorsement varies according to the characteristics and needs of different subject areas.

Students will be required to take an appropriate specialized methods course in each endorsement area, major or minor. In several endorsements areas additional professional courses may be required as needed to meet recommendations of various accrediting and professional agencies. Student teaching must be taken in the student's major endorsement area.

A grade point average of 2.25 in each endorsement is required. To be included in the computation are grades assigned in all courses attempted, required or elective, in each area of endorsement. Semester hours completed as electives in excess of the number of hours required in each endorsement shall be included. EXCEPTION: For endorsement in Elementary Education only the required courses shall be included. (Choose A, B, C, D, E, F, or G, H, or I, or combination of these.)

(Courses taken to meet the requirements of Section I, above, may if applicable, be used to meet any part of the requirements of this section.)

A. ELEMENTARY CERTIFICATE (48 semester hours)

Art 3411

Biology 2001 and 2002 OR Biology 1200 and 1600 and 3050.

Geography 2301, 2311

Health 3306

Library Service 4111

Mathematics 1182, 2581

Music Education 3234

Physical Education 3806 (Prerequisite: PHED 1811)

Physical Science 1031 and 1032

NOTE: Students with adequate high school background in *both* chemistry and physics may take at least six semester hours in any combination from the areas of astronomy, chemistry, earth science, geology, or physics instead of Physical Science 1031 and 1032.

Social Science — Two courses (6 semester hours) from the following social sciences: cultural anthropology, economics, history (other than History 2601, 2602), political science, or sociology.

Speech 2911 OR 1411

B. KINDERGARTEN THROUGH GRADE 3 ENDORSEMENT

To add an endorsement in Kindergarten through Grade 3 to a certificate in Elementary Education (grades 1-9), the student must complete the requirements for the elementary certificate and, in addition, must complete Elementary Education 2211, 4212, and 4811.

C. EARLY CHILDHOOD EDUCATION (K-3)

The following program in Early Childhood Education has been approved by the State of Tennessee as a

special program. It does not meet requirements for certification in Elementary Education (grades 1-9), but is designed for the student who desires certification in kindergarten through third grade only.

Early Childhood Education Major.

1. Supportive Content (30 hours)

Health 2102, Humanities 3 hours (Elective from Applied Art or Applied Music), MATH 1182 or 2581, Science 3 hours (Elective from Biology or Earth Science plus science listed in General Education), Social Science six hours (Elective from Anthropology, Economics, Geography or Sociology), SPCH 1411 or 2911.

2. Early Childhood Education (15 hours)

HMEC 2101 and 3101; ELED 2211, 3212, and 4411.

3. *Area of Specialization (6-12 hours)

A minimum of six hours constitutes a specialization area. Some areas require more than six hours. The areas of specialization presently identified are: Elementary Education, Library Service, Math, Child Development, Geography, Biology, Special Education, Physical Education, Health, Reading and Language, and Psychology.

4. *Electives (5-11 hours)

*At least nine (9) hours of upper division courses must be included in the area of specialization and/or from the electives.

SPECIAL EDUCATION (Educable Mentally Retarded)

Major Endorsement (33 semester hours)

Special Education and Rehabilitation 2000, 3201, 3401, 3501, 3516, 3521, 3901, 4001 (or Educational Foundations 4511)

Elementary Education 3241, 4242

Distributive Education 3010

In addition, the student must complete one of the following:

1. Professional Education courses required for secondary endorsement and specific requirements for endorsement in a subject area (Grades 7-12 or 1-12). This program leads to certification in Special Education (Educable Mentally Retarded, Grades 1-12), as well as in the selected subject area. A Major Endorsement can be taken only when combined with some other major or minor endorsement area which is certifiable by the State of Tennessee. Library Service and Driver Education will not satisfy the requirement for a second teaching area for students completing major endorsements in Special Education.

2. Special Education 3512 and Professional Education courses required for elementary endorsement and all of the courses required for the Elementary Certificate except Geography 2301, 2311 and Mathematics 2581. This program leads to certification in Special Education (Educable Mentally Retarded, Grades 1-12). To become certified in Elementary Education (Grades 1-9), the student must take the following additional courses required for the Elementary Certificate: Geography 2301, 2311 and Mathematics 2581.

Minor Endorsement (18 semester hours)

Special Education and Rehabilitation 2000, 3501, 3521, 3901, 4001 (or Educational Foundations 4511)

Elementary Education 4242

In addition, the student must complete one of the following:

1. Professional Education courses required for secondary endorsement and specific requirements for a major endorsement in a subject area (Grades 7-12 or 1-12)

2. Special Education 3512 and Professional Education courses required for elementary endorsement and all of the courses required for the Elementary Certificate.

* Minor Endorsement can be taken only when combined with a major endorsement area which is certifiable by the State of Tennessee.

E. LIBRARY SERVICE

Major Endorsement — Not available

Minor Endorsement (21 semester hours)

Library Science 4111, 4121, 4131, 4231 OR 4401, 4232, 4331, EDUC 4301

For certification in Library Service, a student must complete all requirements for either the elementary certificate (Grade 1-9) or the secondary certificate with a Major Endorsement in a subject area (Grades 7-12).

F. ELEMENTARY PHYSICAL EDUCATION (Grades 1-9)

Major Endorsement: (49 semester hours)

Physical Education 1103, 1581, 1621, 1713, 1813, 2003, 2903, 3303, 3403, 3703, 3816, 3826, 3836, 3846, 4204

Four one-hour activity electives, to include one team sport activity and one individual and dual activity.

Biology 1631, 1632

Electives (6 semester hours) to include no more than 2 activity courses

The Minor Endorsement: 34 semester hours, as follows:

Physical Education 1103, 1581, 1621, 1713, 1813, 2903, 3303, 3403, 3703, 3846, 4204

One of the following courses: Physical Education 3816, 3826, 3836

Four one hour activity electives

Biology 1631, 1632

G. VOCATIONAL CERTIFICATES

1. DISTRIBUTIVE EDUCATION

Major Endorsement (27-30 semester hours)

Management 1010

Accounting 2010

Economics 2110, 2120

Marketing 3010, 3140, 3320, 3410

Marketing 4991 OR two years practical experience in one or more distributive occupations.

Elective in Business Administration (3 semester hours), selected in conference with adviser.

Minor Endorsement — Not available

2. VOCATIONAL HOME ECONOMICS

Major Endorsement (77-78 semester hours)

Home Economics 1100, 1101, 1104, 1105, 2101, 2102, 2202, 2205, 3302, 3305, 3402, 3405, 4100, 4103, 4104, 4201, 4203, 4503, upper division electives (6 semester hours).

Chemistry 1051 and 1052 OR 1111 and 1112

Biology 1400; 1631 OR 1632

Economics 2110, 2120

Minor Endorsement — Not available.

H. CERTIFICATES FOR GRADES 1-12

To receive a certificate for Grades 1-12 in the following areas of endorsement, the student must complete requirements for secondary certification.

1. ART EDUCATION

Major Endorsement (36-39 semester hours)

Art 1101 (OR 2101 and 2102), 1201, 1204, 1311, 1314, 2201, 2313, 3411, 3421, 4167, 4168, 4424.

Minor Endorsement — Not available

2. HEALTH EDUCATION (Grades K-12)

Major Endorsement: (43 semester hours)

Health 1102, 1202, 1302, 2102, 2202, 3202, 4102, 4702

Biology 1631, 1632, 3400

Chemistry 1000

Home Economics 2202

Electives (6 semester hours) to be chosen from the following: HLTH 3306 3402, 3502, 4202-20, 4402, 4502, 4602; PHED 3303; SCED 3335; SOC1 3420, 4411, 4610, 4620

Minor Endorsement: (31 semester hours)

Health 1102, 1202, 1302, 2102, 3202, 4102

Biology 1631, 1632, 3400

Home Economics 2202

Electives (3 semester hours) to be chosen from the following: HLTH 3306, 3402, 3502, 4202-20, 4402, 4502, 4602; PHED 3303; SCED 3335; SOC1 3420, 4411, 4610, 4620

Note: It is recommended that Chemistry 1000 be taken to satisfy the second area of science required in General Education.

3. MUSIC EDUCATION

Major Endorsement (46-50 semester hours)

Certification in Music Education requires the completion of (a) a group of basic courses and (b) a group of courses in at least one of two areas of emphasis.

a. Basic Courses (26 semester hours)

Music 1051, 1052, 3061 (16)

Music 3236 (3)

Music Elective (3)

Music ensembles (4 hours of large ensembles)

b. Areas of Emphasis

(1) School Music (vocal emphasis)-(20 semester hours)

Music Education 4233, 4234, 4236

Applied Music (14 semester hours)

Music Education 1312 OR 1912

Piano — Class Instruction or Individual Lessons (4 semester hours)

Voice — Class Instruction or Individual Lessons (4 semester hours)

Additional individual lessons above the Preparatory Level in either Piano or Voice (4 semester hours)

(2) Instrumental Music (24 semester hours)

Music Education 4232, 4234, 1512

Applied Music (18 semester hours)

Music Education 1312, 1711, 1712, 1912

Piano — Class Instruction or Individual Lessons (4 semester hours)

Voice — Class Instruction or Individual Lessons (2 semester hours)

Individual lessons on one band or orchestral instrument of major emphasis (6 semester hours)

Minor Endorsement — Not available

I. SECONDARY CERTIFICATE

1. BUSINESS EDUCATION

Students seeking endorsement in Business Education must complete a Business Education Core (a) of 18 semester hours, and complete either the requirements for a Major Endorsement (b) or a Minor Endorsement (c). Endorsement in specific subjects is optional (d), but cannot be taken without completing the Major or Minor Endorsement requirements. For computation of the grade point average, each endorsement in business includes the 18 semester hours of basic requirements.

a. Business Education Core (18 semester hours)

Accounting 2010, 2020 (6 semester hours)

Economics 2110, 2120 (6 semester hours)

Management 1010 OR FIR 3011 (3 semester hours)

Office Administration 3510 OR Mathematics 2291 (3 semester hours)

b. *Major Endorsement* (22 semester hours plus 18 hours core)

Accounting 3010 OR 3110; 2720

Office Administration 4270; 4320 OR 4330 OR 4400 OR 4410

Six semester hours in shorthand, including one course in advanced shorthand

Six semester hours in typewriting, including one course in advanced typewriting

NOTE: Mathematics 2291 must be added, if not taken as part of core.

c. *Minor Endorsements* (10-18 semester hours plus 18 hour core)

1. Secretarial Practice (18 semester hours)

Office Administration 4270; 4320 OR 4330 OR 4400 OR 4401 OR 4410

Six semester hours in shorthand, including one course in advanced shorthand

Six semester hours in typewriting, including one course in advanced typewriting

2. Bookkeeping — General Business — Typewriting (10 semester hours)

Accounting 2720, 3010 or 3110

Six semester hours in typewriting, including one course in advanced typewriting

NOTE: Mathematics 2291 must be added, if not taken as part of core.

3. Economics — Consumer Education — General Business — Business Law (15 semester hours)

Economics 3610

FIR 3130, 3410

Secondary Education 4707 OR Home Economics 4103

NOTE: Mathematics 2291, Management 1010 and FIR 3011 must be added, if not taken as part of core.

d. Specific Business Endorsements (18 hours core must also be completed)

1. Bookkeeping (4 semester hours)

Accounting 2720; 3010 OR 3110

2. Business Arithmetic (3 or 6 semester hours)
Mathematics 1211 and 2291 (may be included in core)
3. Business English (0 or 3 semester hours)
Office Administration 3510 (may be included in core)
4. Business Law (3 or 6 semester hours)
FIR 3011 (may be included in core), 3130
5. Business Machines (3 semester hours)
Office Administration 4270
6. Consumer Education (3 semester hours)
Home Economics 4103 OR Secondary Education 4707
7. Economics (6 semester hours)
Economics 3610, FIR 3410
8. General Business (6 semester hours)
FIR 3011 (may be included in core) OR 3130
Mathematics, 3 hours chosen in conference with adviser
NOTE: Management 1010 must be added, if not taken as part of core.
9. Office and Clerical Practice (3 semester hours)
Office Administration 4320 OR 4330 OR 4400 OR 4401 OR 4410
10. Salesmanship (6 semester hours)
Marketing 3010, 3410
11. Secretarial Practice (15 semester hours)
Endorsement in Office and Clerical Practice, Shorthand and Typewriting
12. Shorthand (6 semester hours)
Six semester hours in Shorthand, including one course in advanced shorthand
13. Typewriting (6 semester hours)
Six semester hours in Typewriting, including one course in advanced typewriting

2. DRIVER EDUCATION

Major Endorsement — Not available

Minor Endorsement (20 semester hours)

Health 2102, 2202

Secondary Education 3335

Twelve semester hours of electives chosen from the following two groups, selected in consultation with adviser:

- 3 to 6 hours from the following:
Secondary Education 3336, 4337
- 6 to 9 hours from the following:
EDFD 4511, EDUC 4301
Psychology 1102, 3101, 3302
Sociology 3730, 4710

3. ENGLISH

Major Endorsement (36 semester hours)

12 hours freshman and sophomore level courses: English 1101, 1102, and any two of the following: 2101, 2102, 2103, 2104, 2105; 24 upper division hours: English 3321 OR 4321; 3322 OR 4322; 4232 OR 4233; 3501; 4501; 4602; 3211 OR 3212 OR 3213 OR 3214; 3221 OR 3222 OR 3223 OR 3224

Minor Endorsement (30 semester hours)

12 semester hours freshman and sophomore level courses (same as required for Major Endorsement)

18 upper division semester hours: English 3321 OR 4321; 3322 OR 4322; 4232 OR 4233; 3501 OR 4501; 4602; and any one of the following: 3211,

3212, 3213, 3214, 3221, 3222, 3223, 3224

4. FOREIGN LANGUAGES

Endorsement may be obtained in French, German, Latin, Russian and/or Spanish. Two or more high school units of one foreign language may be used in lieu of freshman level courses in that language. Credit in any of the lower division courses may be earned by proficiency.

a. French

Major Endorsement (33 semester hours)

Lower division French, or the equivalent (12 semester hours)

French 3301, 3302, 3411, 3412, 4301, 4305, 4501

Minor Endorsement (24 semester hours)

Lower division French, or the equivalent (12 semester hours)

Four upper division courses, selected from the following:

French 3301, 3302, 3411, 3412, 4301, 4305, 4501

b. German

**Major Endorsement* (33 semester hours)

Lower division German, or the equivalent (12 semester hours)

German 3301, 3302, 3410, 3411, 3412, 4301, 4501

Minor Endorsement (24 semester hours)

Lower division German, or the equivalent (12 semester hours)

Four upper division courses, selected from the following:

German 3301, 3302, 3410, 3412, 4301, 4501

*Students electing a Major Endorsement in German must complete requirements for another Major Endorsement or Minor Endorsement in a complementary teaching area.

c. Latin

***Major Endorsement* (33 semester hours)

Lower division Latin, or the equivalent (12 semester hours)

Latin 3111, 3211, 3411, 3511, 3811, 3912, 4711

Minor Endorsement (24 semester hours)

Lower division Latin, or the equivalent (12 semester hours)

Four upper division courses, selected from the following:

Latin 3111, 3211, 3411, 3511, 3811, 3912, 4711

*Students electing a Major Endorsement in Latin must complete requirements for another Major Endorsement or Minor Endorsement in a complementary teaching area.

d. Russian

Major Endorsement — Not available

Minor Endorsement (24 semester hours)

Lower division Russian, or the equivalent (12 semester hours)

Four upper division courses, selected from the following:

Russian 3301, 3302, 3411, 3412, 3441, 3442, 3443

e. Spanish

Major Endorsement (33 semester hours)

Lower division Spanish, or the equivalent (12 semester hours)

Spanish 3301, 3302, 3411 and 3412 OR 3511 and 3512, 4301, 4302, 4501

Minor Endorsement (24 semester hours)

Lower division Spanish, or the equivalent (12 semester hours)

Four upper division courses, selected from the following:

Spanish 3301, 3302, 3411, 3412, 3511, 3512, 4301, 4302, 4501

5. HOME ECONOMICS EDUCATION

Major Endorsement (38 semester hours)

Home Economics 1100, 1101, 1104, 1105, 2101, 2102, 2202, 3405, 4100, 4103, 4104, 4201 and six upper division electives.

Minor Endorsement — Not available

6. INDUSTRIAL ARTS EDUCATION

**Major Endorsement* (45 hrs.)

Tech 1511, 1711, 2555, 1611, 1811, 1821, 3350, 3718, 2911, 3601, 4355

Electives in Technology — (6 hours)

(These electives may be used to add single subject endorsements)

Art 2213, 2221

**Minor Endorsement* (39 hrs.)

Tech 1511, 1711, 2555, 1611, 1811, 1821, 3350, 3718, 2911, 3601, 4355

Art 2213, 2221

Completion of the specified courses required for the major and the minor endorsements leads toward certification in Industrial Arts. Additional certification in the following single subjects may be earned by completing 3 additional hours in each area desired:

Drafting (Tech. 2511 or 2512 is recommended)

Electricity/Electronics (Tech. 2821 or 3841 is recommended)

Metals (Tech. 3781 is recommended)

Plastics (Tech. 3410 is recommended)

Woods (Tech. 2651, or 3611 or 3631 is recommended)

*Students seeking endorsement in Industrial Arts should take the following courses, which may be used to fulfill General Education requirements:

Math 1212, Chem. 1051, Physics 1111 and 1112.

7. MATHEMATICS

Major Endorsement (32 semester hours)

*Mathematics 1212

Mathematics 1321, 2321

One course in each of the following areas:

Geometry (Math 2581 is recommended)

Probability (Math 3631 is recommended)

Computer Programming (Math 3711 is recommended)

Theory of Numbers (Math 4221 is recommended)

History of Mathematics (Math 4151 is recommended)

Six semester hours from the following courses:

Mathematics 2322, 2611, 3111, 3241, 4261, 4111, 4171, 4241, 4411, 4611, 4612

Minor Endorsement (20 semester hours)

*Mathematics 1212

Mathematics 1321, 2321

Nine semester hours from the following courses:

Mathematics 2322, 2581, 2611, 3111, 3241, 3262, 3631, 4111, 4151, 4171, 4221, 4241, 4411, 4611, 4612, 4710

*If a student's performance on the Mathematics Department Placement Test makes it possible for him to receive credit for Math 1212, then he is advised to pay the required fee (\$15.00) and get the credit for the course.

NOTE: Students in the Honors Program in Mathematics may use Mathematics 1401, 1402, 2401, and 2402 to satisfy the following requirements: Mathematics 1212, 1321, 2321, 2611, and 3241.

8. MATHEMATICS AND PHYSICAL SCIENCE

Major Endorsement (52 semester hours)

Mathematics 1212, 1321, and 7 hours of electives in mathematics

Chemistry 1111, 1112

Physics 2111 and 2112 OR 2511 and 2512

Physical Geography or Geology (8 semester hours)

Math and/or Physical Science electives (14 semester hours)

Minor Endorsement — Not available

9. PHYSICAL EDUCATION (Secondary)—Grades 7-12

Major Endorsement: (46-47 semester hours)

Health 2102 or 3502

Physical Education 1103, 1502, 1572, 1621, 1713

1813, 1923, 2003, 2903, 3203, 3303, 3403

3503, 3703, 4204, 4503

For Men: Physical Education 1431, 1941 and

two of the following courses: Physical Education 2103, 2203, 2303, 2403, 2503, 2803

For Women: Physical Education 1821, 1921

3103

Biology 1631, 1632

Minor Endorsement: (34-35 semester hours)

Physical Education 1103, 2903, 3303, 3403, 3703

4204, 4503

Choose alternative A or B

A. Two of the following courses: Physical Education 2103, 2203, 2303, 2403, 2503, 2803

B. One of the following courses: Physical Education 3103, 3203, 3503

Eight activity courses

For Men: Physical Education 1431, 1502, 1572

1621, 1713, 1813, 1923, 1941

For Women: Physical Education 1502, 1572

1621, 1713, 1813, 1821, 1921, 1923

Biology 1631, 1632

10. PSYCHOLOGY*

Major Endorsement — Not available

Minor Endorsement — (21-22 semester hours)

A. Psychology 1101; Psychology 2302 or Sociology 3322; Psychology 4101; Psychology 3302 or Sociology 4710.

B. Six semester hours chosen from the following areas: Developmental Psychology (Psychology 3103); Abnormal Psychology (Psychology 3102); Personality Dynamics (Psychology 3101); Child Psychology; Adolescent Psychology (Educational Psychology 4112 or Sociology 3881).

*This program has been submitted for approval by the State of Tennessee.

C. Three semester hours of electives: The electives may be selected from any undergraduate course taught in the Department of Psychology; courses in Educational Psychology* (EDPS) taught in the Department of Educational Foundations; or any Sociology course listed in section "b" of the endorsement requirements. The student may not count both Psychology 3302 and Sociology 4710, or both Educational Psychology 4112 and Sociology 3881, in meeting endorsement requirements. *Courses taken in Educational Psychology (EDPS) may not be counted toward fulfilling both professional education and endorsement requirements.

1. SCIENCE

a. Biology

Major Endorsement (35 semester hours)

Biology 1200, 1600, 2000, 3050, 3070, 3100, 3500

Chemistry 1111, 1112 (Corequisite: Math 1211, 1212, or 1321)

Minor Endorsement (23 semester hours)

Biology 1200, 1600, 2000, 3070

Chemistry 1111, 1112 (Corequisite: Math 1211, 1212, or 1321)

b. Chemistry

Major Endorsement (32 semester hours)

Chemistry 1111, 1112, 3311, 3301, 3312, 3302, 3400, 3401

Physics 2111, 2112 (Prerequisite: Math 1212)

Minor Endorsement (20 semester hours)

Chemistry 1111, 1112, 3311, 3301, 3312, 3302, 3400

c. Physics

Major Endorsement (33 semester hours)

Physics 1811, 1812, 2111, 2112 (Prerequisite: Math 1212), 3010, 3211, 3510

Chemistry 1111, 1112

Minor Endorsement (26 semester hours)

Physics 1811, 1812 (OR an approved Physics elective), 2111, 2112 (Prerequisite: Math 1212), 3010

Chemistry 1111, 1112

d. General Science

Major Endorsement (37 semester hours)

Biology 1200, 1600, 2000, 3070

Chemistry 1111, 1112 (Corequisite: Math 1211, 1212 or 1321)

Physics 1811, 2111 and 2112 (Prerequisite: Math 1212)

Earth Science electives (3 semester hours)

Minor Endorsement (23 semester hours)

Biology 1200, 1600

Chemistry 1111, 1112 (Corequisite: Math 1211, 1212 or 1321)

Physics 2111 (Prerequisite: Math 1212)

Earth Science elective (3 semester hours)

e. Earth and Space Sciences

Major Endorsement (33 semester hours)

Geology 1101, 1201, 2312, 3100

Physics 1811

Geography 1101, 3502, 4111, 4122, 4131

Minor Endorsement (23 semester hours)

Geology 1101, 2312, 3100

Physics 1811

Geography 1101, 4111, 4131

12. SOCIAL STUDIES

a. Economics, Geography, Government, and Sociology

**Major Endorsement* (30 semester hours)

24 semester hours of work in the designated major area, selected in consultation with adviser, of which at least 18 hours must be in upper division courses.

Up to 6 hours may be taken in cognate social science areas supportive to the major (excluding History 2601, 2602), and selected in consultation with adviser.

**NOTE:* These four areas may be selected as Major Endorsement areas only if taken in combination with a Major or Minor Endorsement in History or with a Major Endorsement in some other teaching area of endorsement.

Minor Endorsement (18 semester hours)

12 semester hours of upper division courses in the designated major area, selected in consultation with adviser.

Up to 6 hours may be taken in cognate social science areas supportive to the minor (excluding History 2601, 2602), and selected in consultation with adviser.

b. History

Major Endorsement (36 semester hours)

History 2601, 2602

European and/or World History courses (6 semester hours)

Upper division History courses, selected in consultation with adviser (12 semester hours)

Electives, selected in consultation with adviser (12 semester hours), may be additional history courses, or in the following areas:

Up to 6 hours may be taken in historical courses which do not have to be offered by the History Department (excluding History of Education).

Up to six hours may be taken in cognate social science areas supportive to the major (Economics, Sociology, Political Science, Geography, Anthropology).

Minor Endorsement (24 semester hours)

History 2601, 2602

European and/or World History courses (6 semester hours)

Upper division history courses, selected in consultation with adviser (6 semester hours)

Electives, selected in consultation with adviser (6 semester hours)

These electives may be taken in historical courses which do not have to be offered by the History Department (excluding History of Education), or in cognate social science areas supportive to the minor (Economics, Sociology, Political Science, Geography, Anthropology).

13. SPEECH AND DRAMA

Major Endorsement (36 semester hours)

Speech 1211; 1311 and 2781 OR Speech 1781 and 2321; 1411; 2511; 3371 OR 3372 OR 3881; 3521;

1551 OR 3551 OR 3552; 4361 OR 4362 OR 4366; 4101 OR 4341 OR 4371; 4921; 4922

Minor Endorsement in Speech (21 semester hours)

Speech 1211 OR 1311, 1781, 2321 OR 2781, 3371 OR 3372 OR 3881, 4361 OR 4362 OR 4366, 4101 OR 4341 OR 4371, 4922

**Minor Endorsement in Drama* (21 semester hours)
Speech 1211, 1411, 3551 OR 3553, 2511, 3521, 4921
Theatre elective (3 semester hours)

*This area is not presently an approved certification area by the State of Tennessee.

Requirements for Majors and Minors

ADULT EDUCATION. No courses are offered in adult education at the undergraduate level. Students who plan graduate study in this area should consult The Bulletin of the Graduate School.

DEPARTMENT OF CURRICULUM AND INSTRUCTION. The Department of Curriculum and Instruction offers majors and minors in elementary education and secondary education, and a major in Early Childhood Education.

ELEMENTARY EDUCATION:

The Major: 33 semester hours, as follows: Foundations of Education 2011, 2111, 3121, and Elementary Education 3241, 3251, 3261, 3271, 4242, 4821 (9 semester hours).

The following must also be completed: (1) the requirements of general education, (2) the elementary endorsement, and (3) 9 semester hours of area of emphasis (six of these hours in upper division) in one of the following areas: Early Childhood, Health, Language Arts and Reading, Library Service, Mathematics, Physical Education, Science, Social Science, and Special Education.

NOTE: The 9 semester hours in the area of emphasis in (3) must be in addition to courses taken as a part of the general education and elementary endorsement requirements.

The Minor: Same as elementary education major except for the area of emphasis requirement.

SECONDARY EDUCATION:

The Major: 27-30 semester hours, as follows: Foundations of Education 2011, 2111, 3121; Secondary Education 4441, 4841, appropriate secondary school methods courses, one elective appropriate for secondary school teachers. The requirements of general education and at least one major endorsement must be completed.

The Minor: Same as secondary education major.

EARLY CHILDHOOD:

The Major: 33 semester hours as follows: Foundations of Education 2011, 2111, 3121, and Elementary Education 3412, 4212, 4242, 4821 and 4811.

The following must also be completed:

1. The requirements of General Education.
2. Supportive Content (30 hours)
Health 2102, Humanities 3 hours (Elective from Applied Art or Applied Music), MATH 1182 or 2581, Science 3 hours (Elective from Biology or Earth Science plus science listed in General Ed-

ucation), Social Science six hours (Elective from Anthropology, Economics, Geography or Sociology), SPCH 1411 or 2911.

3. Early Childhood Education (15 hours)
HMEC 2101 and 3101; ELED 2211, 3212, and 4411:

4. *Area of Specialization (6-12 hours)

A minimum of six hours constitutes a specialization area. Some areas require more than six hours. The areas of specialization presently identified are: Elementary Education, Library Service, Math, Child Development, Geography, Biology, Special Education, Physical Education, Health, Reading and Language, and Psychology.

5.* Electives (5-11 hours)

*At least nine (9) hours of upper division courses must be included in the area of specialization and/or from the electives.

DEPARTMENT OF DISTRIBUTIVE EDUCATION. The Department of Distributive Education offers a major and a minor in distributive education.

The Major:

Foundations of Education 2011, 2111, 3121

Distributive Education 3010, 4630, 4641, 4871, and three semester hours of electives in Distributive Education or Education 4301 or Guidance 4611

A minimum of 27 semester hours in marketing and business administration

Management 1010

Accounting 2010

Economics 2110, 2120

Marketing 3010, 3140, 3320, 3410

Elective in Business Administration (3 semester hours) selected in conference with adviser

Marketing 4991 or two years of verified practical experience in one or more distributive occupations

The Minor: Recommended for majors in Marketing and in Fashion Merchandising. A requirement for the minor is the completion of the requirements for certification to teach in the State of Tennessee. Requirements for the minor are the same as distributive education major.

DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND SUPERVISION. The Department of Educational Administration and Supervision does not offer courses at the undergraduate level leading to a degree program. Students who plan graduate study in this area should consult The Bulletin of The Graduate School.

DEPARTMENT OF FOUNDATIONS OF EDUCATION. The Department of Foundations of Education does not offer a major or minor at the undergraduate level. Students who plan graduate study in this area should consult the Department Chairman.

DEPARTMENT OF GUIDANCE AND PERSONNEL SERVICES. The Department of

Guidance and Personnel Services offers majors at the Graduate level only.

DEPARTMENT OF HEALTH, PHYSICAL EDUCATION, AND RECREATION. Majors and/or minors are offered in (1) health, (2) physical education, and (3) recreation and park administration. The recreation and park administration major will not satisfy teacher certification requirements or any endorsement area in The College Education.

The Major in Physical Education (Choose concentration in Elementary or Secondary Physical Education)

Major Concentration in Elementary Physical Education: 49 semester hours, as follows:

Physical Education 1103, 1581, 1621, 1713, 1813, 2003, 2903, 3303, 3403, 3703, 3816, 3826, 3836, 3846, 4204

Four one-hour activity electives, to include one team sports activity and one individual and dual sports activity.

Biology 1631, 1632

Electives (6 semester hours) to include no more than 2 activity courses

Major Concentration in Secondary Physical Education: 46-47 semester hours, as follows:

Health 2102 or 3502

Physical Education 1103, 1502, 1572, 1621, 1713, 1813, 1923, 2003, 2903, 3203, 3303, 3403, 3503, 3703, 4204, 4503

For Men: Physical Education 1431, 1941, and two of the following courses: Physical Education 2103, 2203, 2303, 2403, 2503, 2803

For Women: Physical Education 1821, 1921, 3103

Biology 1631, 1632

The Minor in Physical Education (Choose concentration in Elementary or Secondary Physical Education)

Minor Concentration in Elementary Physical Education: 34 semester hours, as follows:

Physical Education 1103, 1581, 1621, 1713, 1813, 2903, 3303, 3403, 3703, 3846, 4204

One of the following courses: Physical Education 3816, 3826, 3836

Four one hour activity electives

Biology 1631, 1632

Minor Concentration in Secondary Physical Education: 34-35 semester hours, as follows:

Physical Education 1103, 2903, 3303, 3403, 3703, 4204, 4503

Choose alternative A or B

A. Two of the following courses: Physical Education 2103, 2203, 2303, 2403, 2503, 2803

B. One of the following courses: Physical Education 3103, 3203, 3503

Eight activity courses

For Men: Physical Education 1431, 1502, 1572, 1621, 1713, 1813, 1923, 1941

For Women: Physical Education 1502, 1572, 1621, 1713, 1813, 1821, 1921, 1923

Biology 1631, 1632

Health Education (Grades K-12)

The Major: 43 semester hours, as follows:

Health 1102, 1202, 1302, 2102, 2202, 3202, 4102, 4702

Biology 1631, 1632, 3400

Chemistry 1000

Home Economics 2202

Electives (6 semester hours) to be chosen from the following: HLTH 3306, 3402, 3502, 4202-20, 4402, 4502, 4602; PHED 3303; SCED 3335; SOCI 3420, 4411, 4610, 4620

The Minor: 31 semester hours, as follows

Health 1102, 1202, 1302, 2102, 3202, 4102

Biology 1631, 1632, 3400

Home Economics 2202

Electives (3 semester hours) to be chosen from the following: HLTH 3306, 3402, 3502, 4202-20, 4402, 4502, 4602; PHED 3303; SCED 3335; SOCI 3420, 4411, 4610, 4620

Note: It is recommended that Chemistry 1000 be taken to satisfy the second area of science required in General Education.

**The Major in Recreation and Park Administration* General Education Program (61 semester hours)

English 1101, 1102, and any two of the following: 2101, 2102, 2103, 2104, 2105

Natural Science: 9 semester hours (including one two-semester laboratory sequence) in two of the following sciences: biology, chemistry, physics, earth sciences (defined for purposes of this requirement to include Geography 1101, 1102, 4111, 4121, 4122, 4131, and any course in geology.)

History 2601, 2602

Psychology 1101, 1102

Sociology 1111, elective (3 semester hours)

Anthropology 1200

Mathematics 1181 or 1211

Humanities: one course from two of the following areas: Art, Music, Drama

Speech 1211 or 1311 or 1411

Journalism elective (3 semester hours)

Physical Education (4 one hour activities)

Related Areas of Study (12 semester hours)

Health 1102, 2102

Educational Psychology 2111, 3121

Professional Areas of Study (38 semester hours)

Recreation 2105, 3105, 3205, 3305, 3405, 3605, 3705, 4105, 4405, 4505, 4605

Electives (21 semester hours) to be selected by student and advisor to strengthen special interest areas as follows: Public Recreation and Parks, Outdoor Recreation, Therapeutic Recreation and Youth Organization

DEPARTMENT OF HOME ECONOMICS

A co-operative relationship exists between Memphis State University and the Merrill-Palmer Institute of Detroit, Michigan, whereby a second-semester junior or first-semester senior majoring in Home Economics-Child Development may enroll for one semester of study at Merrill-Palmer with the semester hours earned being transferred toward graduation at Memphis State.

A cooperative relationship also exists with the Fashion Institute of Technology in New York City, whereby merchandising majors may enroll for one semester of study in New York with the semester hours earned being transferred toward graduation at Memphis State University.

Majors in Home Economics are offered in the areas of Child Development, Dietetics, Food Administration, Merchandising, Vocational Home Economics, and Home Economics Education.

*Child Development

Home Economics Core Requirements: Home Economics 1100, 1101, 2101, 2202, 3405, 4100, 4103

Special Requirements for Child Development Area: Home Economics 3101, 3402, 4201, 4301, 4401

Other Requirements: Art 3411; Psychology 1101, 1102, 3103, 3302; Foundations of Education 2011, 2111, 3121; Elementary Education 2211, 4212, 4811; and 12 hours of electives in Home Economics

For those students wishing to complete the requirements for K-3 certification along with the Child Development major:

1. Delete the requirement of Psychology 3302
2. Reduce the Home Economics electives required from 12 to 9 hours
3. Complete the requirements for the Early Childhood Education major program.

(NOTE: These requirements are in addition to University requirements and required courses of The College of Education).

*Dietetics

Home Economics Core Requirements: Home Economics 1100, 1101, 2101, 2202, 3405, 4100, 4103

Special Requirements for Dietetics: Home Economics 2102, 3302, 3402, 3502, 3602, 4102, 4203, and 6 hours of electives in Home Economics

Other Requirements: Chemistry 1111, 1112, 3311, 3312, 4511; Biology 1632 and 3500; Accounting 2010 and 2020; Management 4210; Foundations of Education 3121.

(NOTE: These requirements are in addition to University requirements and required courses of The College of Education).

*Merchandising (Concentrations in Fashion Merchandising and Home Furnishing Merchandising)

Home Economics Core Requirements: Home Economics 1100, 1101, 2101, 2202, 3405, 4100, 4103

Special Requirements for Major:

For Fashion Merchandising: 1104, 1105, 2205, 3305, 3705, 4104, 4705, and a three semester hour elective in Home Economics.

For Home Furnishing Merchandising: Home Economics 1104, 3104, 3305, 3704, 3705, 4104, 4203, 4204, 4604, 4804

Business Administration Requirements: Economics 2110, 2120; 6 of the following courses: Management 1010, Accounting 2010, 2020, Marketing 3010, 3140, 3320, 3410

*Food Administration

Home Economics Core Requirements: Home Economics 1100, 1101, 2101, 2202, 3405, 4100, 4103

Special Requirements for Food Administration: Home Economics 2102, 3302, 3402, 3502, 3602, 3702, 3802, 3902

Other Requirements: Accounting 2010 and 2020; Economics 2110 and 2120; Management 1010, 3710, 4210, 4420; Marketing 3010, 3410, 4220

Home Economics Education

Home Economics Core Requirements: Home Economics 1100, 1101, 2101, 2202, 3405, 4100, 4103

Special Requirements for Teacher Education major: Home Economics 1104, 1105, 2102, 4104, 4201, and two upper-division electives

(NOTE: These requirements are in addition to University requirements and required courses of The College of Education.)

Vocational Home Economics

Home Economics Core Requirements: Home Economics 1100, 1101, 2101, 2202, 3405, 4100, 4103

Special Requirements for Vocational major: Home Economics 1104, 1105, 2102, 2205, 3302, 3305, 3402, 4104, 4201, 4203, 4503, and 6 semester hours of electives in Home Economics

Other Requirements: Chemistry 1051, 1052 OR 1111, 1112; Biology 1400; 1631 or 1632; Economics 2110, 2120

(NOTE: These requirements are in addition to University requirements and required courses of The College of Education.)

The Minor: 18 semester hours in home economics courses, including Home Economics 1104, 1105, 2101, 2102, 2202, and one course from the upper division.

DEPARTMENT OF LIBRARY SERVICE

The department of Library Service offers no major in Library Service. For certification in Library Service, a student must complete requirements for endorsement in Elementary Education or a major endorsement in Secondary Education, in addition to completing Library Service 4111, 4121, 4131, 4231 or 4401, 4232, 4331; Education 4301.

For non-certification, a student whose major is in another college of the University will meet requirements for a minor in library service by completing the courses listed above.

DIVISION OF MUSIC EDUCATION

Studies of the Division of Music Education qualify students for teaching music in the public schools. Two degree plans are offered: the Bachelor of Music Education with a concentration area in (1) School Music, (2) Instrumental Music or (3) General Music, or the Bachelor of Science in Education with endorsement in (1) School Music or (2) Instrumental Music.

BACHELOR OF MUSIC EDUCATION:

The Major in Music Education

The major requires the completion of (1) a group of basic music courses and (2) a group of course

in one of three concentration areas:

1. Basic Music (46 semester hours)
 - Music 1051, 1052, 3061, 3062 (22)
 - Music 3131, 3132, 3236 (9 semester hours)
 - Music Education 1312, 1711, 1712, 1912, 4234, (8 semester hours)
 - Music ensembles: one large ensemble for every semester of residence except for the semester of student teaching (7 semester hours)
 - Music 0001: each semester of residence except for the semester of student teaching, or for each semester of individual lessons in applied music (no credit)

2. The Concentration Areas

- a. School Music (vocal emphasis)—(22 semester hours)

Music Education 4233, 4236 (4 semester hours)
 Class or individual instruction in voice or piano (4 semester hours)
 Individual lessons in major area including at least four semester hours of upper division credit (14 semester hours)
 Recital: Music 3601 for piano major or Music 3801 for voice major, no credit)

- b. Instrumental Music (24 semester hours)

Music Education 1512, 4232 (4 semester hours)
 Class or individual instruction in piano (4 semester hours)

Class or individual instruction in voice (2 semester hours)

Individual lessons in major area including at least four semester hours of upper division credit (14 semester hours)

Recital: Music 3301 or 3501 or 3701 or 3901, (no credit)

- *c. General Music (24 semester hours)

Music 1310 or 1510 or 1710 or 1910 (4 semester hours)

Music 1610 (4 semester hours)

Music 1810 (4 semester hours)

Music 4310, 4510, 4610, 4710, 4810, 4910 (4 semester hours)

Music Education 1512, 4232, 4233, 4236 (8 semester hours)

A graduation recital is not required.

*This area (General Music) is not presently an approved certification area by the State of Tennessee.

DEPARTMENT OF SPECIAL EDUCATION AND REHABILITATION

The Department of Special Education and Rehabilitation offers a major and a minor in special education (Educable Mentally Retarded) and a major in rehabilitation education.

The Major in Special Education: 33 semester hours as follows:

Special Education and Rehabilitation 2000, 3201, 3401, 3501, 3516, 3521, 3901, 4001 (or Educational Foundations 4511)

Elementary Education 3241, 4242

Distributive Education 3010

In addition, the student must complete one of the following:

1. Professional Education courses required for secondary endorsement and specific requirements for endorsement in a subject area (Grades 7-12 or 1-12). This program leads to certification in Special Education (Educable Mentally Retarded,

Grades 1-12), as well as in the selected subject area.

2. Special Education 3512 and Professional education courses required for elementary endorsement and the following courses in elementary content areas:

Art 3411 or Technology 4375

Biology 2001 and 2002 OR Biology 1200 and 1600 and 3050.

Health 3306

Library Service 4111

Mathematics 1182

Music Education 3231

Physical Education 3806

Physical Science 1031 and 1032

NOTE: Students with adequate high school background in both chemistry and physics may take at least six semester hours in any combination from the areas of astronomy, chemistry, earth science, geology, or physics instead of Physical Science 1031 and 1032.

Social Science — Two courses (6 semester hours) from the following social sciences: cultural anthropology, economics, history (other than History 2601, 2602), political science, or sociology.

Speech 2911 OR 1411

This program leads to certification in Special Education (Educable Mentally Retarded, Grades 1-12). To become certified in Elementary Education (Grades 1-9), the student must take the following additional courses: Geography 2301, 2311, Mathematics 2581, and Art 3411 (if not already taken).

*A Major Endorsement can be taken only when combined with some other major or minor endorsement area which is certifiable by the State of Tennessee. Library Service and Driver's Education will not satisfy the requirement for a second teaching area for students completing major endorsement requirements in Special Education.

The Minor in Special Education: 18 semester hours as follows:

Special Education and Rehabilitation 2000, 3501, 3521, 3901, 4001 (or Educational Foundations 4511)

Elementary Education 4242

In addition, the student must complete one of the following:

1. Professional Education courses required for secondary endorsement and specific requirements for a major endorsement in a subject area (Grades 7-12 or 1-12)
2. Special Education 3512 and Professional Education courses required for elementary endorsement and all the courses required for the Elementary Certificate.

**A Minor Endorsement can be taken only when combined with a major endorsement area which is certifiable by the State of Tennessee.

The Major in Rehabilitation Education¹.

Two program plans are offered for students who major in rehabilitation education. The Major re-

¹This area is not presently an approved certification area by the state of Tennessee. A proposal to allow certification for Rehabilitation Education under Plan II has been submitted for approval. Students seeking certification under Plan II should consult with the advisor concerning additional program requirements.

quires the completion of (1) a group of basic core courses and (2) a group of courses in one of two plans.

1. Basic Rehabilitation Core

Special Education 3901, 4902, 4903, 4941 (6 hours)

Social Welfare 3902, 3903, 3904

Psychology 3102

Distributive Education 3010, 4641, 4651

Sociology 3510, 3521, 3811, 3841

Electives (6 hours)

2. The Two Plans

a. Plan I

Educational Psychology 2111, 3121, 4112

Special Education 2000, 3002, 3003, 320

3401, 3501, 3512, 4001

Mental Health Course (3 hours)

b. Plan II

Educational Foundations 2011

Educational Psychology 2111, 3121, 4112

Special Education 2000, 3501, 3512, 352

4001, 4541 (6 hours)

The Herff College of Engineering

ROGER EMERSON NOLTE, B.S., M.S.,
Ph.D., P.E., *Dean*

Room 201-D Engineering Building

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: (1) undergraduate professional education in the principal fields of engineering (2) undergraduate instruction for majors and minors in geology (3) undergraduate education in both technical and educational technology (4) graduate education in all areas (5) a program of continuing education for the engineering and technological practitioners of the area (6) assistance in the solution of industrial problems through utilization of physical facilities and the professional talents of faculty and students (7) a forum for the interchange of ideas and experiences among members of the industrial community through conferences, institutes and short courses and (8) 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 Departments of Civil Engineering, Electrical Engineering, Geology, Mechanical Engineering, and the Division of Engineering Technology. Each offers a choice of specialized four-year programs leading to Bachelor of Science degrees and graduate programs. *The Institute for Engineering Research* was founded in 1970 to promote the participation of students and faculty in research and service activities. Many interesting projects, of local and regional importance, are being actively pursued.

Facilities

The 4.3 million-dollar three-building engineering complex was occupied in 1970-71. It affords 161,110 square feet of space for offices, classrooms, and a variety of specialized laboratories equipped with 1.7 million dollars worth of modern furnishings. The engineering administration building houses the story engineering library, administrative offices, auditorium, study lounges, and a

hands-on computer terminal. The engineering laboratory building has classrooms, offices, and labs for the Engineering and Geology departments. The engineering technology building on the south houses the entire operation of the Division of Engineering Technology.

Admission of Freshmen and Transfer Students

Requirements for admission to The Herff College of Engineering for freshmen and transfer students are those for the University as a whole (described on page 14).

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 (up to 30 semester hours credit) who choose to study in the Herff College of Engineering will be advised by an Engineering College counselor. Because of one common core for Engineering majors and another for Engineering Technology majors, internal changes of a student's major may be made efficiently through the sophomore year.

Academic Programs

Pre-Med-Engineering.

The Herff College of Engineering at Memphis State University has started a new option for students enrolled in an engineering program. This option will be called "Pre-Med-Engineering". It will add another degree of flexibility to the students' options as they approach the completion of their baccalaureate degree. The program was generated in response to the students' request to qualify for entrance into the medical school in conjunction with a back-up, and highly marketable, degree in an engineering field. This

idea is in concert with the changing attitudes of medical schools, who are now encouraging a variety of carefully planned baccalaureate programs. They feel that such liberalization would improve the overall spectrum and qualifications of the medical profession in its attempt to handle the ever-increasing complexity related to society's health care problems.

The student interested in this pre-med-engineering option should take the regular first two years of the common engineering core — including both semesters of general chemistry. As the student progresses through these first two years, he should then contact the chairman of the engineering department of his choice who is authorized to substitute the courses in organic chemistry for certain technical courses normally taken in the junior and senior years. Organic Chemistry 3301 and Lab 3302 plus Organic Chemistry 3311 and Lab 3312 are the eight semester hours of organic chemistry while Biology 1200 (Botany) and Biology 1600 (Zoology) are the courses recommended by the U. T. Medical Units admissions office and Memphis State's biology department. These courses should be taken by the student as a junior so as to assist him in taking the medical entrance examinations, probably during the senior year. Depending upon the

student's schedule, time required for the undergraduate engineering degree, etc., the pre-med-engineering student may take additional biology courses, such as Physiology 3730 or Comparative Anatomy 3620. Also courses in biochemistry are appropriate, but not required.

Degrees Offered.

The Herff College of Engineering comprises four Departments: Civil Engineering, Electrical Engineering, Geology, Mechanical Engineering, and the Division of Engineering Technology.

All have four-year programs leading to the following degrees: Bachelor of Science in Civil Engineering*, Bachelor of Science in Electrical Engineering*, Bachelor of Science in Mechanical Engineering*, Bachelor of Science in Geology, Bachelor of Science in Engineering Technology*, and Bachelor of Science in Technology.

A five-year program leading to the Master of Science degree is recommended for those students who demonstrate high scholastic abilities. For more information about graduate programs, refer to the Graduate School *Bulletin*.

The following outline lists the majors and areas of concentration for each department in the Herff College of Engineering.

ACADEMIC PROGRAMS

Department	Major	Concentration Within Major	Degree Offered
Civil Engineering	Civil Engineering*	(1) Environmental Engineering (2) Foundation Engineering (3) Structural Engineering (4) Transportation Engineering	Bachelor of Science in Civil Engineering
Electrical Engineering	Electrical Engineering*	(1) Solid State Electronics (2) Energy Conversion (3) Control Systems (4) Computer Science (5) Microwave Antenna Systems	Bachelor of Science in Electrical Engineering

*Note: The following programs are accredited by the Engineer's Council for Professional Development, Civil Engineering, Electrical Engineering, Mechanical Engineering, Architectural Technology, Construction Technology, Drafting and Design Technology, Electronics Technology, and Manufacturing Technology.

Department	Major	Concentration Within Major	Degree Offered
Geology	Geology		Bachelor of Science In Geology
Mechanical Engineering	Mechanical Engineering*	(1) Design & Manufacturing (2) Nuclear & Thermal Power (3) Materials Science (4) Fluid & Solid Mechanics (5) Aerospace Propulsion	Bachelor of Science In Mechanical Engineering
Engineering Technology	Architectural Technology*		Bachelor of Science In Engineering Technology
	Construction Technology*		Bachelor of Science In Engineering Technology
	Computer Systems Technology		Bachelor of Science In Engineering Technology
	Drafting and Design Technology*		Bachelor of Science In Engineering Technology
	Electronics Technology*		Bachelor of Science In Engineering Technology
	Manufacturing Technology*	(1) Forest Products (2) Industrial Safety (3) Production Management	Bachelor of Science In Engineering Technology
	Industrial Arts		Bachelor of Science In Technology

Note: Accredited by the Engineer's Council for Professional Development.

Degree Requirements.

The required curriculum, including elective specialties in each of the various programs, is described in detail in the following pages. General requirements include a minimum of 32 credit hours of approved coursework with a minimum quality point average of 2.0 on a scale in which the grade of A has a quality point value of 4; B, 3; C, 2; and D, 1).

ENGINEERING CORE

The following semester groupings represent the freshman and sophomore years which are common to civil, electrical, and mechanical engineering curricula.

Freshman Year			
Engl 1101	3	Engl 1102	
English Comp	3	English Comp	3
Math 1321		Math 2321	
Anal Geom & Cal	4	Anal Geom & Cal	4
Engr 1001		Phys 2511	
Intro to Engr	1	Phys-Sci & Engr	4
Engr 1011		Natural Science	
Engr Compt Prog	2	(See Note 1)	4
Engr 1021		Ph Ed 1---	
Engr Graphics	2	Phys Activity	1
Chem 1111		or	
Gen Chemistry	4	ROTC 1112	
Ed 1001		Aerospace	(1)
Phys Activity	1		

ROTC 1111			
Aerospace	(1)		
	17		16
Sophomore Year			
Engl 2101		Engl 2102	
English Lit	3	English Lit	3
Math 2322		Math 3391	
Anal Geom & Cal	4	Diff Equations	3
Phys 2512		Elec 2201	
Phys-Sci & Engr	4	Circuit Analysis	4
Civil 2131		Mech 2332	
Statics	3	Dynamics	3
Econ 2110		H & S Elective	
Economics I	3	(See Note 2)	3
ROTC 2211		ROTC 2212	
Aerospace or	(1)	Aerospace or	(1)
Ph Ed	1	Ph Ed	1
	18		17

Note 1: To be selected from Chemistry 1112, Geology 1101, or Biology 1200, 1600, 1731. (Mechanical Engineers should take Chemistry 1112.)

Note 2: See Note 2 on page 96.

CIVIL ENGINEERING

The civil engineering program is built upon a foundation of mathematics, physical sciences, and mechanics with supporting courses in the humanities and social studies. The curriculum affords a detailed study of the fundamental principles which comprise the professional practice of civil engineering.

Graduates are prepared to assume technical or administrative positions in the areas of planning, design, construction, and maintenance of all types of public and private civil engineering projects.

Areas of specialization include sanitary engineering; structural analysis and design; soil mechanics and foundation engineering; transportation engineering, and water resource engineering.

To qualify for the degree of Bachelor of Science in Civil Engineering a student must complete the curriculum outlined below. (For the freshman and sophomore years, see the common engineering requirements previously listed.)

Junior Year		
Civil 3101		Civil 3111
Comp. Meth. in C.E.	3	Field Measurements
Civil 3121		Civil 3131
Struct. Analysis I	3	Des. of Steel Struct.
Mech 3322		Mech 3361
Mech. of Matl.	4	Matl. Science
Mech 3311		Technical Elective
Engr. Thermo.	3	(See Note 3)
Mech 3331		H & S Elective
Mech. of Fluids	4	(See Note 2)
	—	—
	17	16
Senior Year		
Civil 4141		Civil 3141
Hyd. & Water Supply	3	Engr. Economics
Civil 4151		Civil Engr. Elective
Soil Mechanics	4	(See Note 4)
Civil 4161		Technical Elective
Transport. Sys. Engr	3	(See Note 3)
Civil Engr. Elec.		
(See Note 4)	3	
H & S Elective		
(See Note 2)	3	
	—	—
	16	15

Note 2: Humanities and Social Science course to be selected from approved list in consultation with adviser. A 6 or 9 hour sequence terminating in 3000 or 4000 level is required.

Note 3: Upper division course in Engineering, Mathematics, Physics, adviser's approval required.

Note 4: Upper division course in Civil Engineering—Adviser's approval required.

ELECTRICAL ENGINEERING

Students enrolled in electrical engineering are offered a modern, well-balanced curriculum which is designed to provide a thorough background and understanding of the theoretical and physical principles of electric and magnetic phenomena. The concepts and techniques of mathematics and physics are applied in a wide variety of studies designed to guide the student into a career which will enable him to contribute to the design, construction, and utilization of products which are beneficial to man. At the same time the curriculum provides adequate flexibility for

the student to specialize in one of the many diverse and exciting areas of space age technology.

Laboratory facilities are available for a wide variety of instructional and research activities. These facilities are located in a new engineering building which provides the latest advances in equipment and facilities.

Graduates of this program may qualify for positions in development and design, research, sales, management, manufacturing and construction. Some of the technical areas of opportunity lie in the design, development and use of analog and digital computers, communications systems, power generation and distribution systems, microwave and antenna systems, automatic control systems, and general instrumentation. An undergraduate student, with the approval of the department chairman, may also elect to take special technical and H & S electives which satisfy the course entrance requirements for medical school.

The Department of Electrical Engineering offers a Master of Science degree for those electrical engineers who desire advanced study in the areas of hybrid computers, microwave and antenna systems, communications systems, solid state electronics and automatic control systems.

The minimum requirements for the degree of Bachelor of Science in Electrical Engineering are (for the freshman and sophomore years, see the common engineering requirements previously listed):

Junior Year		
Elec 3201		Elec 3202
Circuit Analys II	4	Transform Methds
Elec 3211		Elec 3212
Electronics I	4	Electronics II
Mech 3311		Elec 4211
Engr. Thermo.	3	EM Field Theory I
Technical Elec.		H & S Elective
(See Note 3)	6	(See Note 2)
		Technical Elec.
		(See Note 3)
	—	—
	17	
Senior Year		
Elec 4201		Elec 4231
Energy Convers. I	4	Communicat. Theory
Elec 4212		Elec. Engr. Elec
EM Field Theory II	4	(See Note 4)
Elec. Engr. Elec		Technical Elec.
(See Note 4)	4	(See Note 3)
H & S Elective		H & S Elective
(See Note 2)	3	(See Note 2)
	—	—
	15	

Note 2: Humanities and Social Science course to be selected from approved list in consultation with adviser. A 6 or 9 hour sequence terminating in 3000 or 4000 level is required.

Note 3: Upper division course in Engineering, Mathematics, Physics, adviser's approval required.

Note 4: Upper division courses in Electrical Engineering, such as: Elec. 3221, Matrix computer method in Electrical Engineering; Elec. 4202, Electrical Power Systems; Elec. 4205, Analog Simulation Techniques; Elec. 4213, Antenna Theory and Design; Elec. 4221, Pulse and Digital Circuits; Elec. 4222, Logical Design and Switching Circuits; Elec. 4240, Quantum Electronics; Elec. 4241, Physical Electronics; Elec. 4251, Control System Engineering; Elec. 4261, Network Synthesis; Elec. 4991-4992, Elec. Engr. Projects; Elec. 5205, Hybrid Simulation Techniques.

MECHANICAL ENGINEERING

Mechanical engineering is a broad field and consequently students are offered a balanced curriculum designed to provide a strong foundation in mathematics, physical sciences and the engineering sciences. Moreover, they study humanities and social sciences to understand more fully the engineer's relationship and responsibilities to society. Finally, mechanical engineers cultivate, through advanced courses in engineering design and synthesis, the ability to apply his knowledge to the analysis and solution of significant engineering problems.

Because of the diverse nature of his work, the mechanical engineer must have a basic knowledge of chemistry, physics, mathematics and the classical disciplines of mechanical engineering: thermo sciences, mechanical sciences, materials sciences and modern techniques of engineering analysis, design and optimization. His diverse background uniquely equips the mechanical engineer to work on a variety of challenging problems involving transportation systems, including land and marine vehicles, aircraft and spacecraft, air conditioning systems, nuclear reactors and fuel cells, low pollution devices and a host of other devices.

The mechanical engineering curriculum provides for an element of specialization by way of preference programs in fluid and solid mechanics, materials science, design and manufacturing, nuclear and thermal power and aerospace propulsion.

To qualify for the degree of Bachelor of Science in Mechanical Engineering the student must satisfy general University regulations and complete the following curriculum for the freshman and sophomore years, see the common engineering requirements previously listed.)

	Junior Year		
Elec 3211		Civil 3141	
Electronics I	4	Engr. Economics	3
Mech 3311		Mech 3312	
Engr Thermo. I	3	Engr. Thermo II	3
Mech 3331		Mech 3361	

Mechanics of Fluids	4	Materials Science	4
Mech 3321		Mech 3322	
Principles of Design	3	Mechanics of Matl.	4
Elective (See		Technical Elec	
Notes 2 & 3)	3	(See Note 3)	3
	<hr/>		<hr/>
	17		17

Senior Year

Elec 4201		Mech Engr Elec	
Energy Conversion	4	(See Note 4)	3
Mech 4311		Technical Elec	
Heat Mass Transfer	4	(See Note 3)	3
Mech 4321		Mech 4322	
Mech Design Anal I	3	Mech Design Anal II	4
Mech Engr Elec		H & S Elective	
(See Note 4)	3	(See Note 2)	3
H & S Elective			
(See Note 2)	3		
	<hr/>		<hr/>
	17		13

Note 2: Humanities and Social Science course to be selected from approved list in consultation with adviser. A 6 to 9 hour sequence terminating in 3000 or 4000 level is required.

Note 3: Upper division course in Engineering, Mathematics, Physics. Adviser's approval required.

Note 4: A 6 semester hour sequence of upper division Mechanical Engineering courses to gain depth in a particular area of Mechanical Engineering, such as Aerospace Propulsion, Fluid Dynamics, Material Science, Power Generation, Vibrations, is required.

GEOLOGY

The undergraduate degree offered by the Department of Geology is the Bachelor of Science in Geology. This major allows the student flexibility in that he can select a broad background in Geology, or he can select an area for emphasis which can be continued at the graduate level. In addition to the University requirements, detailed requirements are:

The Major: 36 semester hours in geology courses, including Geology 1101, 1201, 2311, 2312, 3211, 3512, 3712, 4622, and additional semester hours from the upper division as approved by the adviser.

- Chemistry 1111 and 1112
- Mathematics 1321
- Physics 2511, 2512 or 2111, 2112
- Non-technical electives: 30 hours which include:

- (a) Social Sciences: courses offered by the department of sociology and anthropology, economics, geography (other than physical), history, political science and psychology.
- (b) Humanities: courses offered by the department of art, English, foreign languages, music, philosophy, and speech and drama.

- These non-technical electives must include:
- (1) twelve semester hours in the Humanities, including at least six semester hours in one foreign language, either French, German, or Russian.
 - (2) six semester hours in the social sciences and
 - (3) twelve semester hours in any combination of upper division work in any of the fields (1) or (2).

Electives to bring the total to 132 hours. Electives are to be chosen only with the consent of the adviser.

The *Minor*: 18 semester hours in geology courses, including Geology 1201, and 10 additional hours.

DIVISION OF ENGINEERING TECHNOLOGY

Engineering Technology is that part of the technological field which requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities. The Division of Engineering Technology offers six majors leading to the degree, Bachelor of Science in Engineering Technology. These areas are Architectural Technology, Computer Systems Technology, Construction Technology, Drafting and Design Technology, Electronics Technology, and Manufacturing Technology. The Manufacturing Technology program can be completed as outlined on the following pages but also can be completed with an emphasis on Forest Products Technology or Industrial Safety upon consent of an adviser. The Division of Engineering Technology also offers a major in Industrial Arts leading to a Bachelor of Science in Technology degree. A complete outline of the Industrial Arts major can be found on page 100.

ENGINEERING TECHNOLOGY CORE

Freshman Year			
Engl 1101		Engl 1102	
Engl Comp	3	Engl Comp	3
Math 1212		Math 1321	
Alg & Trig	3	Anal Geom & Cal	4
Tech 1411		Tech 1811	
Intro to Tech	3	Elec. Tech. I	3
Tech 1511		Engr 1011	
Graphics I	3	Engr Compt Prog	2
Tech 1711		Chem 1051	
Mach. Prod. Tech.	3	Gen. Chem	4
ROTC 1111		ROTC 1112	
Aerospace	(1)	Aerospace	(1)
or		or	
Ph Ed 1001		Ph Ed 1---	
Phys Activity	1	Phys Activity	1
	<hr/>		<hr/>
	16		17
Sophomore Year			
Engl 2101		Engl 2102	
Engl Lit	3	Engl Lit	3
Phys 2111		Phys 2112	
Gen Phys	4	Gen Phys	4
Tech Elective	3	Tech Elective	3
(See Note 1)		(See Note 3)	
Tech 2431		Tech 2411	
Tech Report Writ	3	Instrumentation	3
(See Note 2)		(See Note 4)	
Hist 2601		Hist 2602	
U.S. History	3	U.S. History	3
ROTC 2211		ROTC 2212	
Aerospace	(1)	Aerospace	(1)

or		or	
Ph Ed	1	Ph Ed	1
	<hr/>		<hr/>
	17		17

Note 1: Computer Systems students take 2251, Electronics students take 1821, Architectural students take Tech. 1555, and all other majors take appropriate electives.

Note 2: Electronics students take 2821

Note 3: Computer Systems take 3251, Manufacturing Drafting and Design, take Tech 2511, Architecture and Construction take Technology 1451, Electronics take Technology 2831.

Note 4: Architectural and Construction take 2555.

ARCHITECTURAL TECHNOLOGY

Architectural Technology is that branch of Engineering Technology that concerns itself with those phases of architectural and engineering design as related to buildings. The purpose of the program is to teach the student design principles and drafting techniques that will enable him to perform tasks that are now required of the architect and the engineer. The course offerings are engineering oriented with emphasis on architectural practices and principles. Each student has the option of selecting a support area consisting of approximately twenty-one (21) semester hours of study in areas such as business law, real estate, city planning, and others.

Junior Year	
Tech 3400	Tech 3521
Forces & Forces Systems	Arch Models
Tech 3531	Tech 3532
Mech Equip I	Mech Equip II
Tech 2511	Tech 3401
Descriptive Geom	Strength
Tech 3411	Elective (Tech)
Ind. Materials	Elective (Genl)
Spch 1311	
Public Speaking	
Tech 3520	
Arch Design II	4
	<hr/>
	19
Senior Year	
Tech 3471	Tech 4520
Structural Design	Const Meth & Equip
Tech 3491	Tech 4515
Estimating	Arch Design II
Geog 4432	Tech 4944
City Planning	Prob in Tech
Elective (Tech)	Tech 3472
Elective (Tech)	Struc Design II
Elective (Tech)	Elective (Genl)
	<hr/>
	18

COMPUTER SYSTEMS TECHNOLOGY

This area of study is designed to prepare the student for positions that require

knowledge of programming and the application of computers in various industries. Electives may be selected to provide a strong background in one or more areas of study.

Junior Year			
Spch 1311		Elective (General)	3
Public Speaking	3	Elective (Technical)	6
Elective (General)	3	Tech 4271	
Mgmt 3710		Computer Tech	4
Bus. Stat. I	3	Tech 4460	
Psych 3301		Mot. & Time	3
Ind. & Org. Psy	3		
Tech 3271			
Computer Sim.	4		
	—		—
	16		16
Senior Year			
Elective (General)	3	Tech 4381	
Tech 3422		Prin. of Super.	3
Metal Mfg. Proc.	3	Elective (Technical)	3
Tech 4251		Tech 4468	
Assem. Lang.	4	Prod. Methods	3
Tech 4462		Tech 4944	
Ins. & Qual. Cont.	3	Prob. in Tech	3
Tech 4464		Elective (General)	3
Prod. Control	3	Elective (Tech)	3
	—		—
	16		18

CONSTRUCTION TECHNOLOGY

This four-year program is for students who are interested in preparing for professional careers in construction management, techniques, operations and different areas of the construction industry. As one of the biggest industries in the world, construction has dire need for many young men and women trained for the construction industry or related fields.

Junior Year			
Tech 3400		FIR 3310	
Forces & Systems	3	Real Estate	3
Tech 3411		Tech 3401	
Ind. Materials	3	Strength	3
Tech 3387		Tech 3532	
Const. Safety	3	Mech. Equip. II	3
Tech 3531		Elective (General)	6
Mech. Equip. I	3	Elective (Tech)	3
Tech 3491			
Estimating	3		
Elective (Tech)	3		
	—		—
	18		18
Senior Year			
Tech 3412		Tech 3472	
Soil Tech	3	Struc. Design II	3
Tech 3414		Tech 4520	
Const. Adm.	3	Const. Meth.	3
Tech 3471		Tech 4944	
Struc. Design I	3	Prob. in Tech.	3
Tech 4510		Mgmt 4420	
Plan & Sched	3	Human Rel. in Bus.	3
Elective (Tech)	6	Elective (Tech)	3
	—		—
	18		15

DRAFTING AND DESIGN TECHNOLOGY

This area is designed for students interested in obtaining a position in industry as a designer, draftsman, or technical illustrator. Close contact is maintained with local industry in order to place classroom emphasis on current problems of design, drafting room practice, and problems. Specific requirements are as follows:

Junior Year			
Tech 2512		Tech 3401	
Graphics II	3	Strength of Mater	3
Tech 3400		Tech 3505	
Forces & For Sys	3	Applied Dynamics	3
Tech 3411		Tech 3386	
Indus Mater	3	Indus. Safety	3
Mgmt 3710		Tech 2555	
Bus Stat I	3	Arch. Design	4
Spch 1311		Tech 4460	
Pub Spkg	3	Mot & Time Anal	3
Tech 3573			
Mech. Design	3		
	—		—
	18		16
Senior Year			
Tech 3471		Tech 4591	
Struc. Design	3	Tool Design	3
Tech 3421		Tech 4381	
Mfg. Processes	3	Prin. of Superv.	3
Tech 4571		Tech 3422	
Mach. Design	3	Mfg. Process	3
Tech 3491		Tech 4468	
Estimating	3	Prod. Methods	3
Tech 4464		Tech 4944	
Prod. Cont.	3	Prob. in Tech.	3
	—	Elective (General)	3
	15		18

ELECTRONICS TECHNOLOGY

For the student especially interested in the practical application of electronics theory. Provides both theory and techniques related to communications, instrumentation, and computer systems. "Hands on equipment" approach is emphasized, employing most modern equipment found in industry. Specific requirements for this area are:

Junior Year			
Tech 2431		Tech 4833	
Tech. Report Writ	3	Analog Comp. Tech.	3
Econ 2110		Econ 2120	
Prin. of Econ.	3	Prin. of Econ.	3
Tech 3821		Tech 3811	
Indus. Elect.	3	Electro Commun	3
Tech 3841		Tech (Note 1)	
Adv. App. Elect.	3	Elective	6
Tech 3411		Elective (General)	3
Indus. Materials	3		
Elective (Tech)	3		
	—		—
	18		18

		Senior Year	
Tech 4831		Tech 4821	
Comp. Tech. I	3	Microwave Tech	3
Tech 4381		Tech 4832	
Prin. of Superv.	3	Comp. Tech. II	3
Tech 4801		Tech (Note 1)	
Antenna Tech.	3	Elective	3
Tech 4841		Tech (Note 1)	
Video Comm.	3	Elective	3
Elective (General)	3	Elective (General)	3
	15		15

Note 1: Consult adviser for course to be selected from area of technology. All 18 technology elective hours may be from any one technology area or from a combination of technology areas applicable to student's interest.

MANUFACTURING TECHNOLOGY

This area of study is designed for students interested in directing men, materials, and machines to efficient production in a manufacturing establishment. The three areas of concentration provided under the Manufacturing Technology program are: Production Management, Forest Products, and Industrial Safety. Areas of opportunity for a student having a background in Manufacturing Technology include production management and supervision or positions in specialized staff groups such as Industrial Engineering, Manufacturing Engineering, Quality Assurance, Process Engineering, or Safety Engineering. The program can be completed as outlined below, but can also be completed with an emphasis on Forest Products Technology or Industrial Safety upon consent of adviser.

		Junior Year	
Tech 2251		Spch 1311	
Adv Prog Techniques	4	Bas Prin Pub Sp	3
Mgmt 3110		Tech 3386	
Org and Mgmt	3	Ind. Safety	3
Mgmt 3710		Tech (Elective)	3
Bus Stat I	3	Tech 3421	
Psyc 3301		Mnfg. Proc.	3
Ind & Org Psyc	3	Tech 4591	
Tech 3411		Tool Design	3
Ind Mat	3	Tech 4460	
Tech 3400		Motion & Time	3
Forces & Systems	3		
	19		18

		Senior Year	
Elective (Mgmt)	3	Tech 4381	
(Note 1)		Prin. of Supv.	3
*Tech 3422		Tech 4466	
Metal Mfg. Pro.	3	Plant Layout	3
*Tech (Elective)	3	*Tech (Elective)	3
Tech 4462		*Tech 3505	
Ins. & Qual. Cont.	3	Applied Dynamics	3
Tech 4464		Elective (General)	3
Prod. Cont.	3		
Elective (Tech)	3		
	18		15

Note 1: Approval of adviser.

*Students with a Forest Products concentration take Tech. 2651, 3611, 3631, and 4661.

*Students with an Industrial Safety concentration take Tech. 3387, 4951, 4652, 4953, 4954—take Health 2102 for Tech. elective.

INDUSTRIAL ARTS

This major is designed for students planning a teaching career in Industrial Arts, with the emphasis on the secondary school program. Specific requirements for this area are as follows:

		Freshman Year	
Engl 1101		Engl 1102	
Engl. Comp.	3	Engl. Comp.	3
Tech 1411		Tech 2911	
Intro. to Tech.	3	Found Ind. Arts Ed.	3
Tech 1511		Tech 2555	
Graphics I	3	Arch. Design I	4
Psyc. 1101		Hlth 1102	
Gen. Psyc.	3	Personal Hlth.	3
Math 1212		Chem 1051	
Alg. & Trig.	3	Gen. Chemistry	4
Ph Ed		Ph Ed	
or		or	
ROTC	1	ROTC	1
	16		18

		Sophomore Year	
Engl Any 2000 level		Engl Any other 2000	
course except 2106	3	level course except	
Tech 1711		2106	3
Mach. Prod. Tech.	3	Tech 3718	
Tech 1611		Metal Form & Fab	3
Wood Industry	3	Tech 3601	
Phys 1111		Prin. of Bldg. Constr.	3
Found of Physics	3	Phys 1112	
Spch 1311		Found of Physics	3
Public Speaking	3	Educ 2011	
Ph Ed		Found of Educ.	3
or		Ph Ed	
ROTC	1	or	
	16	ROTC	1

		Junior Year	
Tech 1811		Tech 1821	
Elec. Tech. I	3	Elec. Tech. II	3
Tech 3350		Tech 4355	
Fluid Power	3	Power Mechanics	3
Tech 3410		Educ 3384	
Plastics Mater. & Proc.	3	Mtl's. & Methods—HSIA	3
Educ 2111		Educ 3121	
Human Growth & Dev.	3	Psyc. of Learning	3
Hist 2601		Hist 2602	
U.S. History	3	U.S. History	3
Art 2213		Art 2221	
Ltr. & Layout	3	Graphic Prod.	3
	18		18

		Senior Year	
Tech 4362		Educ 4841	
Gen. Shop Appl.	3	Dir. Student Teaching	9
Tech 4361		Educ 4441	
Org. — Gen. Shop	3	Cur. Probs. & Trends	3
*Hum Req. Elective	3	Educ Req. Elective	3

(Note 1)

*Soc Sci Req. Elective 3

(Note 2)

*Electives (Note 3) 3

15

15

Note 1: One course (3 semester hours) in one of the following humanities: art, music, foreign languages, philosophy.

Note 2: One course (3 semester hours) in one of the following social sciences: anthropology, economics, geography, political science, sociology.

Note 3: Elective must be applicable for secondary school teachers.

*Three (3) semester hours must be 3000-4000 level courses.

THE MINORS:

SAFETY:

Technology 3386, 3387, 4951, 4952, 4953, 4954.

Health 2101

Psychology: 3 hours

Management 3810

Education 3335

SURVEYING:

Geography 3501, 3511

Technology 1411, 1451, 1511, 2451, 2591, 3451

Mathematics 1212, 1321

TECHNOLOGY:

Technology 1411, 1511, 1711, and 15 additional semester hours in technology courses, 9 semester hours of which must be from the upper division in one of the specific technology areas.

The Department of Nursing

LOIS HOLLOWON, B.S.N., M.S.N., *Chairman*

Room 316, Manning Hall

Purposes

The Department of Nursing offers the Associate of Arts Degree in Nursing. The primary purpose of the nursing program is to provide educational experiences designed to prepare graduates who have the ability to plan and implement direct care to patients with common, recurring nursing problems. Each nursing course includes clinical laboratories in one of the many local public and private health facilities. Transportation to and from the various health agencies is the responsibility of the student. An additional expense of approximately \$75.00 is incurred for uniforms and professional liability insurance. Loans and scholarships are available through the University Financial Aid Office.

Accreditation

The department of Nursing is accredited by the National League for Nursing and approved by the Tennessee Board of Nursing. The Department holds agency membership in the National League for Nursing and the National League for Nursing Council of Associate Degree Programs.

Admissions

Application for admission to the Nursing program is made through the office of Admissions at Memphis State University. Information regarding an additional examination required for admission to the Nursing program may be acquired through the Admissions Office. Examination for credit in Nursing 1101 is offered by the Department of Nursing to individuals who believe they have already mastered the materials of the course through previous study and experi-

ence (see the university statement regarding credit by examination on page 52). Only students who are registered in nursing courses are considered as having entered the Nursing program.

Degree Requirements

To qualify for the Associate of Arts Degree in Nursing the student must complete a minimum of 74 semester hours with a quality point average of 2.0 (on a scale in which the grade of A has a quality point value of 4; B, 3; C, 2; and D, 1). Of the 74 semester hours required for graduation, 37 hours must be in Nursing.

Continuation in the Nursing program is contingent upon the student's making a grade of "C" in all nursing courses. Any student who makes less than a "C" in a nursing course attempted may be terminated from the program or continued on probation upon recommendation of the Nursing faculty.

The 2000 courses may be taken in any desired sequence; however, students who fail any 2000 course attempted must repeat that course before attempting another nursing course. Course requirements for the Associate Degree in Nursing are as follows:

General Education Requirements:

Biology	1731	Sociology	1111
Biology	1732	Home Economics	2202
Biology	1400	Phys. Ed.	
English	1101	Any 1000 level course	
English	1102	Elective	
Psychology	1101	Speech, Art, or Music	
Psychology	3103	Elective	
		History or Political Sci.	

Nursing Requirements:

Nursing	1000	Nursing	2113
Nursing	1101	Nursing	2114
Nursing	1102	Nursing	2201
Nursing	2112	Nursing	2202

The Office of International Studies

GERALD S. PIERCE, A.B., M.A., Ph.D.,
Director

Room 113, Mitchell Hall

The Office of International Studies coordinates and assists in the development of the University's teaching, research and service activities in the international field.

Undergraduate interdisciplinary programs for which the Office of International Studies has coordinating responsibility are those in Latin American and African studies, international relations and international business. General descriptions of the programs appear elsewhere in the *Bulletin*, and detailed information on them may be obtained from the Office of International Studies and program advisers.

With the Office of the Vice President for Public Service and Continuing Education, this office is responsible for the conduct of Memphis State-sponsored overseas study and work programs. Current information on these programs and on many others open to Memphis State students is available for reference in this office, and students will be assisted in selecting programs which will best serve their educational needs. Participation in study- and work-abroad programs is not limited to those enrolled in the international studies programs, but is open to all qualified persons.

The Office of International Studies is also prepared to assist students who are inter-

ested in participating in overseas exchange programs sponsored by governmental and private organizations. Advanced graduate students engaged in foreign area and international research and study may obtain information about grant opportunities that may be available to them. In cooperation with the Office of Research Administration, the Office of International Studies will give advice and assistance to those interested in applying for financial aid from non-University sources.

The office has responsibilities in a broad range of other international programs in which the University is currently engaged or is prepared to engage. Among these activities are the following: development and administration of interinstitutional consortia in the fields of international studies and programs, including overseas development and technical assistance; the offering of non-credit courses, orientation seminars and training programs for businesses and other organizations with international interests; maintenance of a "talent bank" file on University personnel possessing language skills and foreign area expertise; sponsorship of lectures and seminars on international topics of interest to the University and non-University communities; and dissemination of information about international programs of the University.

*The University College

Initiation of the University College has been approved for the 1975-76 academic year. As of the *Bulletin's* publication date, specific programs had not been authorized. For information regarding specific programs which have been authorized since the *Bulletin's* publication, call the office of the Vice President for Academic Affairs.

Purposes

The University College offers non-traditional degrees for those students whose experience, talents, and interests are best served through a program which emphasizes personally designed education. The University College is based on the belief that faculty,

students, and professionals should have the opportunity to interact on a personal level, unrestricted by departmental or college boundaries. The College provides the structure and opportunity for the University's faculty, academic departments, and other colleges to develop interdisciplinary ventures that may be later subsumed into other degree-granting units. The University College is committed to exploring new program ideas and to providing the stimulative, experimental atmosphere necessary for their introduction.

*This is a new degree-granting college, not to be confused with the academic advising unit formerly called by the same name.

The Department of Aerospace Studies

FRANK H. DAWSON, JR., B.S., M.B.A.,

Lt. Colonel

United States Air Force, Professor of

Aerospace Studies

Room 404, Jones Hall

The Department of Aerospace Studies provides a four-year program of instruction for all qualified U. S. citizens, male and female, divided into two phases, each of two years duration. The first, termed the General Military Course, offers instruction in the foundation of leadership and Aerospace-age citizenship. The second, termed the Professional Officer Course, builds upon these foundations in developing upperclassmen who are to become Air Force officers and serve on active duty upon graduation and commissioning. Students may apply for the two-year or four-year program, or they may enroll one year prior to applying for the two-year program.

Instruction in Aerospace Studies has been an important phase of the curriculum at Memphis State University since 1951. Active duty Air Force personnel, approved by the University President, are detailed by the Department of the Air Force to administer the instructional program. Air Force officers serve under appointment by the University as Professor or Assistant Professor of Aerospace Studies.

THE GENERAL MILITARY COURSE: The two-year (4 semesters) General Military Course consists of one hour a week of classroom instruction and one hour a week of Corps Training. Textbooks are furnished by the Air Force without charge. Regulation Air Force uniforms are furnished and must be properly worn and kept in good condition. A uniform deposit is required for all cadets at the time of registration. Cadets who successfully complete the General Military Course may apply for admission to the Professional Officer Course.

THE PROFESSIONAL OFFICER COURSE: The Professional Officer Course provides instruction and systematic training to selected eligible students who desire to qualify as officers in the United States Air Force while pursuing their academic studies at the University. Successful completion of the require-

ments for the Professional Officer Course and for a baccalaureate degree leads to a commission in the United States Air Force as a Second Lieutenant. To be eligible for selection to the Professional Officer Course, a student must have at least two years remaining at the University (undergraduate, graduate, or a combination). Final selection is based on academic standing, leadership potential, percentile score on the Air Force Officer Qualifying Test, and physical qualifications. Senior male cadets who are enrolled in the pilot category will engage in a flying program consisting of 25 hours of flight instruction and 2 semester hours of Elementary Aeronautics (AS 4413). All members of the Professional Officer Course receive a subsistence allowance of \$100.00 per month and are issued uniforms provided by the Air Force.

THE TWO-YEAR PROGRAM: All students who meet qualifying criteria, may apply for selection to the Professional Officer Course under the Two-Year Program if they are not in the Four-Year Program. Applications must be received not later than March 1 of each year. If selected, the student will attend a six-week field training program during the summer prior to entry into the Professional Officer Course. Graduates of the six-week field training are enrolled in the Professional Officer Course with the same status as cadets in the four-year program.

AIR FORCE ROTC COLLEGE SCHOLARSHIP PROGRAM: Full scholarships which pay full tuition and fees, full book allowance, transportation to Memphis, and a tax free subsistence allowance of \$100.00 per month are available to entering freshmen and cadets enrolled in the Air Force ROTC programs. Details concerning qualifications and applications can be obtained from the Department of Aerospace Studies. (See Chapter 4, Scholarships)

FIELD TRAINING: Four-year cadets enrolled in the Professional Officer Course will

attend a four-weeks field training program at an Air Force Base during the summer between their sophomore and junior years. Cadets who register for AS 3211 (Four-Week Field Training), prior to attending field training, will receive an academic grade with four hours academic credit. Students applying for the Professional Officer Course Two-Year Program will attend a six-weeks field training program at an Air Force Base prior to entering the Professional Officer Course as a cadet. Students who register for AS 3212 (Six-Weeks Field Training), prior to attending field training, will receive an academic grade and six hours academic credit.

MINOR IN AEROSPACE STUDIES: Upon successful completion of 18 semester hours in Aerospace Studies, a cadet may apply for a minor in Aerospace Studies.

SPECIAL STUDENT PROGRAM: This is available to all students who have not previously enrolled in an ROTC course in the University. AFROTC scholarship recipients are not eligible. This program applies to a student's first semester in any GMC course. The special student does not pay the uniform deposit, does not have to meet strict Air Force hair standards, does not wear the uniform. Full credit is received for the course.

The Office of Public Service and Continuing Education

JOHN A. RHODES, JR., B.S., M.S., Ph.D.,

Vice President

OLD BRISTER LIBRARY

Instructional Services

The Office of Public Service and Continuing Education offers instructional services supplementing the traditional full-time program. Each of these services is designed to increase the availability of the faculty and the facilities of the University to individuals and groups in the Mid-South area. The Office coordinates degree credit offerings at residence centers in metropolitan Memphis and the West Tennessee region as well as CEU (Continuing Education Credit Unit) and non-credit activities.

Residence Centers.

Institutional services of the University are extended to areas off the campus and through educational television. Both undergraduate and graduate courses are given at locations within the state where suitable advance arrangements are made. The subject matter of such courses is the same as that of courses taught on the campus.

Candidates for degrees at Memphis State University may take a limited amount of work through this division; regulations governing the use of such credit will be found on page —.

Correspondence is invited with groups of individuals who are interested in any phase of this program. Please address all inquiries and suggestions to the Director of Program Development, Office of Public Service and Continuing Education.

Conference Services.

This service provides CEU and non-credit programs in various occupational, technical, and general education fields. It assists state agencies, educational institutions, recognized civic organizations, professional groups, and departments of the University in the development and presentation of conferences so as to provide a wide variety of educational opportunities for adults throughout the Mid-South.

The staff of the Office will assist in planning programs, preparing and distributing printed materials, engaging speakers, handling registration, and other matters pertain-

ing to conferences and institutes.

Professional, business and cultural groups who wish to avail themselves of the services of the teaching staff and the facilities of the University, either on or off the main campus, are welcome to schedule instructional meetings through the Director of Program Development, phone 454-2381.

Special Interest, Non-Credit Courses

These classes are for men and women who have a particular interest in a subject and a desire to learn more about that subject but who do not wish to engage in the formalities of registration, grades and examinations. The courses offered do not duplicate credit courses which are described in the *Bulletin*. Announcements of special interest, non-credit courses to be offered are issued before the beginning of each semester in a special brochure and through news media of the Mid-South.

Continuing Education Unit

Participants in certain approved programs sponsored by the Office of Public Service and Continuing Education are now awarded "Continuing Education Units". One unit is awarded for each ten hours of instruction, with decimal units given for less than ten hours. These units are recorded on a permanent transcript for each individual. Participants may obtain a transcript of their participation upon request. Copies will be forwarded to designated groups, associations, or employers when requested by participants.

The awarding of CEU's is part of a national movement to provide records for participation in non-credit continuing education activities. Many organizations and professions are now requiring adults to continue their education. The use of the CEU is an effort to provide a standard unit of measure by which these organizations and professions may grant the proper recognition to their constituents for having participated in continuing education programs. *CEU's do not constitute academic credit earned at Memphis State University.*

The Graduate School

GLEN E. PETERSON, B.A., M.S., Ph.D., *Dean*

Administration Building

The Graduate School of Memphis State University is the center of advanced study and research within the University. The basic objectives of The Graduate School are (a) to preserve and disseminate knowledge; (b) to extend knowledge through research; and (c) to prepare men and women to assume a more responsible and useful role in a changing society.

The Graduate School is open to persons holding the Bachelor's degree from colleges and universities recognized by standard, general and regional, accrediting agencies, and whose undergraduate work has been of sufficient quality and scope to enable them to pursue graduate study profitably. Satisfactory entrance examination scores are required for all students who seek to be admitted to graduate study. A prospective student should contact The Graduate School Office to ascertain admission requirements

and the appropriate examination to be taken.

A student may study in thirty-five departments with various majors and areas of specialization. The Masters degree is offered by each of the thirty-five departments. The Doctor of Philosophy degree is offered by the departments of audiology and speech pathology, biology, chemistry, history, mathematical sciences, and psychology. The Doctor of Education and Education Specialist degrees are offered by various departments within the College of Education.

The regulations and policies of The Graduate School are explained in greater detail in The Graduate School Bulletin. Application for admission must be made on the admission application form supplied by The Graduate School. Inquiries concerning The Graduate School should be addressed to the Dean of The Graduate School.

ACADEMIC PROGRAMS

MASTER'S DEGREE

Department	Major	Concentrations Within Major (Possible)	Degree Offered
Accountancy	Accountancy		Master of Science Master of Business Administration
Art	Studio Art	(1) Painting (2) Sculpture (3) Printmaking (4) Graphic Design (5) Interior Design	Master of Fine Arts
	Art	(6) Art History (7) Art Education	Master of Arts Master of Arts in Teaching
Audiology and Speech Pathology	Audiology and Speech Pathology	(1) Audiology (2) Speech Pathology	Master of Arts
Biology	Biology	(1) Botany (2) Cell Biology (3) Invertebrate Zoology (4) Microbiology (5) Vertebrate Zoology	Master of Science
Chemistry	Chemistry	(1) Inorganic (2) Analytical Chemistry (3) Organic (4) Physical Chemistry (5) Biochemistry	Master of Science
Civil Engineering	Civil Engineering	(1) Environmental Engineering (2) Foundation Engineering (3) Structural Engineering (4) Transportation Engineering	Master of Science

ACADEMIC PROGRAMS
MASTER'S DEGREE

Department	Major	Concentrations Within Major (Possible)	Degree Offered
Departments of the College of Business Administration	Business Administration	(1) Accountancy (2) Finance, Insurance, Real Estate (3) Management (4) Marketing (5) Economics	Master of Business Adminstration
Distributive Education	Distributive Education		Master of Education
Economics	Economics		Master of Arts Master of Business Administration
Educational Adminlstration and Supervision	Educational Administration and Supervision	(1) General (2) Elementary (3) Secondary	Master of Education
	Adult Education		Master of Education
Electrical Engineering	Electrclcal Engineering	(1) Solid State Electronics (2) Automatic Control Systems (3) Engineering Computer Systems (4) Microwave & Antenna Systems	Master of Science
Currlculum and Instruction	Elementary Education	No Concentration or (1) Early Childhood Education	Master of Education
	Reading		Master of Education
	Secondary Education		Master of Education Master of Arts in Teaching
English	English		Master of Arts
Finance, Insurance, Real Estate	Finance		Master of Science Master of Business Administration
Foreign Language	French		Master of Arts
	Spanish		Master of Arts
Geography	Geography		Master of Arts Master of Science
Geology	Geology		Master of Science
Guidance and Personnel Services	Guidance and Personnel Services	(1) Elementary School Counseling & Guidance (2) Secondary School Counseling & Guidance (3) General Counseling & Guidance	Master of Education
Health, Physical Education & Recreation	Health, Physical Education & Recreation	(1) Health (2) Physical Education (3) Recreation	Master of Education
History	History		Master of Arts

ACADEMIC PROGRAMS
MASTER'S DEGREE

Department	Major	Concentrations Within Major (Possible)	Degree Offered
Interdepartmental Programs	Natural Science		Master of Science
Interdepartmental Programs	Industrial Systems Analysis		Master of Science
Library Service	Library Service		Master of Education
Management	Management		Master of Science Master of Business Administration
Marketing	Marketing		Master of Science Master of Business Administration
Mathematical Sciences	Mathematics	(1) General Mathematics (2) Statistics (3) Computer Sciences	Master of Science
Mechanical Engineering	Mechanical Engineering	(1) Design & Manufacturing (2) Nuclear & Thermal Power (3) Materials Science (4) Fluid & Solid Mechanics (5) Aerospace Propulsion	Master of Science
Music	Music	(1) Applied Music (a) Composition (b) Piano (c) Vocal Pedagogy (d) Vocal Performance (e) Organ (f) Strings (g) Brasses (h) Winds (i) Percussion (2) Sacred Music (3) Music Theory (4) Music History (5) Opera and Conducting (6) Opera Production and Directing	Master of Music
		(7) Musical Arts: Music History (8) Musical Arts: Applied Music	Master of Arts
	Music Education		Master of Music Education
Office Administration	Business Education and Office Management	(1) Business Education	Master of Education
Philosophy	Philosophy		Master of Arts
Physics	Physics		Master of Science
Planning	City and Regional Planning	(1) Developmental Planning (2) Comprehensive Physical Planning (3) Natural and Environmental Resources Planning	Master of City and Regional Planning

ACADEMIC PROGRAMS**MASTER'S DEGREE**

Department	Major	Concentrations Within Major (Possible)	Degree Offered
Political Science	Political Science		Master of Arts
	Public Administration	(1) Urban Management and Planning (2) Comparative and Development Administration (3) General (4) Health Services Administration	Master in Public Administration
Psychology	General Psychology	(1) General Psychology (2) Clinical Psychology	Master of Arts Master of Science
	School Psychology		Master of Arts
Sociology	Sociology		Master of Arts
Special Education and Rehabilitation	Special Education and Rehabilitation	(1) Educationally Handicapping Conditions (2) Pre-School Education of Exceptional Children (3) Multihandicapped (4) Vocational Rehabilitation	Master of Education
Speech and Drama	Speech and Drama	(1) Radio-TV-Film (2) Rhetoric and Communication Arts (3) Theatre & Oral Interpretation	Master of Arts
	Theatre		Master of Fine Arts
Engineering Technology	Technical Education	(1) Architectural (2) Construction (3) Drafting & Design (4) Electronics (5) Manufacturing (6) Industrial Arts	Master of Science

ACADEMIC PROGRAMS**ADVANCED DEGREES**

Department	Major	Concentrations Within Major (Possible)	Degree Offered
Audiology and Speech Pathology	Audiology and Speech Pathology	(1) Audiology (2) Speech Pathology	Doctor of Philosophy
Biology	Biology	(1) Botany (2) Cell Biology (3) Invertebrate Zoology (4) Microbiology (5) Vertebrate Zoology	Doctor of Philosophy
Chemistry	Chemistry	(1) Inorganic (2) Organic (3) Physical Chemistry (4) Analytical Chemistry (5) Biochemistry	Doctor of Philosophy

ACADEMIC PROGRAMS
ADVANCED DEGREES

Department	Major	Concentrations Within Major (Possible)	Degree Offered
Educational Adminlstration & Supervision	Educational Administration & Supervision	(1) Superintendency (2) Elementary (3) Secondary	Education Specialist
		(4) Higher Education	Education Specialist Doctor of Education
		No Concentration	Doctor of Education
Guidance and Personnel Services	Personnel Services	(1) Counseling & Guidance	Education Specialist
		(2) Student Personnel Services	Doctor of Education
History	History		Doctor of Philosophy
Interdepartmental Programs (Education)	Curriculum and Instruction	No Concentration or (1) Elem. Ed. (2) Reading (3) Sec. Ed. (4) Higher Ed. (5) English Ed. (6) Music Ed. (7) Science Ed. (8) Bus. Ed. (9) Social Studies Education (10) Mathematics Education (11) Special Education and Rehabilitation (12) Cultural Foundations (13) Educational Psychology (14) Research Method- ology and Statistics	Education Specialist Doctor of Education
Mathematical Sciences	Mathematics	(1) College Teaching	Doctor of Philosophy
Psychology	Psychology	(1) Clinical Psychology (a) Neuropsychology (b) Behavior Management (2) Experimental Psychology (a) Biopsychology (b) Learning Behavior Analysis (c) Sensory Processes (d) Neuropsychology (e) Behavior Management (3) Human Psychology (a) Human Develop- mental Retardation (b) Industrial Psychology (c) Personality- Cognitive Processes (d) Social Psychology (e) Neuropsychology (f) Behavior Management	Doctor of Philosophy

The School of Law

ROBERT DOYLE COX, LL.B., LL.M., *Dean*

Room 209, Law School Building

The School of Law offers a program of instruction leading to the degree of Juris Doctor. A student may enroll in a regular program, attending classes during the day, or in an extended program, attending classes in the evening. A student in the regular program may graduate in three academic years. A student in the extended program may graduate in four academic years plus work in summer sessions. A student regularly employed more than 20 hours per week may not pursue the regular program.

Admission to The School of Law is on a selective basis. To be eligible for admission, a student must have received a bachelor's degree in an appropriate discipline from an accredited college or university and must have made a satisfactory score on the Law School Admission Test administered by the Educational Testing Service, Princeton, New Jersey. One hundred credit hours of course work leading to the undergraduate degree must have been earned in theory courses approved by The School of Law. Questions concerning which course credits are accept-

able and additional admissions requirements should be directed to the Dean of The School of Law or the Associate Director of Admissions.

Admission to advanced standing may be given to a student who qualifies for admission, and who is eligible for re-enrollment in the law school in which his previous work has been taken, provided that such school is on the approved list of the American Bar Association.

The successful completion of 84 semester hours work, including all required courses, with the prescribed grade average is necessary for graduation. The last 28 semester hours must be taken in this school.

The regulations and policies of The School of Law are set out in greater detail in a separate bulletin. Applications for admission must be made on forms supplied by The School of Law. Inquiries should be addressed to the Dean of The School of Law or to the Associate Director of Admissions in the office of Admissions and Records.

8

Description of Courses

The section which follows contains an alphabetical listing of all departments in the University and a description of all course offerings. The official course title appears in bold-face type following the course number. The figures in parentheses after the description of a course denote the number of semester hours of credit for that course. If the credit is variable, to be fixed in consultation with the instructor, that fact is indicated by the minimum and maximum credit, as Biology 4000 (2 to 4).

Courses are numbered according to the following system:

1000-1999 Courses primarily for freshmen

2000-2999 Courses primarily for sophomores

3000-3999 Courses primarily for juniors

4000-4999 Courses primarily for seniors and for which graduate credit is not offered

5000-5999 Courses offered in The Graduate School but open to seniors within 36 semester hours of graduation

Course numbers have no reference to the semester in which the courses are taught.

The Schedule of Classes is published a few weeks prior to the opening of each semester and The Summer Session. It contains a listing of the specific courses to be offered with the time, place, and instructor in charge of each section. It also contains special announcements concerning registration procedures. Copies are available in the office of the Dean of Admissions and Records.

ACCOUNTANCY

PROFESSOR JAMES THOMAS THOMPSON, *Chairman*

Room 200A. The College of Business Administration Building

Requirements for the major and minor in accountancy are listed on page 72.

2010. Fundamentals of Accounting I. (3).

Study of the collection and analysis of financial transactions and communicating the information they contain with periodic general purpose financial statements using double-entry accrued accounting techniques. The use of accounting procedures to routinize and control repetitive activities. Theory is stressed with minimum necessary attention to clerical operations.

2020. Fundamentals of Accounting II. (3).

Continuation of Accounting I plus a general survey of cost accounting, income taxes, financial statement analysis, and special accounting analysis for managerial decision making. PREREQUISITE: Accounting 2010.

2720. Accounting Laboratory. (1).

The working of a practice set involving current accounting practice. Both semesters. PREREQUISITE: Accounting 2010.

3010. Managerial Accounting. (3).

The study of accounting as it relates to managerial control. Topics studied include financial statement analysis including price level changes, cost controls, budgeting, quantitative accounting techniques for decision making in management. Both semesters. PREREQUISITE: Accounting 2020 or permission of department chairman.

3110. Intermediate Accounting I. (3).

Accounting records, end-of-period procedures, corrections of prior periods, accounting statements, comparative statements, working capital, miscellaneous ratios, profit and loss analysis, corporations. Both semesters. PREREQUISITE: Accounting 2020.

3120. Intermediate Accounting II. (3).

Cash and receivables, inventories, tangible op-

erating assets, intangibles, investments, liabilities reserves and valuation accounts, net income determination, statement of source and application of funds. Both semesters. PREREQUISITE: Accounting 3110.

3310. Cost Accounting. (3).

A study of cost systems, including job order process, and standard, as management information systems for planning and control. The role of cost accounting in general financial reporting is covered but the dynamic aspects of the subject are stressed. PREREQUISITE: Accounting 2020.

4210. Advanced Accounting. (3).

Partnerships, consignments, installment sales, insurance, statement of affairs, receiver's accounts, statement of realization and liquidation, annuities, and introduction to consolidations. Fall semester. PREREQUISITE: Accounting 3120.

4220. Consolidated Financial Statements. (3).

Consolidations, mergers, foreign exchange. Spring semester. PREREQUISITE: Accounting 3120.

4240. Auditing. (3).

Ethics in accounting practices, internal control, auditing standards and procedures, programs of audit of various accounts, construction and indexing of various papers, reports to clients, a practice audit is carried out. Fall semester. PREREQUISITE: Accounting 3120, 3310.

4251. Readings in Auditing. (3).

Auditing theory, standards and procedures, case studies applicable to specific industries, current trends, study of American Institute of Certified Public Accountants, releases pertaining to auditing. Spring semester. PREREQUISITE: Accounting 4240.

4310. International Accounting. (3).

A comparative study of international accounting and auditing practices: variations in accounting

thought; reporting standards; taxation in international operations; professional and ethical standards; effect of government regulation on accounting practice. PREREQUISITE: Accounting 2020.

450. Accounting Systems. (3).

Problems involved in designing accounting systems for various types of business, including processing accounting data by electronic computer. Spring semester. PREREQUISITE: Accounting 3120, 3310, and Management 2750.

510. Federal Income Tax I. (3).

Regulations pertaining to individuals and partnerships; installment and deferred payment sales; introduction to corporate taxation. Fall semester. PREREQUISITE: Accounting 3120 or permission of the instructor.

520. Federal Income Tax II. (3).

Laws and regulations for corporations, estates, and fiduciaries: Spring semester. PREREQUISITE: Accounting 4510.

4540. Governmental Accounting. (3).

Accounting theory and practice applicable to federal, state, and local government; and to non-profit institutions; budgetary control; control, classification, and use of funds; financial statements and reports. Fall semester. PREREQUISITE: Accounting 2020; and permission of the instructor.

4810. Internship in Accounting. (3).

Seniors majoring in public accounting, after receiving approval of the accounting faculty, are placed in offices of cooperating public accounting firms to receive on-the-job training under the direct supervision of a certified public accountant and the general supervision of the University accounting staff. Credit is allowed upon acceptance of report of work done, verified by supervising accountant, and completion of a qualifying examination. Minimum time: 500 hours. Both semesters. PREREQUISITE: Senior standing.

Graduate Courses in Accountancy: For course descriptions and further details of the graduate programs, see The Bulletin of The Graduate School.

AEROSPACE STUDIES

LT. COLONEL FRANK H. DAWSON

Professor of Aerospace Studies

Room 404, Jones Hall

Details of the Air Force ROTC program are on page 105.

111. World Military Systems. (1).

A study of world military forces is begun through treatment of the U.S. Department of Defense and the doctrine, mission and functions of the United States Air Force.

One class hour per week and one hour of Corps Training.

112. World Military Systems. (1).

A continuation of Aerospace Studies 1111.

One class hour per week and one hour of Corps Training.

211. Growth and Development of Aerospace Power. (1).

This course is an introduction to the study of air power. It is developed from a historical perspective starting before the Wright brothers and continuing through the early 1970's.

One class hour per week and one hour of Corps Training.

212. Growth and Development of Aerospace Power. (1).

A continuation of Aerospace Studies 2211.

One class hour per week and one hour of Corps Training.

PROFESSIONAL OFFICER COURSE

211. Aerospace Studies Four-Week Field Training. (4).

A twenty-eight day course conducted during the summer at an active installation of the USAF which consists of approximately 185 hours of instruction in Air Force base functions, leadership, physical training and Air Force environment. Students are assigned in groups of twenty-five and individually counseled, and evaluated on their performance. Emphasis is given to self-initiated leadership activities. PREREQUISITE: Aerospace Studies 1111, 1112, 2211, 2212.

3212. Aerospace Studies Six Week Field Training. (6).

A forty-two day course conducted during the summer at an active installation of the USAF which consists of approximately 258 hours of instruction on the role of the military forces, organization of the Defense Department, instruments of national security, Air Force base functions, leadership, physical training and Air Force environment. Students are assigned to groups of twenty-five and individually counseled and evaluated on their performance.

3311. National Security Forces in Contemporary American Society. (3).

A course concerned with the fundamental issues and requirements of national security. It entails extensive study of civil-military relations, the nature of the international environment and strategic requisites for defense.

Three class hours per week and one hour of Corps Training.

3312. National Security Forces in Contemporary American Society. (3).

A continuation of Aerospace Studies 3311.

Three class hours per week and one hour of Corps Training.

4411. Aerospace Leadership and Management. (3).

A study of professionalism, leadership and management. This study includes the meaning of professionalism, professional responsibilities, the military justice system; leadership theory, functions and practices; management principles and functions; problem solving; and management tools, practices and controls.

Three class hours per week and one hour of Corps Training.

4412. Aerospace Leadership and Management. (3).

A continuation of Aerospace Studies 4411.

Three class hours per week and one hour of Corps Training.

4413. Elementary Aeronautics. (2).

An introduction to aviation and the fundamental principles of flight; basic meteorology and its applications to aviation; use of navigation computers, instruments, and radio aids; basic regulations governing airmen, aircraft operations, and

flight safety. This course is designed to prepare for the FAA Private Pilot Written Examination. **PREREQUISITE:** Aerospace Studies 3311 and 3312, or permission of the Professor of Aerospace Studies.

Two class hours per week.

ANTHROPOLOGY

PROFESSOR AUGUSTUS SORDINAS, *Chairman*

Requirements for the major and minor are listed on page 62.

IMPORTANT NOTE: *Anthropology 1200 may be taken before Anthropology 1100.* Anthropology 1200 is a general prerequisite for the upper division courses; exceptions can be granted by individual instructors.

1100. Man's Place in Nature. (3).

Man's place in nature, human origins, the fossil record from archeological excavations, the biological aspects of race.

1200. Man and Culture. (3).

The origin and development of human culture. The study of social relations, language, government, religion and ritual, and the problems of developing nations or minority groups in the modern world.

3035. Indians of Tennessee and Adjacent Areas. (3).

A survey of the archeology and ethnology of the Southeast, with intensive study of the various Indian cultures of Tennessee and bordering states.

3065. The Rise of Anthropological Theories. (3).

An introduction to the rise of anthropology as a science. Emphasis on anthropological thinking and theories of the 19th and early 20th century. **PREREQUISITES:** Anthropology 1100 and 1200 or permission of instructor.

3111. Physical Anthropology and Human Paleontology. (3).

A comparative study of primate anatomy, physiology, and behavior; detailed examination of the Hominid fossil record; and a summation of population genetics and human variability.

3225. Ethnological Field Techniques. (3).

Methods of collecting and interpreting data pertaining to contemporary societies; personal problems involving conflicts in cross-cultural research.

3231. Ethnology of North America. (3).

Description and distribution of aboriginal culture-types of North America north of Mexico; comparisons and inter-relationships during the pre- and post-contact periods.

3232. Ethnology of Latin America. (3).

Description and distribution of the peoples and cultures of South America and Mesoamerica; comparisons and inter-relationships during the pre- and post-contact periods.

3242. Ethnology of Africa. (3).

Description and distribution of the peoples and cultures of Africa; comparisons and inter-relationships during the pre- and post-contact periods.

3252. Ethnology of Eurasia. (3).

Description and distribution of the peoples and cultures of Europe, Asia, and India; comparisons and inter-relationships during the pre- and post-contact periods.

3272. Ethnology of Oceania. (3).

Description and distribution of the peoples and cultures of Oceania (including Australia); comparisons and inter-relationships during the pre- and post-contact periods.

3321. Archeological Field Techniques. (3).

Experience in field excavations; preparation of specimens, use of survey instruments, photographing and keeping archeological records, making of small ground areas. Hours individually arranged. **PREREQUISITE:** permission of instructor.

3322. Archeological Field Techniques. (3).

A continuation of Anthropology 3321. **PREREQUISITE:** permission of instructor.

3331. Archeology of North America. (3).

Description and distribution of prehistoric cultural remains in North America north of Mexico. Discussion and comparison of the major regional sequences, extending from the earliest evidence of human occupation until historic times.

3332. Archeology of Latin America. (3).

Description and distribution of prehistoric cultural remains in South America and Mesoamerica, with emphasis on Mexico and Peru.

3342. Archeology of Africa. (3).

Description and distribution of archeological remains in Africa; discussion and comparison of the major regional sequences, extending from the earliest evidences of human occupation until historic times. Emphasis on the cultural achievements of pre-colonial Africa.

3351. Archeology of Europe. (3).

Development of the various European civilizations and their influence and inter-relationships with other cultures through Europe and Eurasia.

3352. Archeology of Asia. (3).

Description and distribution of prehistoric cultural remains in Asia; discussion and comparison of the major regional sequences, extending from the earliest evidences of human occupation until historic times.

3385. Anthropological Reporting. (3).

Practicum in report preparation, emphasizing the distinctive natures of description, analysis, comparison, and synthesis as they pertain to selected anthropological data. **PREREQUISITE:** Permission of the instructor.

3411. Linguistic Anthropology. (3).

Nature and usefulness of symbols, mechanism by which they are communicated, relation of symbolic systems to thought and culture, comparative techniques used to reconstruct prehistoric languages.

3811. Social and Ethnic Minorities. (3).

(Same as Sociology 3811). A comparative study of social and ethnic minor

- ties in the United States and elsewhere with a focus on differences in cultural backgrounds, social relationships with the larger society; social, educational, and legal problems; factors contributing to satisfactory and unsatisfactory adjustments of minorities.
- 400. Sociology of Mexico. (3).**
(Same as Sociology 3900).
A study of Mexico's social development, the community, the family, social change, minority group relations and population.
- 401. Anthropology and Education. (3).**
(Same as EDFD 4051).
An advanced study of the 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 the public education system are examined. PREREQUISITE: Permission of instructor.
- 405. Contemporary Anthropological Theory. (3).**
Contemporary growth of theories and methods in anthropology. PREREQUISITES: Anthropology 1100, 1200, and 3065; or permission of instructor.
- 450. Complex Societies. (3).**
Folk society, peasant society, and the pre-industrial state. Community studies. Anthropological studies of social institutions and groupings in industrial settings.
- 451. Comparative Social Structures. (3).**
Comparative analysis of social structures and their functional relationships to other cultural institutions, with emphasis on family types, marriage patterns, and kinship.
- 452. Economic Anthropology. (3).**
Comparative analysis of economic systems and their functional relationships to other cultural institutions; production, distribution, and consumption; concepts of wealth, value, property, and ownership.
- 453. Anthropology of Religion. (3).**
Comparative analysis of religious systems and their functional relationships to other cultural institutions; inter-relations of myth, magic, and ritual; types of religious institutions and religious practitioners.
- 454. Cultural Change. (3).**
Internal and external factors causing change; theories of cultural evolution; social changes involved in the emergence of civilization; changes involved in industrialization.
- 455. Political Anthropology. (3).**
Comparative analysis of political systems and their functional relationships to other cultural institutions; formation and segmentation of political structures; requisites of leadership and political control.
- 456. Archeological Field Techniques and Restoration. (3).**
Individual instruction in dealing with archeological field problems and methods of modern conservation and restoration techniques. PREREQUISITE: Permission of the instructor.
- 457. Evolution of Civilization. (3).**
Comparative investigation of the origins of civilization in the Old and New Worlds. Development and study of models to explain the cultural, social, political, and other changes that lead to and define civilization.
- 4354. Archeology of the Holy Land. (3).**
A survey of the archeological remains in the Holy Land from the Stone Age to the early Christian Era.
- 4380. Museology. (3). (Same as Art 4380).**
- 4381. Archeological Laboratory and Research Techniques. (3).**
Coverage of basic archeological laboratory and research techniques, including processing, cataloguing, storage of specimens, and analysis of a small body of archeological data on an individual basis. PREREQUISITE: Permission of instructor.
- 4382. Museum Operation. (3). (Same as Art 4382).**
Basic aspects of museum organization, management, exhibit planning and execution, and maintenance of collections and records.
- 4411. Urban Anthropology. (3). (Same as Sociology 4411).**
Anthropological studies of pre-industrial and industrial cities. Urbanization, movements of social transformation and other processes of adjustment to an urban milieu. Urban slums, ethnic enclaves and housing developments in cross-cultural perspective. Urban kinship and social organization. Urban community development. Urban research techniques. PREREQUISITE: Anthropology 1200 or Sociology 1111, or permission of instructor.
- 4724. Primitive Technology. (3).**
An anthropological survey of the development of technology. Analysis of the origins of primitive techniques, subsistence patterns, arts, crafts, machines, and tracing of their relationship to social organizations. A comparative examination of prehistoric and historic information.
- 4742. Anthropology of Contemporary Sub-Saharan Africa. (3).**
Development of African societies from traditional institutions to contemporary states.
- 4742. Culture and Personality Change in Africa. (3).**
The transformation of aboriginal African cultures; psychological correlates of social and cultural change.
- 4751. Culture and Personality. (3).**
Comparison of factors involved in the analysis of personality as contrasted to culture; the interaction of these factors; problems of studying personality cross-culturally.
- 4752. Applied Anthropology. (3).**
Application of anthropological knowledge and techniques to contemporary problems in government, industry, public health, community development, and urbanization.
- 4975. Directed Individual Readings. (1-4).**
Intensive guided survey of anthropological and related literature dealing with topics selected by advanced students and accepted by the staff. Compilation, synthesis, and evaluation of the published data; preparation for students considering anthropology as a profession. PREREQUISITE: Permission of chairman and the designated staff.
- 4985. Directed Individual Research. (1-3).**
Intensive guided study of original data, in areas selected by advanced students and accepted by the staff. Collection and/or processing of data in physical anthropology, ethnology, applied and

urban anthropology, archeology, and linguistics; description, classification, analysis, and synthesis. Preparation for publication. PREREQUISITE: Permission of chairman and the designated staff.

4995. Seminar in Anthropology. (3).

Problems in contemporary anthropology; may be offered in sections dealing with different topics; field trips and individual assignments.

ART

PROFESSOR DANA DOANE JOHNSON, *Chairman*

Room 201, Jones Hall

Requirements for the major and minor in art are listed on page 62; the program for the Bachelor of Fine Arts degree is outlined on page 57.

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

1101. Introduction to Art. (3).

An introduction to the fundamental principles of the fine arts, aimed at providing an understanding of art products and processes as a basis for judgment and enjoyment of all types of art expression.

1201. Basic Design. (3).

Basic design factors of line, value, texture, form, and space presented in a problem solving approach for the purpose of stimulating the student's visual perception and for encouraging inventive manipulation of tools, materials, and techniques. Development of a vocabulary for professional practice is encouraged through lectures, discussions, and class critique.

1204. Color Fundamentals. (3).

A study of light and color in relation to form. The mixing of colors and the notation of hue, value, chroma relationships. A study of the interaction of color; color harmony, psychology, and symbolism in a variety of mediums. PREREQUISITE: Art 1201.

1311. Beginning Drawing. (3).

An introduction to the materials and techniques of basic drawing.

1314. Figure Structure. (3).

Analysis of the structure of the human figure with emphasis on contour, gesture, and volume. PREREQUISITE: Art 1311.

2101. World Art I. (3).

The development of the visual arts from pre-historic times through the medieval period; their use by man as a social, cultural, and educational force; brief survey of the art of the Far East.

2102. World Art II. (3).

Continues (but does not presuppose) World Art I; a survey of the development of the visual arts from the medieval period through the Renaissance to the present.

2201. Design. (3).

A continued study of the elements of design, using a variety of materials and methods. PREREQUISITES: Art 1201 and 1204, or permission of the instructor.

2202. Design. (3).

A continuation of Art 2201, with attention given to three-dimensional problems in design. PREREQUISITE: Art 2201, or permission of the instructor.

2213. Lettering and Layout. (3).

An introduction to graphic design: problems involving the use of typography; principles and

techniques of layout; and the development of roughs and comprehensives.

2221. Graphic Production. (3).

The preparation of copy for photomechanical reproduction: printing processes, halftone and linotype reproduction, the selection and use of type and paper.

2231. Interior Design. (3).

A survey of the field of interior design and some of its underlying principles. PREREQUISITE: Art 1204.

2232. Interior Design. (3).

A continuation of Art 2231, with emphasis on spatial relations. PREREQUISITE: Art 2231, or permission of the instructor.

2311. Perspective. (3).

Theory and practice of perspective projection and its various applications.

2313. Drawing. (3).

Advanced problems of communication through exploration of varied graphic media and methods. PREREQUISITES: Art 1311 and 1314, or permission of the instructor.

2314. Drawing. (3).

A continuation of Art 2313, with emphasis on personal expression. PREREQUISITE: Art 2313, or permission of the instructor.

2351. Printmaking. (3).

An introduction to basic printmaking processes: relief, intaglio, planograph.

2511. Sculpture. (3).

An introduction to the basic materials and techniques of sculpture.

3101. History of Interior Architecture and Furniture. (3).

Survey of interior architecture, furniture design and decorative arts from the Egyptian era to the 18th century.

3102. History of Interior Architecture and Furniture. (3).

Survey of interior architecture, furniture design and decorative arts from the 18th century to the present day.

3221. Graphic Design. (3).

An introduction to the methods and materials of graphic design, with problems which utilize visual communication. PREREQUISITES: Art 2213 and 2221.

3222. Graphic Design. (3).

A continuation of Art 3221, offering further study in the techniques of newspaper, magazine, and direct-mail layout. PREREQUISITE: Art 3221.

3223. Packaging and Display. (3).

A study of package designing and display techniques. PREREQUISITES: Art 2213 and 2221.

3224. Creative Photography. (3).

Study and practice of photographic technique

- in relation to the field of art. Emphasis is on photography as an art medium. PREREQUISITE: Permission of the instructor.
- 31. Interior Design. (3).**
Practical problems to interior architecture and design. PREREQUISITE: Art 2232 or permission of instructor.
- 32. Interior Design. (3).**
A continuation of Art 3231, offering further study in interior organization and the designing of residential and commercial interiors. PREREQUISITE: Art 3231 or permission of instructor.
- 31. Painting. (3).**
A preliminary course in the theory and practice of oil painting:
- 32. Painting. (3).**
A continuation of Art 3331 with special attention given to the essentials of still-life, landscape, and portrait painting.
- 51. Printmaking. (3).**
A continued study in the graphic arts with further emphasis on woodcut and etching. PREREQUISITE: Art 2351, or permission of the instructor.
- 52. Printmaking. (3).**
A continuation of Art 3351 with emphasis turning to personal expression. PREREQUISITES: Art 2351 and 3351, or permission of the instructor.
- 11. Art Experiences for Elementary Teachers. (3).**
An introductory course in the development of skills and methods in the school art program, with emphasis on materials and ideas important to children's art expression and growth.
- 13. Materials and Methods in Teaching Elementary School Art. (3).**
Designed to aid future teachers in understanding child art, encouraging art expression, and preparing art teaching materials for children. PREREQUISITES: Art 1101 (or 2101 and 2102) and 3411.
- 21. Art Experiences for Secondary School Art Teachers. (3).**
Designed to familiarize secondary art teachers with art crafts in a secondary school art program and to allow them to work with equipment, supplies, processes, and ideas in an art craft program. PREREQUISITE: Art 2202 or 3411, or permission of the instructor.
- 1. Sculpture. (3).**
The problems of sculptural form as expressed in metal, wood, and related materials.
- 2. Sculpture. (3).**
A continuation of Art 3511 with further emphasis on techniques.
- 3. Ceramics. (3).**
An introduction to clay and ceramic process. Emphasis is to be placed on a thoughtful, purposeful exploration of medium, regarding both the pottery vessel and the non-vessel object. NOTE: *Students who have received credit for Art 3521 will not be allowed credit for Art 3523.*
- 4. Ceramics. (3).**
A continuation of Art 3523. Some consideration will be given to fundamental historical and aesthetic aspects peculiar to ceramics as a studio medium. NOTE: *Students who have received credit for Art 3522 will not be allowed credit for Art 3524.*
- 3541. Packaging and Display. (3).**
A continuation of Art 3223 with attention given to trademark designs, package rendering and practical displays. PREREQUISITE: Art 3223.
- 4111. Prehistoric Art. (3).**
An examination of the art products of the various Paleolithic, Mesolithic, Neolithic, Bronze, and Iron Age cultures, with emphasis given to Franco-Cantabrian Cave Paintings and Megalithic Architecture.
- 4121. Ancient Art of the Near East. (3).**
A study of architecture, sculpture, painting and the minor arts in Egypt and the Ancient Near East.
- 4122. Greek and Roman Art. (3).**
A study of the architecture, sculpture, and painting from Aegean art to the fall of the Roman Empire.
- 4131. Early Christian and Byzantine Art. (3).**
The development of architecture, sculpture, and painting through the early medieval period, with emphasis on early Christian and Byzantine art.
- 4134. Romanesque and Gothic Art. (3).**
The development of architecture, sculpture, and painting from the Carolingian (Proto-Romanesque) Period through the Gothic Period.
- 4141. Renaissance Art. (3).**
The art of Europe: architecture, painting and sculpture from the medieval period through the Renaissance.
- 4146. Baroque Art. (3).**
An historical study of the architecture, sculpture, and painting from the end of the Renaissance to the Industrial Revolution.
- 4151. Nineteenth-Century Art. (3).**
A study of the art movements of the nineteenth century from Neo-Classicism to Impressionism.
- 4154. Twentieth-Century Art. (3).**
A study of the major art developments from Post-Impressionism to the present.
- 4162. Spanish Colonial Art. (3).**
A study of the arts in South America, Mexico, and the United States during the period of Spanish Rule. Chiefly, a survey of Baroque art in the Americas.
- 4163. Pre-Columbian Art. (3).**
A survey of the ancient art of Mexico, Central America and South America from about 1000 B.C. to European contact.
- 4165. Art of the American Indian. (3).**
A survey of the arts of the North American Indians from prehistory to the present.
- 4167. Art in America I. (3).**
A survey of American art: architecture, sculpture, painting, and the minor arts within the continental United States from prehistoric times to the Civil War.
- 4168. Art in America II. (3).**
A continuation of Art 4167: architecture, sculpture, painting and the minor arts in the continental United States from the Civil War period to the present.
- 4171. Oriental Art: India. (3).**
Artistic traditions and monuments of India from the Indus Valley period to the 19th century as related to Hinduism, Buddhism and Islam; the influence of these traditions on Southeast Asia.

- 4172. Oriental Art: China and Japan. (3).**
Artistic traditions and monuments of China and Japan from the prehistoric period to the 19th Century as related to Confucianism, Taoism, Buddhism and Shinto.
- 4181. Primitive Art. (3).**
A survey of the art of the primitive Negro of Africa, the aboriginal peoples of Oceania, and the American Indian.
- 4201. Design in Plastics. (3).**
A course in two-dimensional and three-dimensional design in plastics employing the basic methods of casting resins and thermoheating processes using sheet, rod, and tube plastics.
- 4202. Design in Plastics. (3).**
Further development of creative plastics design through thermoheating processes of vacuum forming, blow forming, and resin casting processes.
- 4221. Graphic Design. (3).**
Advanced problems in the fields of advertising and merchandising design. PREREQUISITE: Art 3222 or permission of the instructor.
- 4222. Graphic Design. (3).**
The study and execution of graphics for television, incorporating animation and design for the video environment. PREREQUISITE: Art 4221 or permission of the instructor.
- 4231. Interior Design. (3).**
Advanced study in interior design. Problems in designing complete interiors for homes and commercial structures. PREREQUISITE: Art 4234.
- 4232. Interior Design. (3).**
A continuation of Art 4231 with further problems in home and commercial interiors: PREREQUISITE: Art 4231, or permission of instructor.
- 4233. Interior Rendering. (3).**
Professional techniques in the rendering of interiors and the construction of models.
- 4234. Interior Rendering. (3).**
A continuation of Art 4233 with further emphasis on rendering techniques.
- 4235. Interior Design Research. (3).**
Intensive study of special areas of interior design with emphasis on space planning and lighting. PREREQUISITE: Art 3232, or permission of the instructor.
- 4236. Interior Design Research. (3).**
Continuation of Art 4235 with emphasis on furniture design and construction. PREREQUISITE: Art 4235, or permission of the instructor.
- 4321. Drawing and Painting. (3).**
An advanced course in drawing and painting methods with emphasis on transparent watercolor. PREREQUISITE: Art 2321 or permission of instructor.
- 4322. Drawing and Painting. (3).**
A continuation of Art 4321 with attention given to various mixed media. PREREQUISITES: Art 2321 and 4321 or permission of instructor.
- 4331. Painting. (3).**
A consideration of advanced problems in oil painting, presupposing that the student has mastered basic techniques and is ready for a more experimental approach to the subject. PREREQUISITES: Art 3331 and 3332, or the permission of the instructor.
- 4332. Painting. (3).**
A continuation of Art 4331 with emphasis on the development of a personal style. PREREQUISITES: Art 3331, 3332, and 4331, or permission of the instructor.
- 4341. Illustration. (3).**
A survey of the many areas requiring the services of an illustrator and including the preparation of book, magazine, advertising, and television illustrations.
- 4342. Illustration. (3).**
A continuation of Art 4341, dealing with analysis of fine art techniques of drawing and painting as they apply to commercial illustration.
- 4351. Printmaking. (3).**
Specialization in one or two graphic media. Students are encouraged to develop a personal imagery and the necessary technical abilities. PREREQUISITES: Art 2351, 3351, and 3352, or permission of the instructor.
- 4352. Printmaking. (3).**
The culminating course in the graphic arts in which work may be done in woodcut, etching, or lithography. PREREQUISITES: Art 2351, 3351, 3352, and 4351, or permission of the instructor.
- 4380. Museology. (3). (Same as Anthropology 4380).**
The history and development of museums; mandate and variety of institutions; significant research facilities; historical and contemporary collections, and the educational roles of museums in contemporary society.
- 4381. Art Curatorial Techniques. (3).**
Concentrates on curatorial responsibilities and functions: receiving and shipping methods, registration, physical and environmental security, research, conservation, and a study of the art market and publications.
- 4382. Museum Operation. (3). (Same as Anthropology 4382).**
Basic aspects of museum organization, management, exhibit planning and execution, and maintenance of collections and records.
- 4421. Materials and Methods In Teaching Secondary School Art. (3).**
(SAME as Education 3321)
Designed to aid future art teachers in understanding adolescent art expression and in preparing art teaching materials for the secondary school art program. PREREQUISITES: Art 3421 and 3424, or permission of the instructor.
- 4424. Textiles in the Secondary Art Program. (3).**
The place of textiles and textile designing in secondary school art program, including work with equipment, supplies, processes, and ideas basic to a comprehensive textile craft course. PREREQUISITE: Art 3411, or permission of the instructor.
- 4511. Sculpture. (3).**
Advanced work in various sculptural media. PREREQUISITES: Art 2511, 3511, and 3512, or permission of the instructor.
- 4512. Sculpture. (3).**
A continuation of Art 4511 with emphasis upon personal expression. PREREQUISITE: Art 4511 or permission of the instructor.
- 4521. Ceramics. (3).**
Advanced studies in ceramic process and technique. Concentration will be on the development of personal attitudes toward work.

- 522. Ceramics. (3).**
Continued efforts toward technical competence and the production of ceramic objects reflective of genuinely personal involvement.
- 531. Jewelry. (3).**
Jewelry-making with emphasis on materials and equipment. The nature and possibilities of metals, stones and other materials are investigated in terms of good jewelry design. Basic projects in enameling, soldering, pickling, buffing, and other techniques.
- 532. Jewelry. (3).**
A second course in jewelry-making and metalwork. Study and practice in good design. Work done in lost wax casting, champleve, cloissonne, and combinations of materials.
- 551. Working Drawings and Professional Practice. (3).**
Detailing of interior construction and scheduling of finishes. PREREQUISITE: Art 3232, or permission of the instructor.
- 4552. Working Drawings and Professional Practice. (3).**
A continuation of Art 4551. PREREQUISITE: Art 4551, or permission of the instructor.
- 4611. Senior Problems. (3).**
Original research in the student's area of concentration, the extent of the project to be approved by the art faculty.
- 4621. Workshop in Art. (3).**
The study of specific art problems as they apply to the individual student with emphasis on basic art concepts and creative experience. PREREQUISITE: permission of the instructor.
- 4622. Workshop in Art. (3).**
A continuation of Art 4621, providing study of problems appropriate to the need of the individual student. PREREQUISITE: permission of the instructor.
- 4641. Study and Travel in Art. (3 or 6).**
Travel to important art areas of the world and specialized study under the direction of a faculty member of the Department of Art.

BIOLOGY

PROFESSOR CARL DEE BROWN, *Chairman*

201B, Life Science Building

requirements for the major and minor in biology are listed on page 62. Information concerning pre-professional curricula will be found on page 47. The program for the degree of Bachelor of Science in Medical Technology is outlined on page 61.

ADVANCED PLACEMENT

Beginning freshmen who have completed an advanced biology course in high school may apply to the chairman of the Department of Biology, during the semester preceding enrollment, for advanced placement.

- 01. Introduction to Biology. (3).**
An introductory survey of biology, with emphasis on the animal kingdom, designed for non-science majors. Credit in this course is not acceptable for the biology major or in related pre-professional curricula. Credit not allowed for both Biology 1001 and 1600.
Two lecture, two laboratory hours per week.
- 02. Introduction to Biology. (3).**
A continuation of Biology 1001, with emphasis on the plant kingdom. Credit in this course is not acceptable for the biology major or in the pre-professional curricula. Credit not allowed for both Biology 1002 and 1200.
Two lecture, two laboratory hours per week.
- 03. General Plant Biology. (4).**
A survey of the plant kingdom considering distribution, taxonomic relationships, morphology, physiology, and economic importance of selected forms.
Three lecture, three laboratory hours per week.
- 04. Microbiology. (4).**
A course designed to meet the requirements of student nurses and majors in the Department of Health, Physical Education, and Recreation.
Three lecture, two laboratory hours per week.
- 05. General Animal Biology. (4).**
A survey of the animal kingdom, considering distribution, taxonomic relationships, morphology, physiology, and economic importance of selected forms.
Three lecture, three laboratory hours per week.
- 1631. Human Anatomy and Physiology. (3).**
A study of the structure and function of the human organism, designed primarily for majors in the Department of Health, Physical Education, and Recreation.
Two lecture, two laboratory hours per week.
- 1632. Human Anatomy and Physiology. (3).**
A continuation of Biology 1631, designed primarily for majors in the Department of Health, Physical Education, and Recreation. PREREQUISITE: Biology 1631 or the equivalent.
Two lecture, two laboratory hours per week.
- 1731. Anatomy and Physiology. (4).**
A detailed study of the structure and functions of the human organism.
Three lecture, two laboratory hours per week.
- 1732. Anatomy and Physiology. (4).**
A continuation of Biology 1731. PREREQUISITE: Biology 1731 or the equivalent.
Three lecture, two laboratory hours per week.
- 2000. Fundamental Concepts of Biology. (3).**
An expansion of and an elaboration on basic biological concepts introduced in Biology 1200 and Biology 1600. Topics of discussion to include cell structure, cell function, reproduction, genetics, evolution, and ecology. Both unifying and comparative in nature. Required of all majors in biology. PREREQUISITES: Biology 1200 and Biology 1600 or their equivalents and corequisite Chemistry 1112 or the equivalent.
- 2001. Elements of Biology. (3).**
A study of the basic concepts of animal and plant life. (This course, designed for students in The College of Education seeking certification in elementary education, will not satisfy science requirements for degrees in other colleges of the University.)
Two lecture, two laboratory hours per week.
- 2002. Natural History and Bio-Conservation. (3).**
Emphasis is placed on plants and animals in their environment, the use of field work in teaching elementary science, and the study of ecologi-

cal principles related to bio-conservation. (This course, designed for students in The College of Education seeking certification in elementary education, will not satisfy science requirements for degrees in other colleges of the University.) PREREQUISITE: Biology 2001.

Two lecture, two laboratory hours per week.

Completion of both Biology 1200 and Biology 1600 shall be required before enrolling in any course numbered 3000 or above, acceptable for a major or minor.

3030. Principles of Animal Physiology. (4).

Basic concepts of animal function, including the study of many invertebrate phyla and most classes of vertebrate organisms. PREREQUISITE: 8 hours of animal biology or the equivalent and corequisite: Chemistry 3311.

Two lecture, four laboratory hours per week.

3050. General Ecology. (4).

The study of plant and animal communities in relation to their environment. PREREQUISITES: Biology 1200 and 1600, or the equivalent.

Two lecture, four laboratory hours per week.

3070. Genetics. (4).

A study of the principles of heredity, including laboratory experiments in *Drosophila* breeding. PREREQUISITES: Biology 1200, 1600 and 2000 or the equivalent.

Three lecture, three laboratory hours per week.

3100. History of Biology. (3).

The development of the science of biology, considering the work of outstanding biologists and the influence of their contributions. PREREQUISITE: 16 semester hours in biology, or permission of the instructor.

3170. Heredity. (3).

The principals of heredity with applications to human problems, designed for non-science majors and recommended for students who desire a better understanding of heredity and eugenics. Not acceptable as credit toward a biology major or minor.

3220. General Plant Anatomy. (4).

A comparative study of the development and structure of roots, stems, and leaves in flowering plants. PREREQUISITE: Biology 1200 or equivalent.

Two lecture, four laboratory hours per week.

3221. Plant Morphology. (4).

Comparative studies of general structure of lower plants, through the bryophytes. PREREQUISITE: Biology 1200 or the equivalent.

Two lecture, four laboratory hours per week.

3222. Plant Morphology. (4).

A continuation of Biology 3221, considering the vascular plants. PREREQUISITE: Biology 1200 or the equivalent.

Two lecture, four laboratory hours per week.

3240. Field Botany. (4).

Observation, classification, and mounting of representative specimens of flowering plants in the Memphis area. PREREQUISITE: Biology 1200 or the equivalent.

Two lecture, four laboratory hours per week.

3400. The Relation of Microorganisms to Man. (3).

The nature and activities of the microorganisms as they affect the welfare of man; some time is devoted to the pathogens—etiology and trans-

mission of diseases, immunity, and other factors bearing upon the health of the individual and the community. Designed for non-science major. Credit not allowed for both 3400 and 3500. Not acceptable as credit toward a Biology major or minor.

3500. General Microbiology. (5).

A general course dealing with the fundamentals of bacteriology. PREREQUISITE: Biology 2000 or equivalent.

Three lecture, four laboratory hours per week.

3560. Applied Microbiology. (4).

An introduction to the microbiology of water, soil, air, food, sewage, industrial processes, and pathogens. PREREQUISITE: Biology 3500 or equivalent.

Two lecture, four laboratory hours per week.

3600. Ornithology. (4).

A study of the habitats, migrations, nesting habits and classification of birds. Field trips for recognition of the more common local birds will be organized as needed. PREREQUISITE: Biology 1600, or the equivalent.

Two lecture, four laboratory hours per week.

3610. Vertebrate Embryology. (4).

The development of selected vertebrate embryos from the fertilized egg cell. PREREQUISITE: Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

3620. Comparative Anatomy of Vertebrates. (5).

The origin, development, structure, and function of the organs and systems of selected forms of vertebrates. PREREQUISITE: Biology 1600, or the equivalent.

Two lecture, six laboratory hours per week.

3630. The Physiology of Exercise. (3).

The anatomy and physiology of muscular movement. PREREQUISITES: Biology 1631 and 1632 or the equivalent.

Three lecture-demonstration hours per week.

3700. Vertebrate Zoology. (4).

A study of the life histories, adaptations, ecology, distribution behavior, and classification of vertebrates. PREREQUISITE: Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

3730. Human Physiology. (4).

A study of the normal functions of the human body. PREREQUISITE: Biology 1600 or equivalent.

Three lecture, two laboratory hours per week.

3800. Parasitology. (4).

Distribution, morphology, life history, economic importance, and control of some of the parasites of man and domestic animals, Protozoa through helminths. PREREQUISITE: Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

3900. General Entomology. (4).

An introduction to the insects with emphasis on morphology, physiology, development, behavior and ecology. PREREQUISITE: Biology 1600 or the equivalent.

Three lecture, two laboratory hours per week.

3940. Systematic Entomology. (4).

Classification of the insects, the interpretation and use of keys, and the preparation of a representative collection. Extended field trips to be arranged. PREREQUISITE: Biology 1600 or the

equivalent.

Two lecture, four laboratory hours per week.

960. Medical Entomology. (4).

Distribution, morphology, life history, medical importance, and control of some of the insects and other arthropods which serve as vectors for disease-producing organisms. PREREQUISITE: Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

965. Pest Control. (4).

Recognition, life history, habits, and control of insect pests attacking stored grain, wood, fabrics, food products and animals. Also included will be studies of some non-insect pests, such as noxious birds, rodents, and snakes. PREREQUISITES: Biology 1200 and 1600 or permission of the instructor.

Two lecture, four laboratory hours per week.

000. Problems in Biology. (2 to 4).

Individual problems pursued by qualified students under supervision of a member of the biology faculty, designed to develop interest and proficiency in biological research.

050. Field Technique in Ecology. (4).

A field technique course of applied ecology covering practical training in forest, field, aquatic, and atmospheric sampling and analysis. Extended field trips will be arranged. PREREQUISITES: Biology 2000 and consent of instructor.

Two lecture, four laboratory hours per week.

060. 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. PREREQUISITES: Biology 1600 and one year of chemistry.

Two lecture, four laboratory hours per week.

80. Radiation Biology. (3).

The origin and characteristics of ionizing radiations with a detailed discussion of radiation effects upon life processes from the molecular to the ecosystem level. PREREQUISITES: Chemistry 3311 or 3312; Biology 3070.

Two lecture, two laboratory hours per week.

00. Organic Development. (3).

The consideration of theoretical and scientific evidences concerning the origin, development, and establishment of the major groups of living and extinct animals and plants. Recommended for biology majors and general students as well. PREREQUISITE: One year of biology.

30. Cell and Molecular Biology. (4).

An introduction to the principles of molecular biology including discussions of ultrastructure, intracellular metabolism, gene structure and function, and cell differentiation. PREREQUISITES: Biology 2000 or its equivalent, Biology 3070, and Chemistry 3312.

Two lecture, four laboratory hours per week.

50. Histological Techniques. (4).

A study of the methods of preparing plant and animal materials for microscopic study; theories of staining and preparation of permanent mounts. PREREQUISITE: Biology 2000 or the equivalent or consent of instructor.

One lecture, six laboratory hours per week.

4225. Mycology. (4).

A study of the basic life cycles, morphology and classification of fungi. Consideration of the interaction of fungal organisms in the environment. PREREQUISITE: Biology 2000, or the equivalent or consent of instructor.

Two lecture, four laboratory hours per week.

4226. Phycology. (4).

A systematic and comparative study of the morphology and reproduction of algae with emphasis on the fresh water forms. Selected topics on algal genetics, algal physiology, and pollution will be included. PREREQUISITE: Biology 2000, or the equivalent or consent of instructor.

Two lecture, four laboratory hours per week.

4231. Plant Physiology. (4).

A study of the principles of physiology and their application to the lower plant groups, exclusive of the bacteria and related forms. PREREQUISITE: Biology 2000 or its equivalent.

Two lecture, four laboratory hours per week.

4232. Plant Physiology. (4).

Principles of physiology and their application to the living organism, with emphasis on higher plants. PREREQUISITE: Biology 2000 or the equivalent.

Two lecture, four laboratory hours per week.

4240. Plant Taxonomy. (4).

Principles of plant taxonomy, with special attention given to the classification of selected vascular plant families. PREREQUISITE: permission of the instructor.

Lectures, laboratory hours, and field trips.

4250. Ecology of Forests and Arable Lands. (4).

Developmental and structural analysis of forest types from arable lands. Regional silviculture in the United States. Autecology of important species. Field trips to be arranged. PREREQUISITE: Biology 3050, or permission of the instructor.

Three lecture, two laboratory hours per week.

4400. Advanced Microbiology. (4).

Advanced theory and principles of microbiology with emphasis on morphology and bacterial metabolism. PREREQUISITES: Biology 3500 and one year of introductory biology, one year of inorganic chemistry, with organic chemistry desirable.

Two lecture, four laboratory hours per week.

4440. Pathogenic Bacteriology. (4).

A consideration of the pathogenic bacteria, the diseases caused by them, and methods for diagnosis of such diseases. Considerable attention is also given to methods for the identification of the pathogenic bacteria. PREREQUISITE: Biology 3500, with organic chemistry desirable.

Two lecture, four laboratory hours per week.

4444. Immunology. (4).

A study of *in vitro* and *in vivo* reactions of antigens and antibodies, hypersensitivities, blood groups and vaccines. PREREQUISITES: Biology 3500 and Chemistry 3311.

Two lecture, four laboratory hours per week.

4460. Sanitary Bacteriology. (4).

A study of microorganisms in relation to water and sewage; disinfection and disinfectants. PREREQUISITE: Biology 3500 or consent of the instructor.

Two lecture, four laboratory hours per week.

4560. Microbiology of Foods. (4).

Microorganisms in natural and processed foods; origins, nature, and effects on foods; enumeration, and the relation to health. PREREQUISITE: Biology 3500 or consent of the instructor.

Two lecture, four laboratory hours per week.

4604. Ethology. (4).

A study of animal behavior with emphasis on recent developments in the field, including history of ethology, learning, releasers, communication, orientation, instinct, biological clocks, and evolution of behavior. PREREQUISITE: Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

4620. Vertebrate Histology. (4).

Microscopic study of normal tissues and organs of the vertebrate body. PREREQUISITE: Biology 3620 or 3730.

Two lecture, four laboratory hours per week.

4630. General Endocrinology. (3).

Anatomy and physiology of the organs of internal secretion; role of hormones in metabolism and development. PREREQUISITE: Biology 3730.

4640. Field Zoology. (4).

Field study of the identification, life history, and habitat of the animals of this locality; birds and insects are omitted. PREREQUISITE: 8 semester hours of biology, including Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

4644. Ichthyology. (4).

Collection, preservation, identification, life histories, management, and economic importance of fishes. PREREQUISITE: Biology 1600.

Two lecture, four laboratory hours per week.

4720. Vertebrate Neurology. (4).

A study of the nervous system of selected vertebrates. PREREQUISITE: Biology 1600 or permission of instructor.

Three lecture, two laboratory hours per week.

4740. Mammalogy. (4).

Classification, distribution, life histories, economic importance, techniques of field study, methods of collection and preservation of mammals. PREREQUISITE: Biology 3620.

Two lecture, four laboratory hours per week.

4744. Herpetology. (4).

Classification, distribution, life histories, techniques of collection and preservation, natural habitats of North American reptiles and amphibians. PREREQUISITE: Biology 1600.

Two lecture, four laboratory hours per week.

4760. Wildlife Management. (4).

Distribution, identification, population analysis, game mapping techniques, and management of wildlife. PREREQUISITES: Biology 3050 and one

of the following: Biology 3600, 4640, 4644, 4740, 4744.

Two lecture, four laboratory hours per week.

4840. Invertebrate Zoology. (4).

The invertebrate animals, exclusive of the insects with special attention given to phylogeny, organology, and taxonomy. PREREQUISITE: Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

4901. Field Technique in Entomology. (4).

A course devoted to the study of field techniques used in aquatic entomology and larval taxonomy. PREREQUISITES: Biology 1200 and 1600 or their equivalents, and permission of instructor.

Two lecture, four laboratory hours per week.

4920. Insect Morphology. (4).

A study of the form and structure of insects, considering both external and internal morphology. PREREQUISITE: Biology 1600, or the equivalent.

Two lecture, four laboratory hours per week.

4930. Insect Physiology. (4).

A study of physiology as applied to the life processes of insects. PREREQUISITE: Biology 2000 or the equivalent.

Two lecture, four laboratory hours per week.

4940. Aquatic Entomology. (4).

A survey of the orders of insects having aquatic and/or semiaquatic members with primary emphasis on their classification and secondary emphasis on their biologies, habitats, etc. A collection is required. PREREQUISITES: Biology 3900 and 3940, or permission of the instructor.

Two lecture, four laboratory hours per week.

(The following courses, offered in The Graduate School are open to undergraduates within 36 semester hours of graduation. None of these courses carries graduate credit nor is applicable to any degree offered in The Graduate School.)

5100. Instrumentation. (2).

A consideration of recent development in biological techniques which may be applied to the study of living organisms.

5330. Intermediary Plant Metabolism. (3).

A detailed study of the metabolism of carbohydrates, fats and nitrogen compounds in higher plants. PREREQUISITES: Biology 2000, or equivalent and chemistry 3312 or equivalent, or permission of instructor.

5840. Protozoology. (4).

A survey of the free living and parasitic protozoa with consideration given to structure, taxonomy, habitat, and life history. PREREQUISITE: Biology 1600 or the equivalent.

Two lecture, four laboratory hours per week.

Graduate courses in Biology: For course description and further details of the graduate program, see The Bulletin of The Graduate School.

BUSINESS ADMINISTRATION

PROFESSOR HERBERT J. MARKLE, *Dean*

Room 432, The College of Business Administration Building

3900. Study and Travel in Business and Economics. (3).

Travel to important areas of the world and con-

duct study of economic and business systems of selected countries under the direction of the faculty of the College of Business Administration

4000. Internship in International Business. (1-6).

A study of the practical operations of international business. Students will be placed for a 1-8 month period with one of the cooperating business firms operating in the fields of international banking and finance, transportation, management, marketing, or accounting. Academic credit will be granted upon certification or satisfactory performance by the cooperating business firm and upon the acceptance by the faculty of a written research report by the student.

4900. Practicum in Research. (1-3).

A variable-credit course designed to expose the student to actual problem-solving research activities in business and economics: Each student is assigned to a project that is either being conducted currently by a faculty member or one that is developed under the supervision of a faculty member. Whenever possible, the project will be within the student's major field of study. **PREREQUISITE:** Senior status.

CHEMISTRY

PROFESSOR JAMES C. CARTER, *Chairman*

Room 210, J. M. Smith Hall

The Department of Chemistry offers courses leading to the B.S. degree with a major in either chemistry or physical science. Details of these programs are listed on p. 56. The Department also offers a program culminating in the professional degree of Bachelor of Science in Chemistry, for which details are outlined on p. 57. This program is designed to meet the requirements of the Committee on Professional Training of the American Chemical Society, and is undertaken primarily by students who desire to go directly to positions in chemical industry, or to enroll for postgraduate study in chemistry. Information concerning pre-professional curricula is found on p. 47. The program leading to the degree of Bachelor of Science in Medical Technology is outlined on p. 61.

SEQUENCE OF COURSES

Students who present credit for at least two years of high school mathematics (including algebra), or who have an ACT mathematics score of 22 or better, should enroll in Chemistry 1111 if they plan to take more than one year of college chemistry, or plan to major in either a natural science or in civil, mechanical, or electrical engineering. Chemistry 1100 is a one-semester course designed for those students of limited preparation in mathematics whose curriculum calls for the Chemistry 1111-1112 sequence. Chemistry 1051-1052 is a two-semester sequence designed for students interested in the science of chemistry and its impact on modern society. This sequence is not credited toward a major in chemistry or physics but contributes to fulfilling the University science requirements of other majors. It is normally undertaken by those who require only one year of chemistry in satisfying their degree requirement. Credit may not be received for both Chemistry 1100 and Chemistry 1111 simultaneously. Physical Science 1031-1032 is an introductory sequence requiring no previous science experience. These courses emphasize fundamental principles and concepts, and are designed for non-science majors interested in a study of several areas of physical science.

ADVANCED PLACEMENT

Beginning students who have had previous high school training in chemistry are invited to apply for advanced placement.

000. Chemistry of Life Processes. (4).

An introduction to chemistry as related to the understanding of life processes. The implications of topics from general and organic chemistry, as well as biochemistry, are examined. *This course will not be credited toward a major in chemistry, physics, physical science, or engineering, nor*

does it satisfy the general education science requirement.

Three lecture, two laboratory hours per week.

1051. College Chemistry. (4).

A course designed for students interested in the science of chemistry and its impact on modern society, but who expect to take only two semesters of chemistry. *This course will not be credited toward a major in chemistry or physics.*

Three lecture, two laboratory hours per week.

1052. College Chemistry. (4).

A continuation of Chemistry 1051. *This course will not be credited toward a major in chemistry or physics.* **PREREQUISITE:** Chemistry 1051.

Three lecture, two laboratory hours per week.

1100. Introduction to Chemistry. (3).

Designed for students whose curriculum requires Chemistry 1111, but who feel that their background is inadequate. Emphasis is placed on scientific calculations and the properties of matter. *This course will not be credited toward a major in chemistry, physics, physical science, or engineering, nor does it satisfy any part of the science requirement for any degree.* **COREQUISITE:** Mathematics 1211 or 1212 is recommended.

One recitation, two lectures hours per week.

1111. Principles of Chemistry. (4).

A basic course in chemistry designed 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. **PREREQUISITE:** Two units of high school mathematics including algebra, or an ACT score of 22 or better on the mathematics section, or Chemistry 1100. **COREQUISITE:** Mathematics 1211, 1212, or 1321.

Three lecture, three laboratory hours per week.

1112. Principles of Chemistry. (4).

A continuation of Chemistry 1111. **PREREQUISITE:** Chemistry 1111.

Three lecture, three laboratory hours per week.

3200. Chemical Equilibrium and Electrochemistry. (2).

A study of acid-base, solubility, complexation equilibria including activity effects, electrochemistry, and electroanalytical chemistry. Emphasis is placed upon modern methods of problem solving. **COREQUISITE:** Chemistry 3411.

Two lecture hours per week.

3301. General Organic Chemistry Laboratory. (1).

Designed to accompany Chemistry 3311. Emphasis is placed on laboratory techniques as

applied to synthesis and class reactions. **PREREQUISITE:** Chemistry 1112. **COREQUISITE:** Chemistry 3311.

Three laboratory hours per week.

3302. General Organic Chemistry Laboratory. (1).

A continuation of Chemistry 3301, with emphasis on the correlation of chemical behavior with structure. **PREREQUISITE:** Chemistry 3311 and 3301; **COREQUISITE OR PREREQUISITE:** Chemistry 3312.

Three laboratory hours per week.

3311. General Organic Chemistry. (3).

A systematic study of the preparations and properties of organic compounds, including interpretations based on modern theories of organic chemistry. Particular emphasis is placed on aliphatic and aromatic hydrocarbons, their halogen derivatives, and alcohols. **PREREQUISITE:** Chemistry 1112.

Three lecture hours per week.

3312. General Organic Chemistry. (3).

A continuation of Chemistry 3311, with emphasis on the more important functional derivatives of aliphatic and aromatic hydrocarbons. **PREREQUISITE:** Chemistry 3311.

3400. Chemical Analysis. (4).

A treatment of the theory and practice of modern chemical analysis. Topics include acid-base, redox and complex ion equilibria, separation techniques, absorption spectrophotometry and electroanalytical methods. **PREREQUISITE:** Chemistry 3311.

Two lecture, six laboratory hours per week.

3401. Elementary Physical Chemistry. (4).

An abbreviated course in physical chemistry. Topics include elementary thermodynamics, phase transitions, solution chemistry, electrochemistry, kinetics, colloidal and surface chemistry, and molecular polarity. (Credit in this course is superseded by credit in Chemistry 3411). **PREREQUISITES:** Chemistry 3311 and Physics 2112 or 2512.

Three lecture, three laboratory hours per week.

3411. Physical Chemistry. (3).

Thermochemical foundations of physical chemistry applied to open and closed systems, kinetic theory of gases, and surface chemistry. **PREREQUISITE:** Physics 2112 or 2512; Mathematics 2321.

Three lecture hours per week.

3412. Physical Chemistry. (3).

A continuation of Chemistry 3411 emphasizing kinetics of chemical reactions, quantum chemistry, chemical bonding, statistical mechanics, spectroscopy, and other methods of structure determination. **PREREQUISITE:** Chemistry 3411.

Three lecture hours per week.

3601. Identification of Compounds. (1-3).

Identification and separation of compounds, with emphasis on the various forms of spectroscopy and gas chromatography. Designed as a three-credit unit for students in the professional degree program, the course can be taken for reduced credit with the consent of the department chairman by those transferring into this degree program. **PREREQUISITE:** Chemistry 3301. **COREQUISITE:** Chemistry 3312.

One lecture, six laboratory hours per week.

3602. Physical Measurements. (1-3).

An introduction to quantitative measurement and data handling leading to intensive properties such as standard electrode potential, equilibrium constant, molecular weight, paramagnetic moment etc. Designed as a three-credit unit for students in the professional degree program, the course can be taken for reduced credit with the consent of the department chairman by those transferring into this degree program. **COREQUISITES:** Chemistry 3411, 3200.

Nine laboratory hours per week:

3603. Synthesis, Characterization, and Dynamics. (1-3).

A laboratory for advanced students featuring a limited number of in-depth experiments involving product synthesis and identification, methods of reaction rate measurements, trace analysis, and digital electronics. Designed as a three-credit unit for students in the professional degree program, the course can be taken for reduced credit with the consent of the department chairman, by those transferring into this degree program. **COREQUISITES:** Chemistry 3412, 4220.

Nine laboratory hours per week.

4001. Environmental Chemistry. (3).

An examination of the chemical phenomena occurring in the soil, the atmospheric and the aquatic environments: Emphasis will be placed on the interaction of man and his surroundings. *This course may not be counted toward a major in chemistry.* **PREREQUISITE:** Jr. standing and two semesters of natural science.

Three lecture hours per week.

4111. Inorganic Chemistry. (3). (Formerly Chemistry 4210).

A survey of the theoretical and applied inorganic chemistry. Stress is placed on the relationship of structure and bonding to the properties of elements and compounds. Topics include introductory molecular orbital theory, coordination compounds and organometallics, ligand field theory, nonaqueous solvent systems, and reaction mechanisms. **PREREQUISITE:** Chemistry 3412, or permission of instructor.

Three lecture hours per week.

4199. Special Topics in Inorganic Chemistry. (1-6).

Selected topics of current interest to undergraduates pursuing the B.S. degree. May be repeated for a maximum of 6 semester hours credit. **PREREQUISITE:** Chemistry 4111.

4220. Instrumental Methods. (2).

Advanced topics in electrometric, spectrometric, and chromatographic methods of collection and interpretation of data, and introduction to electronic and optical principles of chemical instrumentation, including automatic data acquisition. **PREREQUISITE:** Chemistry 3200 or permission of instructor.

Two lecture hours per week.

4299. Special Topics in Analytical Chemistry. (1-3).

Selected topics of current interest to undergraduates pursuing the B.S. degree. May be repeated for a maximum of 6 semester hours credit. **PREREQUISITE:** Chemistry 4220.

4399. Special Topics in Organic Chemistry. (1-3).

Selected topics of current interest to undergraduates pursuing the B.S. degree. May be repeated for a maximum of 6 semester hours credit. **PREREQUISITE:** Chemistry 3412.

4499. Special Topics in Physical Chemistry. (1-3).

Selected topics of current interest to undergraduates pursuing the B.S. degree. May be repeated for a maximum of 6 semester hours credit. PREREQUISITE: Chemistry 3412.

4511. Biochemistry. (4).

Chemistry of amino acids and proteins as related to their properties in biochemical systems. Enzymology, including kinetics and conformation studies. Coenzymes and their functions. The chemistry of carbohydrates, lipids and nucleotides. PREREQUISITE: Chemistry 3312.

Three lecture, two laboratory hours per week.

4512. Biochemistry. (4).

A continuation of Chemistry 4511. Metabolism of carbohydrates, amino acids and nucleotides. Biochemistry of DNA and RNA, including their relationship to the biosynthesis of proteins. Metabolic control. PREREQUISITE: Chemistry 4511.

Two lecture, four laboratory hours per week.

4599. Special Topics in Biochemistry. (1-3).

Selected topics of current interest to undergraduates pursuing the B.S. degree. May be repeated for a maximum of 6 semester hours credit. PREREQUISITE: Chemistry 3412.

4611. Radioisotope Techniques. (3).

An elementary course dealing principally with interaction of radiation with matter, the detection of radiation, instrumentation, and the application of tracers. *This course will not be credited toward a major in Chemistry.* PREREQUISITE: Chemistry 1052 or Chemistry 1112.

Two lecture, three laboratory hours per week.

4900. Chemical Literature. (1).

Use of the chemical literature and the writing of technical reports. PREREQUISITE: Permission of instructor.

One lecture hour per week.

4910. Seminar. (1).

Special projects, reports and investigation of current chemical literature. PREREQUISITE: Chemistry 4900.

One lecture hour per week.

4991. Chemical Research. (1).

(See description under Chemistry 4993.)

4992. Chemical Research. (2).

(See description under Chemistry 4993.)

4993. Chemical Research. (3).

An introduction to basic research. The student collaborates with a staff member on a problem of mutual interest selected from the fields of analytical, inorganic, organic, and physical chemistry, and biochemistry. The student gains experience in effective laboratory techniques, critical experiment design, and scientific reporting. To receive credit toward a major in chemistry the student must complete three semester hours in these research courses. PREREQUISITE: Chemistry 4220.

Three to nine laboratory hours per week.

PHYSICAL SCIENCE

1031. Physical Science. (3).

An introductory course, with emphasis on the fundamental principles and concepts of physical science.

Two lecture, two laboratory hours per week.

1032. Physical Science. (3).

A continuation of Physical Science 1031. PREREQUISITE: Physical Science 1031 or its equivalent.

Two lecture, two laboratory hours per week.

4050. Glass Manipulation. (2).

A laboratory course in the fundamentals of glass manipulation and the construction and repair of simple laboratory apparatus. PREREQUISITE: Senior standing:

Six laboratory hours per week.

4070. Physical Science for Elementary and Secondary School Teachers. (3).

A study of the fundamental principles and concepts of physical science and their relationship to the understanding and teaching of science in the public schools.

Three lecture hours and laboratory experiments per week.

4071. Physical Science for Elementary and Secondary School Teachers. (3).

A continuation of Physical Science 4070. PREREQUISITE: Physical Science 4070.

Three lecture hours and laboratory experiments per week.

Graduate courses in Chemistry and Physical Science: For course descriptions and further details of the graduate program, see The Bulletin of the Graduate School.

CIVIL ENGINEERING

PROFESSOR THOMAS S. FRY, *Chairman*

Room 104A, Engineering Building

Requirements for the B.S. in Civil Engineering are listed on page 95.

2131. Statics. (3).

Analysis of two and three dimensional systems; centroids and moment of inertia; friction. CO-REQUISITE: Physics 2511.

Three lecture hours per week.

3100. Engineering in the Environment. (4).

A general study of man's role in preserving the environment. Included is general characteristics, treatment, and protection of water supplies; basic waste disposal practices (solid, liquid, and air);

and general and public health engineering. Laboratory consists of experiments, field trips and demonstrations. For non-majors only. PREREQUISITE: Twenty hours.

Three lecture, two laboratory hours per week.

3101. Computer Methods in Civil Engineering. (3).

Algorithmic approach to digital computation; iterative and logical methods; analog computations for distributive systems; civil engineering applications. PREREQUISITES: Engineering 1011; Mathematics 3391.

Three lecture hours per week.

3111. Field Measurements. (3).

Principles of field measurements; earthwork calculations; alignment of curves; error analysis. PREREQUISITE: Engineering 1011; Mathematics 2321.

Two lecture, three laboratory hours per week.

3121. Structural Analysis I. (3).

Statically determinate structural systems; analytical and numerical solutions; influence lines; deflection analysis. PREREQUISITE: Civl. 2131.

Three lecture hours per week.

3131. Design of Steel Structures. (3).

Current design concepts for structural steel members and their connections; introduction to plastic design. PREREQUISITE: Civl. 3121.

Two lecture, three laboratory hours per week.

3135. Properties of Concrete. (3).

Study of aggregates, aggregate beneficiation, properties of portland cement, mix design, testing of plain concrete, testing reinforced concrete, testing prestressed concrete, quality control of concrete and statistical methods for evaluating concrete test data. PREREQUISITE: Mech. 3322.

Two lecture, three laboratory hours per week.

3136. Bituminous Materials Engineering. (3).

Source, manufacture, processing, types, constituents, tests, chemical behavior, specifications and uses of bituminous materials and aggregates in pavement mix design and construction. PREREQUISITE: Mech 3322.

Two lecture, three laboratory hours per week.

3141. Engineering Economics. (3).

Application of economics and decision theory to engineering alternatives in planning, developing, constructing, and managing engineering projects. PREREQUISITE: Senior standing in engineering.

Three lecture hours per week.

3200. Transportation in the Urban Environment. (4).

A general study of the factors affecting the development, operation and maintenance of Urban Transportation Systems. Includes such topics as demand, economics, design principles, and impact of alternative systems. Course not open to Civil Engineering majors. PREREQUISITE: 30 hrs.

Three lecture, two laboratory hours per week.

4121. Structural Analysis II. (3).

Analytical and numerical solutions for statically indeterminate structures. PREREQUISITE: Civl. 3121.

Three lecture hours per week.

4131. Intermediate Steel Design. (3).

Design of plate girders and composite beams; moment connections; building design. PREREQUISITE: Civl. 3131.

Two lecture, three laboratory hours per week.

4135. Reinforced Concrete Design. (4).

Straight-line and ultimate strength analysis for reinforced concrete members; floor systems; introduction to prestressed concrete. PREREQUISITE: Civl. 3121.

Three lecture, three laboratory hours per week.

4136. Intermediate Reinforced Concrete Design. (3).

Design of two-way slab systems; integrated building design using current code provisions. PREREQUISITES: Civl. 4121, 4135.

Two lecture, three laboratory hours per week.

4141. Hydrology and Water Supply. (3).

Hydrology of ground and surface water; water

quality and treatment; hydraulic networks; water supply and distribution systems. PREREQUISITE: Mech. 3331.

Three lecture hours per week.

4142. Unit Operations and Processes in Environmental Engineering. (3).

Operations and processes in water and waste treatment; including sedimentation, coagulation, neutralization, filtration, adsorption, biological treatments, softening and other techniques.

Three lecture hours per week.

4145. Waste Treatment. (4).

Collection of wastes; physical, chemical, and biological treatment of wastes; air pollution control; solid waste disposal. PREREQUISITE: Senior standing.

Four lecture hours per week.

4146. Environmental Engineering Analysis. (3).

Quantitative measurements and bench scale pilot plant studies in the fields of water, sewage, industrial waste and stream pollution, interpretation and application of test data. PREREQUISITE: Civl. 4145, or consent of instructor.

One lecture, six laboratory hours per week.

4147. Environmental Engineering Design. (3).

The design of a water and waste treatment plant. The student's background as well as accepted design criteria will be utilized. PREREQUISITE: Senior standing or consent or instructor.

Two lecture, three laboratory hours per week.

4151. Soil Mechanics. (4).

Physico-chemical basis of soil structure; identification and classification; permeability, compressibility, and shear strength. PREREQUISITES: Mech. 3322, 3331.

Three lecture, three laboratory hours per week.

4152. Applied Soil Mechanics. (3).

Applications of theory to the design of building foundations, retaining walls, and hydraulic structures. PREREQUISITE: Civl. 4151.

Three lecture hours per week.

4161. Transportation Systems Engineering. (3).

Development and function of transportation systems; operational control and characteristics; system coordination; traffic flow and patterns. PREREQUISITE: Senior standing in Civil Engineering.

Three lecture hours per week.

4162. Traffic Engineering. (3).

The study of the 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: Approval of instructor

4164. Advanced Surveying. (3).

Elements of route location and design with emphasis on horizontal and vertical alignment, curvature, gradient and sight distance. PREREQUISITE: Civil Engineering 3111.

Two lecture, three laboratory hours per week.

4191. Civil Engineering Projects I. (1-3).

Independent investigation of a Civil Engineering problem in consultation with instructor. PREREQUISITE: Consent of instructor.

4192. Civil Engineering Projects II. (1-3).

Independent investigation of a Civil Engineering problem in consultation with instructor. PREREQUISITE: Consent of instructor.

COMPARATIVE LITERATURE

(SEE FOREIGN LANGUAGES)

CRIMINAL JUSTICE

JOSEPH A. CANALE, *Associate Professor, Director**Room 208, Johnson Hall*

The Institute of Criminal Justice offers a major in Law Enforcement in three concentration areas: General Law Enforcement, Police Administration, and Corrections.

1520. Introduction to Criminal Justice. (3).

An introduction to the American criminal justice system in its three dimensions, police, courts, and corrections, tracing its development from ancient and early English beginnings to the present time.

2523. Techniques of Criminal Investigation. (3).

A description, analysis, and demonstration of historical and contemporary techniques and procedures utilized in the identification, apprehension, and presentation to Court of the criminal.

2524. Criminalistics. (3).

Study of scientific procedures employed in criminal investigation, principally with respect to the location, development and use of physical evidence in criminal identification, including latent fingerprints, casting, document examination, and ballistics. *NOTE: Students who have received credit for ICJ 2520 will not be allowed credit for ICJ 2524.*

2526. Police Administration. (3).

A comparative analysis of the problems, procedures, organization, and functions of effective police organization.

3528. Research and Statistics for Law Enforcement. (3).

Statistical and non-statistical approaches employed in contemporary law enforcement; review and analysis of current findings. *NOTE: Students who have received credit for ICJ 2528 will not be allowed credit for ICJ 3528.*

3551. Socio-Medical Aspects of Law Enforcement. (3).

The cultural aspects of crime, suicide, and sexual deviancy with emphasis on the medical role of prevention, detection and treatment. An analysis of the role of the physician as an expert witness and criminal investigator, which will provide the law enforcement officer with an insight into the contribution of the medical profession to criminal justice.

3552. Drug Addiction and Alcoholism. (3).

Cultural and medical aspects of the use of alcohol and various other drugs; consideration of the rules of law enforcement and corrections in these areas.

4521. Police Operational Intelligence. (3).

The collection, analysis, storage and retrieval of confidential and classified information. The techniques employed to gain information from informants and infiltrators. The techniques of detecting subversive operations and espionage activity directed at undermining national security.

4523. Constitutional Rights of Prisoners. (3).

Study of the legal status of persons during pre-

conviction and post-conviction confinement, including factors involving discipline, legal services, communication, medical aid, and related matters, with further consideration of civil and criminal liability of prison officials.

4524. Penology. (3).

The historical and contemporary analysis of penal systems and reformatories in terms of organization, procedures, programs, and effectiveness.

4525. Probation and Parole. (3).

The analysis of various release procedures and their effectiveness from a historical, philosophical, and sociological point of view.

4526. Criminal Procedure I. (3).

General view of the criminal justice system as to application of principles of the U.S. Constitution, Bill of Rights, and the Fourteenth Amendment. Study of "due process of law" in federal and state prosecutions and application of the Exclusionary Rule of Evidence. *NOTE: Students who have received credit for ICJ 3534 will not be allowed credit for ICJ 4526.*

4527. Criminal Procedure II. (3).

A study of the application of various constitutional principles to investigative and prosecutive procedures of the criminal justice process, including arrest, search and seizure, interrogation, identification procedures and trial and post-trial proceedings.

4529. Principles of Evidence and Proof. (3).

Consideration of rules of evidence and matters of proof affecting criminal investigation in Investigatory and prosecutive stages of criminal justice. Examination from socio-legal aspect of basic rules of evidence, including hearsay rules, impeachment, materiality and relevancy, privilege, eyewitness identification and other.

4530. Police Planning. (3).

An advanced study and analysis of plans relating to procedures, tactics, personnel, equipment, buildings, budget, and extra-departmental activities which the police administration encounters.

4531. Public Relations and the Police. (3).

The role of law enforcement personnel and administrators in police-community relations; the forms and possible approaches for improving communications with the public; the role of the police officer in the improvement of the public image.

4533. Civil Rights in the Criminal Justice Process. (3).

Study of constitutional provisions, statutes and court decisions relating to civil rights as they apply to the various participants in the criminal justice process.

4534. Substantive Criminal Law. (3).

Study of substantive criminal law, including com-

mon law sources and basic principles, types of offenses, responsibility, justification and excuse and related areas.

4535. Organized Crime. (3).

The nature, structure, characteristics, and investigation of syndicated crime; its impact on social and economic conditions in this country.

4550. The Juvenile in the Criminal Justice Process. (3).

A study of legal procedures in the various aspects

of the juvenile process, including state and federal statute law, local methods and current constitutional procedural modifications.

4560. Individual Directed Study in Law Enforcement. (1-4).

Individually directed reading and/or research in special areas of interest in the field of law enforcement. PREREQUISITE: Permission of the Director.

CURRICULUM AND INSTRUCTION

ASSOCIATE PROFESSOR ROGER BENNETT, *Chairman*

Room 424, The College of Education Building

The Department of Curriculum and Instruction offers majors and minors in elementary education, secondary education and a major in early childhood education.

ELEMENTARY EDUCATION (ELED)

The department of Curriculum and Instruction offers a major and a minor in elementary education and a major in early childhood education; requirements are listed on page 88.

1201. Reading Skills for University Students. (2).

Offered for students who feel a need to increase their reading efficiency through the application of prescribed, individualized study techniques. CREDIT FOR THIS COURSE MAY NOT BE COUNTED TOWARDS ANY DEGREE UNLESS PRIOR PERMISSION HAS BEEN OBTAINED FROM THE DEAN OF THE COLLEGE WHICH GRANTS THE DEGREE.

2211. Introduction to Early Childhood Education. (3).

Principles and practices of early childhood education programming, infancy through third grade, in the United States. Supervised lab experiences in varied socio-economic day care centers, kindergartens, and primary grades. PREREQUISITE: Home Economics 2101.

Two lecture and two laboratory hours per week.

3212. Communication Interaction in Early Childhood Education. (3).

Application of selected principles of communication to teacher-child interaction; classroom management; teaching strategies; and program development, infancy through third grade.

Two lecture and two laboratory hours per week.

3241. Language Arts in the Elementary School. (3).

Designed to develop an understanding of the basic concepts of language. Special consideration given to how language arts (listening, speaking, reading and writing) are learned and taught. The interrelationships of these skills stressed to better utilize these kinds of activities in teaching children to think clearly and communicate thoughts. PREREQUISITES: Foundations of Education 2011, 2111, 3121.

3251. Teaching Methods in Elementary School Mathematics. (3).

A study of newer math concepts and activities to be used in developing understanding. PREREQUISITES: Foundations of Education 2011, 2111, and 3121.

3261. Teaching Methods in Elementary School Science. (3).

Participation in experiences which emphasize the

process approach in the development of basic science concepts, including the area of resource use. Involvement with variety of materials. PREREQUISITES: Foundations of Education 2011, 2111, and 3121.

3271. Teaching Methods in Elementary School Social Studies. (3).

A basic course involving methods and materials appropriate to each developmental level of the elementary school child. PREREQUISITES: Foundations of Education 2011, 2111, and 3121.

3412. Materials and Methods for Affective Domain in Early Childhood Education. (3). (Formerly 3211)

Theory and content of affective development in early childhood education, infancy through third grade; implications for designing programs, materials and teaching strategies in the creative arts. Two lecture hours, two lab hours per week. Supervised lab experiences will be in varied socio-economic day care centers, nursery schools, kindergartens, and primary grades. PREREQUISITES: Home Economics 2101; Elementary Education 2211, 3212.

3803. Motor Learning and Teaching Methods in Physical Education. (3).

Inquiry into perceptual motor and psychomotor behavior. Emphasis on variables conducive to skill acquisition and their implications for formulating teacher behavior. (Same as Physical Education 3803.)

3901. Special Problems in Instruction. (1 to 3).

Individual investigation in the area of instruction. PREREQUISITE: experience as a teacher or satisfactory evidence of being qualified to benefit from such a course.

4211. Comparative Study in Early Childhood Education. (3-6).

The study of programs for young children in United States and other countries focusing on the relationship between the program and the values the society holds. Comparisons of programs will be made with emphasis on how aspects of a program could be modified to meet the needs of children from a different culture. Foreign and domestic travel may be planned in conjunction with this course. PREREQUISITE: Consent of instructor.

4212. Materials and Methods for Cognitive Domain in Early Childhood Education. (3). (Formerly 3411)

Materials and instructional techniques appropriate for infancy through third grade; cognitive development, concept formation, instructional objectives; preparation and implementation of aca-

demic content as in math, natural and social sciences, and language arts. Two lecture hours and two lab hours per week. Supervised lab experiences will be varied socio-economic day care centers, nursery schools, kindergarten and primary grades. PREREQUISITES: Home Economics 2101, 3101; Elementary Education 2211, 3212.

4242. The Teaching of Developmental Reading. (3).

Designed to survey the theoretical background for developmental reading instruction. Practical consideration given to methods and materials used to teach the sequential skills in the primary and intermediate grades. PREREQUISITE: Elementary Education 3241 or classroom experience.

4243. Corrective Reading. (3).

This course has been designed to develop a teacher's ability to use informal diagnostic techniques in reading. Emphasis is placed on using these results for instructional purposes. The use of standardized test results is also reviewed to give the teacher an accurate means of assigning materials at a student's functional or instructional reading level. PREREQUISITE: Elementary Education 4242.

4245. The Teaching of Children's Literature in the Elementary School. (3).

A course designed to improve the methods of teaching children's literature in the elementary school, including units on story telling, dramatization, choral speech work, and the correlation of literature with the content subjects.

4252. The Teaching of Modern Mathematics in the Elementary School (Grades 1-8). (3).

An advanced course acquainting prospective and experienced teachers with the mathematical processes required of the elementary school child and the reasons why certain methods are used.

4262. The Teaching of Natural Science in the Elementary School. (3).

Current developments in elementary science education in both process and content. Examination of new curriculum materials and involvement in learning experiences appropriate for elementary school. Designed primarily for in-service teachers.

4411. Home School Relationships in Early Childhood Education. (3).

Parent-Teacher-Child Relationships; conferring, interviewing, reporting procedures and techniques; pupil evaluation methods; atypical child characteristics. Two lecture hours, two lab hours per week. Supervised lab experiences will be in varied socio-economic day care centers, nursery schools, kindergartens, and primary grades. PREREQUISITES: Elementary Education 2211, 3212, 3412, 4212; Home Economics 2101, 3101.

4421. Curriculum Problems and Trends in the Elementary School. (3).

This course deals with general educational objectives and means of achieving them; the roles of the various school subjects and their interrelationship: an examination of newer trends and their application in various schools in the community.

4511. Comparison of Program Models in Early Childhood Education. (3).

A study of group models, infancy through 8 years of age, including home-oriented, television, school-based, day care, multi-ethnic and compensatory models. Review of related research. PREREQUISITE: Early Childhood Education Major Core.

4512. Comparison of Child Study Models in Early Childhood Education. (3).

Comparison of techniques of studying young children, infancy through third grade, in a variety of individual and group models. Review of related research and literature. PREREQUISITE: Early Childhood Education Major Core.

4701-20. Workshops in Elementary Education.

This is a workshop for teachers who wish to improve their teaching skills. Various curriculum areas will be included for study. Students will explore many alternate solutions to problems of teaching.

NOTE: Not more than 9 semester hours of workshop credit can be applied toward a degree.

4701—Workshop. Improvement of Current Instruction. (1-3).

4702—Workshop. For Teachers of the Disadvantaged. (1-3).

4703—Workshop. For Elementary Curriculum. (1-3).

4704—Workshop. Elementary Science Education. (1-3).

4751. Workshop in the Reading Program. (3 to 6).

Designed to utilize the reading conference, group study, discussion, demonstration, and directed practice to study problems of reading. Participants will have the opportunity to pursue their own reading related problems of content, methods, materials, and evaluation.

4761. Aerospace Education in Schools. (3).

The purpose of this course is to provide teachers with aerospace knowledge and experiences and ways of utilizing this knowledge and experience in the classroom.

***4811. Directed Student Teaching in the Kindergarten. (3 to 6).**

Observation of the growth and development of pupils and of methods of teaching; participation in school activities, culminating in assuming responsibility for teaching entire groups. Six hours credit required; exceptions must be approved by the Director of Early Childhood Education.

***4821. Directed Student Teaching in the Elementary School. (3 to 9).**

Observation of the growth and development of pupils and of methods of teaching; participation in school activities, culminating in assuming responsibility for teaching entire groups.

***4822. Directed Student Teaching in the Elementary School. (3 to 6).**

For the student who has completed six semester hours or less of student teaching in the elementary school and desires some additional experience.

*For detailed information concerning the requirements for admission to the student teaching program, see page 77.

Graduate courses in *Elementary Education: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.*

SECONDARY EDUCATION

The department of Curriculum and Instruction offers majors and minors in secondary education; requirements are listed on page 88. Letters following each subheading are prefixes used by The College of Education.

EDUCATION (EDUC)

1010-13. Career Opportunities Workshops.

The purpose of these courses is to provide participants with experiences that relate closely with actual problems of the public and private schools and the communities that they serve.

- 1010—Career Opportunities Workshop (1)
- 1011—Career Opportunities Workshop (1)
- 1012—Career Opportunities Workshop (1)
- 1013—Career Opportunities Workshop (1)

NOTE: These courses are designed specifically for and limited to Career Opportunities Program participants only. The courses will not be accepted as a substitute for specified requirements for graduation but may be accepted in lieu of electives in education.

1020-23. Career Opportunities Program Practicums.

Practicums in the academic area of the participant's preparation and work experience.

- 1020—Career Opportunities Program Practicum (2)
- 1021—Career Opportunities Program Practicum (2)
- 1022—Career Opportunities Program Practicum (2)
- 1023—Career Opportunities Program Practicum (2)

NOTE: These courses are designed specifically for and limited to Career Opportunities Program participants only. The courses will not be accepted as a substitute for specified requirements for graduation but may be accepted in lieu of electives in education.

3301. Analysis of Teaching. (1-3).

Use of interaction analysis and related nonverbal behavior techniques to describe pupil-teacher classroom interchange and use of microteaching to identify and analyze teaching skills. PREREQUISITE: EDPS 3121.

4301. Audio-Visual Instructional Materials in Education. (3).

Introduction to means for effective preparation and utilization of selected multi-media materials. Laboratory practice in operation of audio-visual equipment and development of selected materials and techniques centered around student interests. Emphasis on the implications of audio-visual media for teaching.

SECONDARY EDUCATION (SCED)

- *3321. Materials and Methods in High School Art. (3). (SAME as Art 4421)
- *3322. Materials and Methods in High School Music. (3).
- *3331. Motor Learning and Teaching Methods in Physical Education. (3). (SAME as Physical Education 3803)
- *3332. Materials and Methods in Health Education. (3). (SAME as Health 3102)
- 3335. Driver and Traffic Safety Education I. (3).
A course designed to meet minimal qualification requirements for teachers of driver education in the secondary schools. A study of materials and methods that may be used in organizing and conducting a Driver Education program in the secondary schools. PREREQUISITES: Foundations of Education 2011, 2111, 3121 and a valid driver's license.
- 3336. Driver and Traffic Safety Education II. (3).
Designed to give the student advanced professional preparation to meet the traffic safety educational needs of schools and communities. Included is a review of research related to accident causation, teacher preparation, current materials and methods used in organizing and administering a driver and traffic safety education program in a secondary school. PREREQUISITE: Secondary Education 3335 or equivalent.
- *3341. Materials and Methods in High School English. (3).
- *3342. Materials and Methods in High School French. (3).
- *3343. Materials and Methods in High School German. (3).
- *3344. Materials and Methods in High School Latin. (3).
- *3345. Materials and Methods in High School Spanish. (3).
- *3346. Materials and Methods in High School Speech. (3).
- *3347. Materials and Methods in High School Russian. (3).
- *3351. Materials and Methods in High School Mathematics. (3).
- *3361. Materials and Methods in High School Biology. (3).
- *3362. Materials and Methods in High School Physical Science. (3).
- *3371. Materials and Methods in High School Social Studies. (3).
- *3372. Materials and Methods in High School Psychology. (3).
- *3381. Materials and Methods in Vocational Business Subjects. (3).
- *3382. Materials and Methods in Bookkeeping and General Business Subjects. (3).

*3383. **Materials and Methods in High School Home Economics. (3).**

*3384. **Materials and Methods in High School Industrial Arts. (3).**

*NOTE: The methods courses in high school subjects include: objectives, content, and grade placement of subjects; tools of instruction; organization of courses; and teaching procedures and practices.

3901. **Special Problems in Instruction. (1 to 6).**

Individual investigation in the area of instruction. PREREQUISITE: experience as a teacher or satisfactory evidence of being qualified to benefit from such a course.

4306. **Educational Methods for Adult Education. (3).**

This course places emphasis on trends, instructional and resource materials, and instructional techniques used in adult educational programs.

4337. **Seminar in Driver and Traffic Safety Education. (3).**

An in-depth study of current problems, research and research methodology in driver and traffic safety education. PREREQUISITE: Secondary Education 3335 or equivalent.

4341. **Teaching Literature for Adolescents. (3).**

Theories and techniques of teaching literature for adolescents at the secondary level; survey and analysis of appropriate fiction, drama, and poetry for the teenage reader.

4344. **The Teaching of Reading in the Secondary Schools. (3).**

A course designed for teachers of content subjects at the secondary level, exploring methods, materials, and organizational patterns by which reading skills can be developed and improved in the secondary schools.

4441. **Curriculum Problems and Trends in the Secondary School. (3).**

This course is designed to afford some help in the clarification of secondary school educational

purposes and in determination of appropriate learning activities; it deals with the functional teaching objectives, ways of obtaining these objectives, methods of establishing relationships among the school subjects, developing the core curriculum, and the organization and use of units of work.

4701-20. **Workshops in Secondary Education.**

A study of selected phases of the secondary School curriculum through group study. These courses are designed to assist both in-service and prospective teachers of grades 7-12 in improvement of the teaching-learning processes. Attention is given to common elements of basic methodology, utilization of appropriate materials and resources, and evaluative criteria.

SCED 4701—Workshop-Improvement of Instruction (1 to 3)

SCED 4702—Workshop-Secondary Curriculum (1 to 3)

SCED 4703—Workshop-Social Studies Education (1 to 3)

SCED 4704—Workshop-Language Arts Education (1 to 3)

SCED 4705—Workshop-Science Education (1 to 3)

SCED 4706—Workshop-Math Education (1 to 3)

SCED 4707—Workshop-Family Finance Education (1 to 3)

SCED 4708—Workshop-Newspaper in the Classroom (1 to 3)

NOTE: Not more than 9 semester hours of workshop credit can be applied toward a degree.

*4841. **Directed Student Teaching in the Secondary School. (3 to 9).**

Observation of the growth and development of pupils and of methods of teaching; participation in school activities, culminating in assuming responsibility for teaching entire groups.

*4842. **Directed Student Teaching in the Secondary School. (3 to 6).**

For the student who has completed six semester hours or less of student teaching on the secondary level and desires some additional experience.

Graduate Courses in Secondary Education: For full details of the graduate program, see The Bulletin of The Graduate School.

DISTRIBUTIVE EDUCATION

PROFESSOR C. EDWIN PEARSON, *Chairman.*

Room 101, The College of Education Building

The Department of Distributive Education offers a major and a minor to prepare teacher-coordinators for vocational marketing programs in high schools, technical institutes and junior colleges. The requirements are listed on page 88. (*Students majoring in Marketing may secure certification to teach Distributive Education through this department.*)

The prefix used by The College of Education for courses in Distributive Education is DTED.

3010. **Cooperative Occupational Education. (3).**

An introductory study of occupational education programs which use work experience coordinated with related in-school instruction to provide ca-

reer preparation in marketing, office, industry, home economics, health and other fields of employment.

4611. **Principles and Philosophy of Vocational Education. (3).**

The history, philosophy, principles and objectives of vocational education; curriculum problems; contribution of vocational-technical education to general education; trends in vocational-technical education.

4630. **Materials and Methods in Distributive Education. (3).**

The instructional materials and techniques used

in high school and post-high school Distributive Education classes.

4641. Techniques of Coordination of Cooperative Occupational Education. (3).

Selecting training agencies; developing job analyses; selecting and briefing the training supervisor; selecting and working with advisory committees; utilizing other community resources. PREREQUISITE: Distributive Education 4630 or consent of instructor.

4651. Basic Problems in Distributive Education. (1-3).

A study of current trends and problems related to distributive education; viewpoints of leaders in the field; special attention to problems of students enrolled.

4680. Development and Supervision of Vocational Student Organizations. (3).

Aims and objectives of vocational student organizations and their value in occupational preparation; their development, curricular integration, operation and evaluation.

4690. Workshop in Distributive Education. (1-6).

Designed to meet the needs of inservice teachers by offering an opportunity to work cooperatively on problems which are real to teaching situations and which meet the needs of the individual. PREREQUISITE: Teaching experience and permission of director of the workshop.

***4871. Student Teaching in Distributive Education. (3-9).**

Observation of the operation of a high school Distributive Education program and of methods of teaching; participation in school activities, culminating in assuming responsibility for teaching and coordinating entire groups. PREREQUISITE: Distributive Education 4630.

**For detailed information concerning requirements for admission to the student teaching program, see page 77.*

Graduate courses in Distributive Education: For details of the graduate program, see The Bulletin of The Graduate School.

DRAMA

(See SPEECH AND DRAMA)

ECONOMICS

PROFESSOR KURT F. FLEXNER, *Chairman*

Room 400, The College of Business Administration

Building

Requirements for the majors and minors in economics for the Bachelor of Business Administration degree are listed on page 73. Requirements for the major and minor in economics for the bachelor's degree in The College of Arts and Sciences are listed on page 63.

1010. Economic Issues and Concepts. (3).

A critical examination of the current economic issues facing the country. Discussion and utilization of the elementary tools of analysis so that the student becomes familiar with the importance and applicability of economic reasoning. This course will not satisfy the College of Business Administration economics requirement.

2110. Economics I. (3).

An introduction to economics as a social science, with major emphasis on understanding the macroeconomic concepts and principles with reference to key socio-economic problems in our private enterprise system. PREREQUISITE: 21 semester hours.

2120. Economics II. (3).

An invitation to the professional analytical techniques of the economist and to the ways and means that these techniques are used to achieve reliable answers to economic problems. Basic economic institutions are studied. PREREQUISITE: Economics 1010 or 2110.

2130. Principles of Economics I (Honors). (3).

An accelerated and intensified introduction to the first half of the principles of economics for students of exceptional ability. PREREQUISITE: Invitation of the Department of Economics.

2140. Principles of Economics II (Honors). (3).

A continuation of Economics 2130. PREREQUISITE: Invitation of the Department of Economics.

3210. Labor Economics. (3).

An introductory course dealing with the institutional aspects of the American labor force and its organization, wage and employment theory, the economic role of collective bargaining, and the basic ingredients of public policy toward labor organization. PREREQUISITE: Economics 2120.

3310. Microeconomic Theory. (3).

An intermediate level approach to price theory. Stress is placed on the market mechanism as a device for resource allocation, with attention given to the uses of basic microeconomic concepts in the analysis of economic problems and in the formulation of economic policy. Both semesters. PREREQUISITE: Economics 2120.

3320. Macroeconomic Theory. (3).

An intermediate level approach. Attention is given to social income accounting and to functional relationships between important aggregate economic variables as well as to forecasting and social policy implications. Both semesters. PREREQUISITE: Economics 2120.

3410. Economic Development of the United States. (3).

Analysis of economic growth of the American economy in general and of the problems of economic growth in the South in particular. Emphasis is placed on the factors instrumental in that growth in the various segments of the economy. PREREQUISITE: Economics 1010 or 2110.

3510. International Economic Growth and Development. (3).

A consideration of the economic variables involved in economic growth and of the functional relationships that may be of significance, from the point of view of the underdeveloped economy and of the mature society. PREREQUISITE: Economics 1010 or 2110.

3610. Money and Banking. (3).

Monetary and banking history of leading countries with special emphasis on the theory of money and banking in the United States, deposit and earning operations of individual banks, interbank and central bank relations. Both semesters. PREREQUISITE: Economics 2120.

4111. Managerial Economics. (3).

An attempt to develop an understanding of the economic reasoning underlying managerial decision-making. Economic analytical techniques are applied to profit, competition, product policy, demand and cost conditions, pricing policies, and capital budgeting. Both semesters. PREREQUISITE: Economics 2120.

4120. Economic Forecasting. (3).

The current economic thinking on the problems of recession and inflation are examined as background to economic forecasting. The several methodologies of forecasting are then analyzed with examples of each. PREREQUISITE: Management 3711, or the equivalent.

4130. Government Regulation of Business. (3).

The several approaches to legal and legislative control of business—especially tax laws, commission regulations, and anti-monopoly legislation—are considered in view of the impact of each on industrial operating policy. PREREQUISITE: Economics 1010 or 2110.

4140. Industrial Organization. (3).

The course is an economic analysis of two aspects of American industry: 1) an historical study of new industries, of the question of oligopoly market power, and of the impact of merger waves, and 2) an analysis of structure, conduct, and performance in industry using case studies in manufacturing, transportation and trade. PREREQUISITE: Economics 2120.

4220. History and Theory of American Labor Movements. (3).

A study of major events and trends in American labor history from colonial times to the present, and their significance in terms of the evolving labor-management relationship. An analysis of alternative theories of American trade union development. PREREQUISITE: Economics 3210:

340. Comparative Economic Systems. (3).

An analytical study of the theoretical framework underlying major alternative economic systems—capitalism, socialism, communism, fascism—with the U.S., Sweden, the U.K., the U.S.S.R., and Spain used as examples. Attention is also directed to problems and difficulties associated with the integration of systems. PREREQUISITE: Economics 1010 or 2110.

350. International Economics. (3).

An historical approach to the theory of interna-

tional trade, with consideration given to the techniques of control over investment and trade, foreign exchange, balance of payments, and world interdependence. PREREQUISITE: Economics 3610.

4410. Development of Economic Thought. (3).

A critical study of the historical development of economic thought. Attention is focused primarily on the emergence of Classical and Neoclassical thought, the several dissident schools of thought, and twentieth-century economic thought. PREREQUISITE: Economics 1010 or 2110.

4511. Urban and Regional Economics. (3).

A survey of the theory and problems of regional economic development and the evolving economic structure of urbanized areas. Analysis of the principles of the location of economic activity, interregional income and trade theory, and public policy for the development of regions. PREREQUISITE: Economics 1010 or 2110.

4610. Central Banking and Monetary Management. (3).

A critical examination of the history and economic function of central banks. Analysis of the role of monetary policy in achieving predetermined objectives, with emphasis on the interrelationships of monetary policy, central banking, and the financial markets. PREREQUISITE: Economics 3610.

4710. Economics of Finance. (3).

An economic analysis of the financial system will be undertaken with emphasis on the interconnection of financial flows and their role in the process of economic growth of the economy. PREREQUISITE: Econ. 3610.

4720. Public Finance. (3).

The theory and practice of government expenditure, revenue, and debt, and the problem of integrating them into meaningful fiscal policy. Alternative forms of taxation are analyzed, especially from the standpoint of economic effects. PREREQUISITE: Economics 2120.

4750. State and Local Finance. (3).

Fiscal operations at state and local government levels in the United States. Attention is given to state and local government tax structures particularly with special emphasis on property tax assessment and administration. Also a consideration of the fiscal relations of intergovernmental units, their expenditure elements, debt policy, budgeting, and financial administration. PREREQUISITE: Economics 1010 or 2110.

4810. Introduction to Economic Analysis I. (3).

An introduction to the application of quantitative techniques of analysis to economic problems, including the identification of meaningful relationships, formulating usable quantitative statements about them, and developing relevant analytical methods. Fall semester. PREREQUISITES: One year of college mathematics and Economics 3310.

4820. Introduction to Economic Analysis II. (3).

A continuation of Economics 4810 with emphasis on the more complex and involved relationships of economic theory. Spring semester. PREREQUISITE: Economics 4810.

4920. Senior Seminar in Economics. (3).

A seminar coordinated by the Department Chair-

man and conducted by selected members of the Department and designed to integrate the several fields and course areas pursued by undergraduate majors into a meaningful whole. Required of all departmental majors in their last semester of undergraduate enrollment.

Graduate Courses in Economics: Some of the courses described in the preceding section may be taken for graduate credit with the approval of the department chairman. For further details of the graduate program, see The Bulletin of The Graduate School.

EDUCATION (EDUC)

(SEE CURRICULUM AND INSTRUCTION)

ELECTRICAL ENGINEERING

PROFESSOR THOMAS DEWEY SHOCKLEY, JR.,

Chairman

Room 206B, Engineering Building

Requirements for the B.S. in Electrical Engineering are listed on page 96.

2200. Computer Concepts. (4).

The simplified principles of analog and digital computers are presented and demonstrated. Engineering use of computers as tools in modeling and solving typical problems is studied. The hybrid computer is used to model changing systems such as population densities, traffic patterns, and basic mechanical and chemical processes. For non-engineering students only. PREREQUISITE: Mathematics 1181, or 1203, or 1211.

Three lecture, two laboratory hours per week.

2201. Circuit Analysis I. (4).

Fundamental properties of electrical circuits; basic concepts and circuit elements; analysis methods and network theorems; sinusoidal steady-state response; introduction to transients. PREREQUISITE: Mathematics 2322.

Three lecture, three laboratory hours per week.

3201. Circuit Analysis II. (4).

Continuation of Elec. 2201. Resonance, impedance and admittance functions, network theorems and analysis, the complex frequency plane, polyphase circuits and magnetic coupling. PREREQUISITE: Elec. 2201.

Three lecture, three laboratory hours per week.

3202. Transform Methods in Network Analysis. (3).

Introduction to transform theory; application of Fourier, Laplace and Z-transforms to the solution of network problems. PREREQUISITE: Elec. 2201.

Three lecture hours per week.

3211. Electronics I. (4).

A study of active vacuum, gas and solid state devices as elements of electric circuits; linear representation and operation. PREREQUISITE: Elec. 2201.

Three lecture, three laboratory hours per week.

3212. Electronics II. (4).

Power amplifiers; feedback amplifiers; oscillators; modulation and detection; rectifiers. PREREQUISITE: Elec. 3211.

Three lecture, three laboratory hours per week.

3220. Engineering Computer Systems. (3).

Basic structure and organization of digital com-

puters and associated peripheral devices. Digital representation of data, basic instruction sets, instruction execution and addressing techniques. Basic program structure in machine language. Subroutine and utility programs, system programs, and other software. Formulation of assemblers, compilers, and interpreters that are oriented toward computer-controlled systems. PREREQUISITE: Engr 1011.

Three lecture hours per week.

3221. Matrix Computer Methods in Electrical Engineering. (3).

Application of matrix theory to the solution of circuit problems: Introduction of the state space concept in circuit, electronics and controls problems. Introduction of matrix concepts in the solution of basic electromagnetic problems. PREREQUISITE: Elec. 3201.

Three lecture hours per week.

3222. Introduction to Engineering Instrumentation. (4).

Study of transducers for physical systems. Mechanical, temperature, acoustic, and biomedical transducers. Methods of processing and analyzing data. PREREQUISITE: Elec. 3212.

Three lecture, three laboratory hours per week.

4201. Energy Conversion. (4).

Energy conversion by electromechanical methods, energy relations in singly and multiply excited magnetic systems, dynamic equations of magnetic systems, transformers and electrical machines. PREREQUISITE: Elec. 3201 or permission.

Three lecture, three laboratory hours per week.

4202. Electrical Power Systems. (3).

Investigation of problems associated with the transmission of electrical energy. Load-flow studies, and fault analysis by use of symmetrical components. PREREQUISITE: Permission of instructor.

Three lecture hours per week.

4205. Analog Simulation Techniques. (4).

Introduction to the basic concepts of component and system design of analog computers. Application of the analog computer in the solution of linear and nonlinear engineering problems. PREREQUISITE: Elec. 3202.

Three lecture, three laboratory hours per week.

4211. Electromagnetic Field Theory I. (3).

Maxwell's equations, electrostatics, magneto-statics and time varying electromagnetic fields. PREREQUISITE: Mathematics 3391.

Three lecture hours per week.

4212. Electromagnetic Theory II. (4).

Continuation of Elec. 4211. Plane, cylindrical and spherical waves; high frequency transmission lines; introduction to microwave and antenna theory. PREREQUISITE: Elec. 4211.

Three lecture, three laboratory hours per week.

4213. Antenna Theory and Design. (4).

Continuation of 4212 with emphasis on the theory of operation and design of antennas. Determination of antenna radiation characteristics. Introduction to antenna array theory. PREREQUISITE: Elec. 4212.

Three lecture, three laboratory hours per week.

4215. Introduction to Bio-Engineering. (3).

Use of engineering concepts for modeling physiological phenomena. Introduction and use of piecewise linear functions for the characterization of system components such as the respiratory, sensory, circulatory and muscular subsystems. Introduction to computer processing of electrocardiograms, cybernetic actuators, and design of prosthetic devices. PREREQUISITE: Senior standing and permission.

Three lecture hours per week.

4221. Pulse and Digital Circuits. (4).

Timing, scanning, trigger and pulse circuits; astable, bistable and monostable multivibrators; binary counting circuits. PREREQUISITE: Elec. 3212.

Three lecture, three laboratory hours per week.

4222. Introduction to Logical Design and Switching Circuits. (3).

Introduction to the analysis and design of logical switching circuits; logic, number systems, digital computer components. PREREQUISITE: Elec. 3211 or permission.

Three lecture hours per week.

4230. Data Communication Systems. (3).

A study of 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. On and Off line, real and non-

real time, and time sharing systems. PREREQUISITE: Elec. 3212 or permission.

Three lecture hours per week.

4231. Communication Theory. (3).

Frequency and time domain. Modulation, random signal theory; autocorrelation; basic information theory, noise, communication systems. PREREQUISITE: Elec. 3212.

Three lecture hours per week.

4240. Introduction to Quantum Electronics. (3).

Quantum concepts, Schrodinger equation, quantization of electromagnetic radiation. Laser theory and application. PREREQUISITE: Senior standing.

Three lecture hours per week.

4241. Physical Electronics. (3).

Fundamental particles: Quantum concepts; statistics; crystal structure; thermal, dielectric, magnetic and optical properties of solids; solid state devices. PREREQUISITE: Elec. 3212.

Three lecture hours per week.

4251. Control System Engineering. (4).

General equations of physical linear systems and their transfer functions, Transient analysis and stability of servo systems. The Bode plot, Nichols chart, Nyquist plot, Routh-Hurwitz criterion, root locus method, introduction to compensation techniques and systems in state space. PREREQUISITES: Elec. 3202, Elec. 4201.

Three lecture, three laboratory hours per week.

4261. Introduction to Network Synthesis. (3).

Synthesis of canonical LC, RL, RC, and RLC driving point impedances. Introduction to the synthesis and realization of lossy one and two port networks. PREREQUISITE: Elec. 3202.

Three lecture hours per week.

4991. Electrical Engineering Projects I. (1-3).

Independent investigation of a problem selected in consultation with instructor; report required. PREREQUISITE: Senior standing.

4992. Electrical Engineering Projects II. (1-3).

Continuation of Elec. 4991. Design, construction and testing of project investigated in Elec. 4991; report required. PREREQUISITE: Elec. 4991.

5205. Hybrid Simulation Techniques. (3).

Introduction to hybrid computer techniques, hardware and software. Hybrid computer solutions of field problems, parameter optimization and optimal control system problems and man-machine systems. PREREQUISITE: Elec. 4205.

Three lecture hours per week.

ELEMENTARY EDUCATION (ELED)

(SEE CURRICULUM AND INSTRUCTION)

ENGINEERING

ROGER E. NOLTE, *Dean*

Room 201D, Engineering Administration Building

Course listings for the Department of Civil Engineering begin on page 129, course listing for the Department of Electrical Engineering begin on page 138; and

course listings for the Department of Mechanical Engineering begin on page 177. Requirements for engineering degrees are listed on page 95.

ENGINEERING CORE COURSES

1001. Introduction to Engineering. (1).

History and nature of engineering as a profession, including industrial practices, academic programs, and career planning. The use of logic as applied to engineering problems and systems. PREREQUISITE: Freshmen having engineering inclinations.

One lecture hour per week.

1011. Engineering Computer Programming. (2).

Introduction to the role of the digital computer in engineering systems; applications of computer systems to analysis and design; introduction to computer programming languages.

One lecture, three laboratory hours per week.

1021. Engineering Graphics. (2).

Role of graphical communication in engineering practice; sketching and drafting techniques used in design, elements of descriptive geometry.

One lecture, three laboratory hours per week.

ENGINEERING TECHNOLOGY

PROFESSOR W. T. BROOKS, *Director*

Room 203, Technology Building

The requirements for the B.S. in Technology and B.S. in Engineering Technology begin on page 98.

ARCHITECTURAL TECHNOLOGY

1555. History of Architecture. (2).

A history of architecture from the neolithic revolution to date; a comparative approach considering the influences and results on each period.

2555. Architectural Design I. (4).

Fundamentals of architectural design; basic techniques of drafting, perspectives, presentation and working drawings.

Two lecture, four laboratory hours per week.

3471. Structural Design I. (3).

Fundamentals of structural design and analysis of steel and timber buildings and building components. PREREQUISITES: Math. 1321, Tech. 3401.

3472. Structural Design II. (3).

Fundamentals of structural design and analysis of concrete buildings and building components. PREREQUISITES: Math. 1321, Tech. 3401.

3520. Architectural Design II. (4).

A continuation of Tech. 2555, Architectural Design I. Basic design concepts and methods as applied to building types; design, construction, and systems for units of contemporary architecture. PREREQUISITE: Tech. 2555.

Two lecture, four laboratory hours per week.

3521. Architectural Model Making. (3).

Continuation of Tech. 2555, including pictorial representations, model building and furnishings design. PREREQUISITE: Technology 2555.

3531. Mechanical Equipment in Construction I. (3).

Studies of electrical and thermal services for commercial and residential structures. PREREQUISITE: Tech. 3520.

3532. Mechanical Equipment in Construction II. (3).

Continuation of Tech. 3531, with emphasis on the sanitary, water services, etc. for commercial and residential structures. PREREQUISITE: Tech. 3531.

4515. Architectural Design III. (4).

A continuation of Tech. 3520, Architectural Design II. Design concepts and methods as related to mass horizontal and vertical architectural de-

velopment. PREREQUISITES: Tech. 3520, Tech. 3471, Tech. 3472.

Two lecture, four laboratory hours per week.

COMPUTER SYSTEMS TECHNOLOGY

2251. Advanced Programming Techniques. (4).

The purpose of this course is to broaden the student's knowledge of computer usage through the study of modeling techniques applicable to engineering technology. Subprograms, tape input/output, random-access storage devices, complex arithmetic, and double precision operations are emphasized. PREREQUISITE: Engr. 1011 (note: credit will not be allowed in both Tech. 2251 and Math. 4710, but Tech. 2251 may be used as prerequisite to Math. 4711).

Three lecture, two laboratory hours per week.

3251. Data Structurers. (4).

Application of the high speed digital computer to the problems associated with the storage and retrieval of numeric and non-numeric data in engineering systems. Included are the representation and organization for storing of data, searching and sorting techniques, decision tables, and file maintenance techniques. PREREQUISITE: Tech. 2251 or equivalent.

Three lecture, two laboratory hours per week.

3271. Computer Simulation Technology. (4).

A study of languages designed for simulation of physical systems. Included are general purpose languages, as well as languages designed for electronics and construction technology. Laboratory will consist of the application of analog, digital, and hybrid computers to simulate large scale systems. PREREQUISITE: Tech. 2251 or equivalent.

Three lecture, two laboratory hours per week.

4251. Assembly Language Programming. (4).

An investigation of a particular mini-computer from the programmer's view point. Topics include machine representation of data, instruction formats, machine operation and addressing techniques, input/output, and interrupts. Applications will include the use of minicomputers for numerical control and in sensor based systems. PREREQUISITES: Tech. 2251, Tech. 2411.

4271. Computer Techniques. (4).

Advanced computer techniques in industry. Topics include APT programming for NC machine tools, application of the computer to solve PERT

networks, and applications in production planning and control. PREREQUISITES: Tech. 2251, COREQUISITE: Tech. 3422.

Three lecture, two laboratory hours per week.

CONSTRUCTION TECHNOLOGY

1451. Introduction to Surveying. (3).

Surveying practices, calculations, and use of topographical conventions. PREREQUISITES: Tech. 1411 and Math. 1212.

2451. Construction Surveying. (3).

Study of construction layout and site locations. PREREQUISITE: Tech. 1451.

3387. Construction Safety. (3).

Study of hazards and their control as related to the construction industry.

3412. Soil Technology in Construction. (3).

Soil Technology as applied to the construction field. The fundamental properties of soils with application to foundations, highways, retaining walls and slope stability. The relationship between soil characteristics and geologic formations. PREREQUISITE: Junior standing or approval of instructor.

Two lecture, two laboratory hours per week.

3414. Construction Administration. (3).

Ethical practice, social responsibility, licensing, codes, and public regulation of contracting, specification writing and interpretation, functions of the architect-engineer and owner, construction contracts, bonding, insurance, indemnification, labor agreements and jurisdictional procedures, joint venture and subcontract relationship will all be included in the course. PREREQUISITE: Junior standing.

3451. Route Surveying. (3).

Study of surveying practices as applied to streets, roads, and highways. PREREQUISITE: Tech. 2451.

3491. Estimating. (3).

Study and practice of specifications, bidding procedures, and estimating. PREREQUISITE: Tech. 2555.

3591. Land Surveying. (3).

The historical background of property surveys. Writing adequate land descriptions. Interpretation of old descriptions. Excess and deficiency. Riparian rights. Field practice. PREREQUISITE: Tech. 3451.

Two lecture, three laboratory hours per week.

4510. Construction Planning and Scheduling. (3).

Principles of planning, scheduling, organizing, and controlling construction projects. Studies in the critical path method (CPM) and PERT, with resource leveling and financial scheduling. Computer applications in CPM and PERT will be emphasized. PREREQUISITE: Senior standing.

Two lecture, two laboratory hours per week.

4520. Construction Methods and Equipment. (3).

Theory and practice of construction operations, equipment utilization, construction methods, analysis of costs, crew and equipment. PREREQUISITE: Senior standing.

4522. Construction Logistics. (3).

Theory and practice of construction project bidding using statistical concepts of probability and computer applications. Office procedures, job and cost control, and the analysis of starting and completing construction contracts will be studied. PREREQUISITE: Senior standing.

Three lecture hours per week.

DRAFTING AND DESIGN TECHNOLOGY

1511. Graphics I. (3).

An introductory course in graphic representation and presentation. Basic exercise in lettering, use of the instruments, sketching, geometric construction and projections are offered; however problem solving is stressed.

2511. Descriptive Geometry. (3).

A study of points, lines and planes in space with emphasis on application to problems of a technological nature. PREREQUISITE: Tech. 1511.

2512. Graphics II. (3).

A continuation of Tech. 1511 to include working drawing, details, assemblies and pictorials. Shades and shadows are also considered. PREREQUISITE: Tech. 1511.

3505. Applied Dynamics. (3).

A study dealing with motion and the effects of forces acting on particles, lines, and rigid bodies in motion. PREREQUISITES: Math. 1321 and Tech. 3400.

3572. Technical Illustration. (3).

A course dealing with the basic techniques of illustration as applied to industrial visual communication. PREREQUISITES: Tech. 2512 and 2511.

3573. Mechanical Design. (3).

A basic consideration of mechanisms, kinematics, linkages, cams, and gears. PREREQUISITE: Tech. 2511.

3575. Structural Steel Detailing. (3).

A study of A.I.S.C. riveted and welded fabrication design. PREREQUISITES: Math. 1212, Tech. 2511 and 3401.

4511. Design Problems. (3).

A consideration of advanced drafting room practices. PREREQUISITES: Math. 1321 and 12 semester hours of drafting and design courses.

4571. Machine Design. (3).

A study of the design of basic machine elements, subassemblies and assemblies. PREREQUISITES: Math. 1212 and Tech. 2511.

4591. Tool Design. (3).

A course concerned with the design and application of jigs, fixtures and dies. PREREQUISITES: Math. 1212 and Tech. 2511 and 3401.

ELECTRONICS TECHNOLOGY

1801. Instrumentation for Medical Sciences I. (3).

Principles of electricity, electronics and devices applicable to medical instrumentation.

Two lecture, two laboratory hours per week.

1802. Instrumentation for Medical Sciences II. (3).

Continuation of instrumentation for Medical Sciences I, with emphasis on specific instrumentation for such processes as potentiometry, spectrophotometry, photometry, chromatography and etc. PREREQUISITE: Tech. 1801.

Two lecture, two laboratory hours per week.

1811. Electronics Technology I. (3).

Survey of Direct and Alternating Current fundamentals with laboratory emphasis on basic electrical measurements and the proper use of instruments. PREREQUISITE: Concurrent enrollment in Math. 1212 desirable.

1821. Electronics Technology II. (3).

Circuit analysis methods in modern electronics technology. Laboratory confirmation of mathematical solutions to problems involving Direct and Alternating Currents. PREREQUISITES: Tech. 1811 and Math. 1212.

2821. Electronics Technology III. (3).

Theory of electron tubes and transistors and their applications in power supplies, amplifiers and oscillators. PREREQUISITES: Tech. 1811 and concurrent enrollment in Tech. 1821.

2831. Electronics Technology IV. (3).

Theory of semiconductor devices and their applications. Both discrete component solid state circuits and monolithic circuits are compared and contrasted with similar electron tube circuits. PREREQUISITE: Tech. 2821.

3811. Electronics Communications. (3).

Principles of modulation and demodulation are examined in depth, together with associated radio transmitter and receiver circuitry, telephony applications and electronic navigational aids. PREREQUISITE: Tech. 2831.

3812. Control Instrumentation. (4).

A study of the theory of application of automatic control equipment, principles, operations and construction of pneumatic hydraulic, electrical, and automatic ratio controllers. PREREQUISITE: 2411, 3821 or permission of instructor.

Three lecture, two laboratory hours per week.

3821. Industrial Electronics. (3).

Study of electronics in modern industry, with emphasis on motor controls, high frequency heating devices and electronic instrumentation. PREREQUISITE: Tech. 2831.

3841. Advanced Applied Electricity. (3).

The generation and utilization of single and poly-phase electrical power in home and industry; DC and AC generators, motors, regulators and meters in both individual and systems applications. PREREQUISITE: Tech. 1821.

4801. Antenna Technology. (3).

Detailed examination of transmission lines and antennas, using applications approach with minimum of purely mathematical analysis; applications in both wire and wireless systems. PREREQUISITE: Tech. 3811.

4821. Microwave Technology. (3).

Generation and transmission of energy at frequencies above 300 megahertz, emphasizing techniques and equipment which contrast sharp-

ly with those at lower frequencies. PREREQUISITES: Tech. 3811 and Tech. 4801 or permission of instructor.

4831. Computer Technology I. (3).

Basic logic operations, Boolean algebra, and reduction techniques as related to both combinational and Sequential Systems. PREREQUISITE: Tech. 2831 or permission of instructor.

4832. Computer Technology II. (3).

An introduction to internal computer organization and configuration design; component and device characteristics; data representation, transfer and storage; Boolean algebra; combinational logic. PREREQUISITE: Tech. 4831 or permission of the instructor.

4833. Analog Computer Technology. (3).

Function of analog computer elements, problems, preparation and representative solutions of program problems. PREREQUISITE: Tech. 3831 or permission of the instructor.

4841. Video Communications. (3).

Theory and application of technical equipment for the generation, transmission, and reception of video signals, both closed circuit and broadcast. PREREQUISITE: Tech. 3811.

INDUSTRIAL ARTS

2911. Foundations of Industrial Education. (3).

Study of the development, objectives, and current trends of industrial arts and vocational education; required for teaching endorsement in Industrial Arts.

3621. Upholstery. (3).

A study of machines, tools, materials, principles of design, construction processes, methods, and their application to actual problems. PREREQUISITE: Tech. 3601.

3831. Industrial Arts Electronics. (3).

Brief coverage of applied electronics for prospective teachers. PREREQUISITE: Technology 1821.

4341. Manufacturing Industries. (3).

Material, methods and procedures for presenting the manufacturing and/or construction industries in the Industrial Arts Laboratory. PREREQUISITES: Junior standing, Tech. 1611 or 1711.

4351. Power Industries. (3).

Materials, methods and procedures for presenting power and transportation industries in the Industrial Arts Laboratory. PREREQUISITE: Junior standing.

4353. Clinical Practice in Manual Arts Therapy. (6).

Supervised clinical practice in the Physical Medicine and Rehabilitation Service at Veterans Administration Hospital, Memphis. PREREQUISITE: Senior classification, with major in Industrial Arts Education.

4355. Power Mechanics. (3).

Principles of power mechanics including systems, operating principles, servicing and maintenance operations of selected types of power sources such as small engines, motors and turbines. PREREQUISITE: Tech. 3350 or permission of instructor.

Two lecture, two laboratory hours per week.

4361. Organization of The General Shop. (3).

Study of problems dealing with the selection and organization of general shop activities. PREREQUISITE: Junior standing.

4362. General Shop Applications. (3).

This course deals with the implementation of the philosophy of the general shop with emphasis on curriculum planning. PREREQUISITE: Junior standing.

4363. Occupations and Careers. (3).

The development and methods of presentation of career and occupational information to Industrial Arts students. PREREQUISITE: Junior standing.

4375. Crafts for Teachers. (3).

Study and experience with craft materials.

4382. Research and Development. (3).

Materials, methods and procedures for presenting research and development in the Industrial Arts Laboratory. PREREQUISITE: Junior standing.

4391. Communication-Industries. (3).

Materials, methods and procedures for presenting the communication industries in the Industrial Arts Laboratory. PREREQUISITES: Junior standing, Tech. 1511 and 1811.

MANUFACTURING TECHNOLOGY

1611. Wood Industries. (3).

Introduction to the processes of designing, developing and producing wood products through lectures, lab experiences, in the different wood-working areas. Introduction to machine wood-working.

1711. Machine Production Techniques. (3).

A study of metalworking equipment and machinery for production usage, including safety, care, layout, cutting feeds and speeds, tool grinding, drilling, tapping, shaping, turning, and milling.

2651. Survey of Forestry. (3).

An introduction to forestry as it relates to tree farming, the environment, conservation and utilization practices, and its economic impact on the forest products industries.

3410. Plastic Properties and Processes. (3).

The classification and properties of the basic groups of plastics and the industrial processes and techniques used in transforming the raw materials into usable products. PREREQUISITE: Chem. 1051.

Two lecture, two laboratory hours per week.

3421. Manufacturing Processes. (3).

A study of the various processes and techniques used to shape materials into useful products. Techniques include cuttings, molding, stamping, extruding, cold and hot forming, and grinding.

3422. Metal Manufacturing Processes. (3).

Advanced study and practice in metals machining and fabrication. Emphasis is on advanced techniques in duplicating equipment, numerically controlled machines, milling, shaping, grinding, and turning. PREREQUISITE: Tech. 1711.

3386. Industrial Safety. (3).

Study of industrial hazards and safety procedures.

3601. Principles of Building Construction. (3).

The development of knowledge and skills through lecture and laboratory experiences in light frame building construction and bending of wood. PREREQUISITE: Tech. 1611.

3611. Industrial Wood Processing. (3).

The study of wood product mass production techniques, to include jig and fixture design, product design, industrial woodworking machines, personnel management, and industrial wood finishing procedures. PREREQUISITE: Tech. 1611.

3631. Wood Technology. (3).

A study of the properties and characteristics of wood, to include macro and micro-identification, physical and mechanical properties of wood, wood adhesives, holding power of mechanical fasteners. RF and kiln drying of wood, and wood preservation. PREREQUISITE: Permission of instructor.

3718. Metal Forming and Fabrication. (3).

Industrial metal forming and fabrication processes and techniques. Includes layout and fabrication of sheet, plate and mill stock; casting processes and welding techniques. PREREQUISITE: Tech. 1711.

Two lecture, four laboratory hours per week.

3731. Metallurgy. (3).

A study of the properties of ferrous and non-ferrous metals with emphasis on; physical and mechanical properties, cold and hot working, heat treatment, hardening, and testing. PREREQUISITES: Tech. 1711 and Chem. 1051.

4460. Motion and Time Analysis. (3).

A study of methods improvements, motion economy, and the development of time standards by direct observation, predetermined time standards, and synthesis.

4462. Inspection and Quality Control. (3).

Inspecting products and controlling the quality through the use of statistical techniques. Topics for study include administration of inspection, tolerance systems, gaging, sampling inspection plans, frequency distributions, control charts for variables and control for fraction defective and defects per unit. PREREQUISITE: Mgmt. 3710.

4464. Production Control. (3).

The planning and control of production with emphasis on intermittent and continuous manufacturing. Fields of study include forecasting, designing control forms, using visual controls, scheduling, dispatching, preplanning, and using critical path techniques.

4466. Plant Layout. (3).

Designing a plant with respect to material handling, machine location, auxiliary services, capital requirements, safety, and personnel organization.

4468. Production Methods. (3).

A study and comparative analysis of production methods and techniques used to manufacture various types of products. Emphasis is on plant visitation and analysis with respect to methods used, plant layout, production control procedures and time standards established.

4470. Human Performance Factors. (3).

Determining the most effective way to integrate the man and the task he is to perform by studying work procedure, workstation layout, and equipment design.

4661. Forest Resources. (3).

A study of the relationship of forest products to the economy of the United States. PREREQUISITES: Permission of instructor and junior classification.

4951. Fire Safety Problems. (2).

Study of the fire hazards and control. PREREQUISITE: Tech. 3386.

4952. Chemical Safety Problems. (2).

Study of chemical hazards and control. PREREQUISITE: Tech. 3386.

4953. Electrical Safety Problems. (2).

Study of electrical hazards and control. PREREQUISITE: Tech. 3386.

4954. Traffic Safety Problems. (2).

Study of traffic problems as they relate to industrial plants. PREREQUISITE: Tech. 3386.

SUPPORTING COURSES

1010. Introduction to Computer Usage. (3).

Instruction on how computers operate. Methods of communicating with computers through input and output devices will be demonstrated and used. Elementary and familiar calculations will be programmed in FORTRAN and the student will have hands-on operational experience with the remote terminal equipment. Not for Engineering and Technology students. PREREQUISITE: High School Mathematics.

Two lecture, two laboratory hours per week.

1411. Introduction to Technology. (3).

An introduction to technology in industry, with emphasis on the use of references, the slide rule, precision measuring instruments, and systems of mensuration.

2411. Introduction to Instrumentation. (3).

Study of basic mechanical and electrical instruments used in the measurement of temperature, pressure, flow and level. PREREQUISITES: Tech. 1411, 1511, 1811 and Math. 1212.

2431. Technical Report Writing. (3).

Studies of fundamentals of technical report writing;

emphasis is placed on the use of graphs, charts, and drawings as used in the communication of technical information. PREREQUISITES: Tech. 1511 and Engl. 1102.

2551. Industrial Design. (3).

Theory and application of design and principles in industry. PREREQUISITE: Tech. 1511.

2561. Constructive Design. (3).

Laboratory experience in three-dimensional design for both handcraft and mass production. Woods, metals, and plastics are basic media for work with both models and full-scale design. PREREQUISITE: Tech. 2551.

3350. Fluid Power. (3).

Fundamental principles of hydraulics and pneumatics involving application, problem solving and basic design of fluid power circuits. PREREQUISITES: Tech. 1411, 1811.

Two lecture, two laboratory hours per week.

3400. Forces and Force Systems. (3).

A study of force systems and their solution; that branch of mechanics which deals with forces and with the effects of forces acting upon rigid bodies at rest. PREREQUISITES: Tech. 2511, Math. 1321, Phys. 2112.

3401. Strength of Materials. (3).

Analysis and study of structural materials. PREREQUISITES: Tech. 3400, Math. 1321, Phys. 2112.

3411. Industrial Materials. (3).

A course designed to acquaint the student with the various properties of structural materials and the methods used to test for these properties.

3440. Project Cost Evaluation. (3).

A study of the methods, techniques and formulas employed in the evaluation of alternative solutions to technological problems related to manufacturing and construction projects. PREREQUISITE: Junior standing.

Three lecture hours per week.

4381. Principles of Supervision. (3).

Study of the functions of supervisory personnel.

4944. Problems in Technology. (3).

Study and research in the specific area. PREREQUISITE: Senior classification for majors and minors in Technology who can offer satisfactory evidence of being qualified to benefit by the course.

ENGLISH

PROFESSOR WILLIAM OSBORNE, *Chairman*

Room 467, Patterson Hall

English Honors Program. Freshman students with high ACT scores are issued invitations to participate in the honors program, which is open to all qualified students during the freshman and sophomore years. During the junior and senior years, it is restricted to English majors; students are eligible to apply for admission to the program if they have a grade point average of 3.0 in their overall studies and in English. Honor students take special courses during the junior and senior years and write a senior research paper. At commencement

they are awarded the special distinction "with honors in English." Details of the program are available at the English Department office.

Requirements for the major and minor in English are listed on page 63. All candidates for graduation at Memphis State University are required to complete English 1101 and 1102, or their equivalent, and any two of the following: English 2101, 2102, 2103, 2104, 2105 or their equivalent. These two sequences must

be scheduled in consecutive semesters through the freshman and sophomore years, or until completed. English 1101 and 1102 must be taken in sequence; no credit will be allowed for English 1102 until 1101 has been completed successfully.

0100. English for Foreign Students. (0).

Training in the composition of English sentences and paragraphs with some attention to conversation.

1101. English Composition. (3).

Training in the writing of English sentences, paragraphs, and longer compositions related to the reading of essays and short fiction.

1102. English Composition and Analysis. (3).

Further training in English composition related to an introductory study of poetry, drama, and the novel. PREREQUISITES: English 1101 or equivalent.

2101. English Literature. (3).

Selected readings in English literature from the beginning through the eighteenth century with attention to the development of forms and to the cultural context. PREREQUISITES: English 1101 and 1102 or the equivalent.

2102. English Literature. (3).

Selected readings in English literature from the Romantic period to the present with continuing attention to the development of forms and to the cultural context. PREREQUISITES: English 1101 and 1102, or their equivalent.

2103. Readings in Literature I. (3).

Selected readings exemplifying some of the developmental features and humanistic themes in early and recent fiction, these masterworks to be drawn from world literature. PREREQUISITES: English 1101 and 1102, or their equivalent.

2104. Readings in Literature II. (3).

Selected readings exemplifying some of the developmental features and humanistic themes in early and recent drama and poetry, these masterworks to be drawn from world literature. PREREQUISITES: English 1101 and 1102.

2105. American Fiction. (3).

Selected readings in American fiction of the nineteenth and twentieth centuries with consideration of the characteristic themes and techniques of both the American novel and the American short story. PREREQUISITES: English 1101 and 1102, or their equivalent.

2601. Introduction to Creative Writing. (3).

A sophomore-level course designed to introduce students to the writing of fiction and poetry. This course is an elective, and will not fulfill any specific English requirement. PREREQUISITES: Grade of C or better in English 1101 or 1102, and the permission of the department registrar.

Note: No student may enroll for an upper-division English course until he has completed satisfactorily English 1101, 1102, or their equivalent, and any two of the following: English 2101, 2102, 2103, 2104, 2105, or their equivalent.

3211. The Medieval Period. (3).

Readings in English authors chiefly of the fourteenth and fifteenth centuries related to study of

Middle English.

3212. The Sixteenth Century. (3).

A study of the poetry and prose, chiefly non-dramatic, of the sixteenth and the early seventeenth century.

3213. The Seventeenth Century. (3).

Selected poetry and prose from Donne and Bacon to the Restoration, studied in relation to political and intellectual events of the period.

3214. The Restoration and the Eighteenth Century. (3).

A study of poetry and prose from 1660 to the Romantic Period, with attention to theoretical aspects of neoclassicism and the advent of romanticism.

3221. The Romantic Period. (3).

A study of English Romantic poetry, with some attention to the prose written during the early decades of the nineteenth century.

3222. Victorian Poetry. (3).

A study of major English poets writing between 1830 and 1900 with some consideration of the social, intellectual, and aesthetic interests of the period.

3223. Victorian Prose. (3).

A study of English prose between 1830 and 1900 with emphasis on critical and philosophical works.

3224. The Twentieth Century. (3).

A study of the major literary movements and techniques of English literature in the twentieth century.

3321. American Literature. (3).

A survey of American literature from the beginning through the Romantic period.

3322. American Literature. (3).

A survey of American literature from the advent of Realism to the present.

3341. The American Novel. (3).

Reading of representative American novels of the nineteenth century with consideration of their relation to English and European work and to American developments in the genre.

3342. The American Novel. (3).

Reading of representative American novels from 1900 to the present, with attention to relevant literary and cultural developments in Europe and America.

3411. European Literature. (3).

Major literary works of western civilization from Homer through the Renaissance, read in English translation.

3412. European Literature. (3).

Major literary works of western civilization from 1600 to the present, read in English translation.

3441. The Continental Novel. (3).

Critical analysis and appreciation of representative novels chosen from the works of important European writers from 1850 to 1950.

3501. English Grammar. (3).

A brief introduction to linguistic scholarship fol-

lowed by a survey of current grammatical theory, a review of English grammatical terminology, and a consideration of the relation between grammar and style.

3701. Theory and Practice in Literary Criticism. (3).

An introduction to theory of literature related to exercises in practical criticism.

4001. Senior Honors Seminar I. (3).

Intensive study of a problem in language or literature. Enrollment limited to English honors students.

4002. Senior Honors Seminar II. (3).

Intensive study of a problem in language or literature. Enrollment limited to English honors students.

4231. Chaucer. (3).

A study of Chaucer as a literary artist, including a reading of representative works and discussion of their philosophical and social context.

4232. Shakespeare's Tragedies. (3).

A study of selected tragedies, with detailed critical examination of at least five.

4233. Shakespeare's Comedies and Histories. (3).

A study of selected comedies and histories.

4234. Milton. (3).

A study of Milton's development as a literary artist, with emphasis on his poetry but with some attention to his prose.

4241. The English Novel. (3).

A study of major English novels from the Renaissance to the mid-nineteenth century.

4242. The English Novel. (3).

A study of major English novels from the mid-nineteenth century to the present.

4251. English Drama. (3).

A study of the development of the genre in England from medieval times to 1642.

4252. English Drama. (3).

A study of English drama from 1660 to the present, with attention to developments in the genre.

4321. American Literature: Major Writers. (3).

A study of seven major writers before 1850 including Poe, Hawthorne, Melville, Thoreau, and Emerson.

4322. American Literature: Major Writers. (3).

A study of seven major writers after 1850 including Whitman, Dickinson, James, Twain, and Elliot.

4323. Southern Literature. (3).

A study of Southern literature from its beginning to the present with emphasis on twentieth-century authors.

4351. American Drama. (3).

The development of American drama as a literary form studied in relation to the English and European tradition and to currents in American thought.

4371. American Negro Literature. (3).

A study of American Negro writing, from its beginning to the present, with emphasis upon major authors.

4423. Contemporary Poetry. (3).

A study of British and American poetry from about 1900 to the present.

4424. Contemporary Fiction. (3).

A study of English and American fiction from about 1900 to the present.

4461. Biblical Literature. (3).

A study of selected books from the Old and New Testaments with emphasis on their literary value and with consideration of the place of the Bible in world literature.

4501. History of the English Language. (3).

Study of the relationship of English to other Indo-European languages; of etymology and the effects of word-borrowing, word-formation, and semantic change on English vocabulary; and of the development of English sounds, inflections, and syntax.

4601. Creative Writing. (3).

Discussion of technique of fiction and verse, analysis of models, and criticism of student work. PREREQUISITE: permission of instructor.

4602. Advanced Composition and Rhetoric. (3).

A study of the rhetorical principles involved in writing clear, effective expository prose, with the emphasis placed upon the application of these principles to the student's own writing. Analysis both of readings and of student writing. Not designed for remedial purposes.

4603. Advanced Creative Writing. (3).

Continued discussions of the techniques of fiction and poetry, analysis of models, and criticism of student work. PREREQUISITE: English 4601.

Graduate courses in English: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

FINANCE, INSURANCE AND REAL ESTATE

PROFESSOR PETER F. FREUND, *Chairman*

*Room A 402, The College of Business Administration
Building*

Requirements for the major and minor are listed on page 73.

2220. Personal Financial Management. (3).

General Elective. Non-technical course dealing

with the broad areas of budgeting, insurance, borrowing and credit purchases, home ownership, investment, taxes, and family financial planning. Open to non-business majors only.

3011. Business Law. (3).

A course designed to familiarize the student with the elements of law and legal principles encountered by the businessman. Emphasis will be given to the basic law of contracts, sales and secured transactions, negotiable instruments, real and personal property, agency, forms of business organization, suretyship, insurance contracts and torts.

3130. The Legal, Social, and Political Environment of Business. (3).

The central issue of this course is the legal, social, and political environment in which business and its executives exist. Students will be encouraged to gain a broad understanding of the legal, social, and political forces that affect business operations. Both lectures and case discussions will be utilized.

3310. Real Estate. (3).

Real estate law, property description, methods of transferring property, joint ownership, tax sales and title to property, inheritance of real property. Both semesters.

3410. Business Finance. (3).

An introduction to principles of financial management integrated with institutional finance. Current topics of managerial finance including working capital management, capital budgeting, and acquisition of funds are discussed. PREREQUISITE: Accounting 2020.

3710. Investments. (3).

The principles of investment in stocks and bonds and their application to specific classes of investments. Both semesters. PREREQUISITE: Accounting 2020.

3720. Financial Markets. (3).

A survey of the important capital funds markets, the institutions and characteristics peculiar to them. The sources of supply and of demand for funds in each market, and the complex interrelations between the several markets are carefully analyzed. Both semesters. PREREQUISITE: ECON 3610.

3810. Principles of Risk and Insurance. (3).

Theory of risk, risk management, and insurance practice and problems in the fire, liability, automobile, marine, surety, life, health and accident lines. Both semesters.

4011. Law of Taxation and Planning of Estates. (3).

A survey course of the law of taxation as applied to the transmission of property by gift or death and its impact upon accumulations of wealth. Estate planning from an individual viewpoint designed to create, maintain, and distribute the maximum estate possible. Fall semester. PREREQUISITE: FIR 3011 or consent of the instructor.

4310. Real Estate Law. (3).

This course covers law and legal instruments as applied to real estate and is designed to serve the needs of property owners and those engaged in the real estate business. PREREQUISITE: FIR 3310.

4320. Real Estate Finance. (3).

Examination and analysis of the source of funds for financing all kinds of real estate transactions,

including FHA and VA types. PREREQUISITE: FIR 3310.

4430. Determinants in Housing Finance. (3).

Consideration of determinants of private and public demand for housing; the relationships between construction and economic trends; new town legislation, urban renewal and development, improving environment and housing for low income groups, criteria for assessing public policy, policy implementation; the role of a private enterprise in developing, maintaining and improving housing. PREREQUISITE: FIR 3310.

4430. Real Estate Appraisal. (3).

The fundamentals of appraising residential, commercial, and industrial real estate. PREREQUISITE: FIR 3310.

4450. Real Estate Investment Analysis. (3).

Real Estate investment principles and practices will be reviewed, analyzed and evaluated. Emphasis will be placed on tax considerations, investment strategy and model building. PREREQUISITE: FIR 3310.

4440. Managerial Finance. (3).

Analytical approaches to the firm's financial decisions; including current asset management, capital budgeting, the cost of capital, capital structure determination, and dividend policy. PREREQUISITE: FIR 3410.

4450. International Finance. (3).

Financing international trade and investments; foreign exchange markets and exchange rates; the balance of payments; current developments in international financial cooperation. Fall Semester. PREREQUISITES: FIR 3410, Economics 3610.

4410. Cases in Managerial Finance. (3).

A case course emphasizing the application of tools and principles introduced in previous courses to develop up-to-date problem solving techniques: Cases are approached from the standpoint of top level management and utilize both quantitative and qualitative analysis. PREREQUISITE: FIR 4440;

4720. Operations and Management of Financial Institutions. (3).

This course is designed to provide exposure to the financial policies and decision-making that are peculiar to financial institutions in the United States. The profitable management of funds consistent with adequate standards of liquidity and solvency. PREREQUISITES: Econ 3610, FIR 3410, and FIR 3720.

4770. Security Analysis and Portfolio Management (3).

A development of techniques for finding the actual worth of securities, primarily stocks and bonds. Portfolio management involves selection, timing, diversification, and other aspects of supervising investment funds. Spring semester. PREREQUISITE: FIR 3710.

4790. Internship in Real Estate. (3).

Seniors majoring in real estate with the approval of the department faculty, are placed with real estate firms to work in the areas of real estate sales, brokerage, finance, development, appraisal and property management. PREREQUISITES: FIR 3310 and senior standing.

4810. Property and Casualty Insurance. (3).

The forms and functions of fire, marine, automobile, general liability, and other types of property and casualty insurance with emphasis on their application to commercial and industrial occupancies. A survey of current underwriting practice. Spring semester. PREREQUISITE: FIR 3810.

4820. Life and Health Insurance. (3).

The functions of life and health insurance with emphasis upon the need for insurance and the service of life and health insurance to the American family and community. A study of the mechanics of private and public insurance and annuities. Fall semester. PREREQUISITE: FIR 3810.

4840. Functional Aspects of Property and Liability Insurance Carriers. (3).

Company and industry functions other than contracts, including rating, rate-making, reserves, auditing, underwriting, reinsurance, claims, production engineering, and governmental supervision. Fall semester. PREREQUISITE: FIR 3810.

4850. Social Insurance. (3).

The nature and causes of economic insecurity in our society with emphasis on the broader aspects of public and private programs: the Social Security Act, Unemployment Compensation, Workmen's Compensation, Medicare and other ap-

proaches. The course de-emphasizes detailed facts and statistics which are otherwise readily available from various governmental agencies. PREREQUISITE: junior standing.

4860. Employee Benefit Programs. (3).

Group insurance, the essence of fringe benefits for employees; a study of group life insurance, group health and accident insurance, group pension and profit-sharing plans. Spring semester. PREREQUISITE: junior standing.

4870. Risk Management. (3).

Problems of the risk manager in small and large firms, methods of handling risk that serve as alternatives to obtaining insurance, and a brief survey of insurance as a standard for comparisons. Spring semester. PREREQUISITE: junior standing.

4910. Problems in Finance, Insurance, or Real Estate. (1-3).

Student will carry on approved research projects in his major area under supervision of staff members. PREREQUISITE: Senior standing and permission of the department chairman.

Graduate courses in Finance, Insurance, and Real Estate: Some of the 4000 courses described in the preceding section may be taken for graduate credit. For further details of the graduate program see The Bulletin of The Graduate School.

FOREIGN LANGUAGES

PROFESSOR FRANKLIN O. BRANTLEY, *Chairman*

Room 375A, Mathematics/Foreign Languages Building

The Department of Foreign Languages offers majors and minors in French, German, Latin, Russian, and Spanish; a minor is also offered in Greek and Italian. Requirements are listed on page 63. Requirements for the major or minor in Comparative Literature are listed on page 62. Details for specific requirements in foreign languages for the various degrees offered by the University are explained on page 51.

One hour a week in the language laboratory (two half-hour sessions) is required for all 1101, 1102, and 2201 courses in the modern languages.

CLASSICS

3021. Latin and Greek Etymology. (3).

Origin and derivation of words, especially those used in medicine and science. This course is given in English and is open to all students without prerequisite. It may not be used to satisfy any part of the foreign language requirements nor does it apply toward a major in classical languages.

COMPARATIVE LITERATURE

The following courses are given in English and are open to all students without prerequisite. They may not be used to satisfy any part of the foreign language requirement nor do they apply toward a major or minor in any of the foreign languages. They may count toward a major or minor in Comparative Literature.

3411. European Literature. (3).

Major literary works of western civilization from Homer through the Renaissance, read in English translation. (Same as English 3411.)

3412. European Literature. (3).

Major literary works of western civilization from 1600 to the present, read in English translation. (Same as English 3412.)

3413. Survey of Greek Literature. (3).

Analysis of content and characteristics of the various literary types including tragedy, comedy, epic poetry, lyric poetry, and historical prose from Homer to Lucan.

3414. Survey of Roman Literature. (3).

History and character of the literature of the Roman Republic and early Empire. Selections from Plautus through Juvenal. Analysis of individual works, especially in relation to the development of the genre.

3441. Russian Literature of the Nineteenth Century. (3).

An introduction to the authors of the Golden Age of Russian Literature, with representative works from Pushkin, Lermontov, Gogol, and Turgenev. (Same as Russian 3441 but in English translation.)

3442. Russian Literature of the Nineteenth Century. (3).

Readings in representative works of Dostoevski, Tolstoi, Chekov, and Gorki. (Same as Russian 3442 but in English translation.)

4423. Cervantes. (3).

A study of *Don Quixote* and the *Novelas ejemplares*. (Same as Spanish 4423 but in English translation.)

4431. Contemporary Spanish Prose. (3).
A study of Spanish prose from the Generation of 1898 to the present. (Same as Spanish 4431 but in English translation.)

4432. The Contemporary French Novel. (3).
A general survey of the twentieth century French novel, treating the works of such authors as Proust, Gide, Mauriac, Malraux, Sartre, Camus, Maurois, and others. (Same as French 4432 but in English translation.)

4441. Dante. (3).
A study of the *Vita Nuova* and the *Divina Commedia*. (Same as Italian 4441 but in English translation.)

4452. The Contemporary French Drama. (3).
From Becque and his school, the Theatre Libre, and Rostand to the present, with emphasis on the twentieth century drama and such playwrights as Pagnol, Claudel, Tristan Bernard, Giraudoux, Anouilh, Montherlant, Camus, Sartre, Cocteau, and others. (Same as French 4452 but in English translation.)

4461. Twentieth Century German Prose and Poetry. (3).
A study of works of Hesse, Thomas Mann, Kafka, Rilke, Frisch, and Grass. (Same as German 4461 but in English translation.)

4462. Twentieth Century German Drama. (3).
Study of plays by Gerhart Hauptmann, the German Expressionists, Brecht, Frisch, Durrenmatt, and Peter Weiss. (Same as German 4462 but in English translation.)

4791. Studies in Comparative Literature. (3).
A study of selected authors, works, or literary problems. May be repeated for credit up to a maximum of six hours. PREREQUISITE: Joint consent of instructor and the director of the Comparative Literature program.

FRENCH

1101. Elementary French. (3).
Elements of grammar and pronunciation, with the reading of simple selections.

1102. Elementary French. (3).
A continuation of French 1101, with reading selections of increasing difficulty. PREREQUISITE: French 1101 or the equivalent.

2201. Intermediate French. (3).
A comprehensive review of French grammar, exercises in writing, and readings in French literature and culture. PREREQUISITE: French 1102 or the equivalent.

2202. Intermediate French. (3).
A continuation of French 2201, with more advanced readings. PREREQUISITE: French 2201 or the equivalent.

3301. Conversation and Composition. (3).
PREREQUISITE: French 2202 or the equivalent.

3302. Conversation and Composition. (3).
PREREQUISITE: French 3301 or permission of the instructor.

3401. French Civilization. (3).
The culture of France as reflected in its history, social institutions, art, and music.

3411. Survey of French Literature. (3).
Introduction to the civilization of France through lectures and the readings of representative literary works and writers from the beginnings through the eighteenth century.

3412. Survey of French Literature. (3).
A continuation of the study of French civilization through lectures and reading of representative works of the major writers in the nineteenth and twentieth centuries.

3421. The Seventeenth Century. (3).
A study of the underlying principles of French Classicism in general and of the theatre in particular, with emphasis on works of Corneille, Moliere, and Racine and their relationship to the critical theories of Boileau.

3422. The Seventeenth Century. (3).
A study of the representative works in the classical genres, emphasizing the later masterpieces of Moliere and Racine, and selected works of Mme. de La Fayette, La Fontaine, Mme. de Sevigne, La Bruyere, and La Rochefoucauld.

4301. French Phonetics. (3).
The theory and practice of French sounds; especially recommended for teachers of French. PREREQUISITE: Three years of college French or permission of the instructor.

4305. French Stylistics. (3).
Translations of English prose into French with an emphasis on style and grammar. Recommended for all French majors. PREREQUISITE: French 3302 or permission of the instructor.

4421. The Eighteenth Century. (3).
The novel from Lesage through the eighteenth century and the drama from Lesage through the theatre of Beaumarchais.

4422. Liberal Ideas in the Eighteenth Century. (3).
Study of philosophical thought from the revocation of the Edict of Nantes to the French Revolution with attention given to Bayle, Montesquieu, Voltaire, Diderot, and Rousseau.

4431. The Nineteenth Century French Novel. (3).
The French novel from the Revolution to the twentieth century, treating the movements of Romanticism, Realism, and Naturalism as they are reflected in the works of such authors as Balzac, Stendhal, Flaubert, and Zola.

4432. The Contemporary French Novel. (3).
A general survey of the twentieth-century French novel, treating the works of such authors as Proust, Gide, Mauriac, Malraux, Sartre, Camus, Maurois, and others.

4451. The Nineteenth Century French Drama. (3).
French drama from 1800 to 1870, including such authors as Hugo, Vigny, Musset, Scribe, Augier, and Dumas *filis*.

4452. The Contemporary French Drama. (3).
From Becque and his school, the *Theatre Libre*, and Rostand to the present, with emphasis on the

twentieth-century drama and such playwrights as Pagnol, Claudel, Tristan Bernard, Giraudoux, Anouilh, Montherlant, Camus, Sartre, Cocteau, and others.

4471. Nineteenth-Century Poetry. (3).

French poetry from Chénier through the Parnassians and the Symbolists.

4501. Applied French Linguistics. (3).

Application of modern linguistic theories to learning French. PREREQUISITE: French 3301.

4781. History of Criticism of French Literature. (3).

A study of the main theories of literary criticism from the Renaissance through the 20th Century, with an introduction to methods of research.

Graduate courses in French: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

GERMAN

1101. Elementary German. (3).

Elements of grammar and pronunciation, with the reading of simple selections.

1102. Elementary German. (3).

A continuation of German 1101, with reading selections of increasing difficulty. PREREQUISITE: German 1101 or equivalent.

2201. Intermediate German. (3).

A comprehensive review of German grammar, exercises in writing, and readings in German literature and culture. PREREQUISITE: German 1102 or equivalent.

2202. Intermediate German. (3).

A continuation of German 2201, with more advanced readings. PREREQUISITE: German 2201 or equivalent.

2203. Scientific German. (3).

A continuation of 2201, with readings in science areas. PREREQUISITE: German 2201 or equivalent.

3301. Conversation and Composition. (3).

PREREQUISITE: German 2202 or equivalent.

3302. Conversation and Composition. (3).

PREREQUISITE: German 3301, or permission of the instructor.

3410. Introduction to German Literature and Culture, Part I. (3).

From the beginnings to 1600. PREREQUISITE: German 2202 or the equivalent.

3411. Introduction to German Literature and Culture, Part II. (3).

From the Baroque period through the Romantic period (1600-1830). PREREQUISITE: German 2202 or equivalent.

3412. Introduction to German Literature and Culture, Part III. (3).

From the *Biedermeier* period to the present day (1830-today). PREREQUISITE: German 2202 or equivalent.

3451. Nineteenth Century Drama. (3).

Selected plays of Kleist, Grillparzer, and Hebbel. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

3461. Nineteenth Century Prose and Poetry. (3).

A study of selected works. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4301. Advanced Grammar. (3).

A thorough and systematic presentation of German grammar. Recommended for all German majors. PREREQUISITE: German 3301 or 3302, or permission of the instructor.

4401. Early German Literature. (3).

German literature from its beginnings to the end of the medieval period. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4402. Humanism, Renaissance, and Reformation. (3).

German literature from the end of the medieval period through the Reformation. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4421. The Baroque Period. (3).

Studies in the writings of important authors of the Baroque period. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4441. The Age of Enlightenment and *Sturm und Drang*. (3).

A study of selected works. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4461. Twentieth Century Prose and Poetry. (3).

A study of works of Hesse, Thomas Mann, Kafka, Rilke, Frisch, and Grass. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4462. Twentieth Century Drama. (3).

Study of plays of Gerhart Hauptmann, the German Expressionists, Brecht, Frisch, Durrenblatt, and Peter Weiss.

4481. Schiller. (3).

A study of the major writings of Schiller. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4482. Goethe. (3).

A study of the major writings of Goethe. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4501. Applied German Linguistics. (3).

Application of modern linguistic theories to learning German. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

4511. The German Language: Development and Structure.

Study of the German language in its various stages of development. PREREQUISITES: Two courses from the group 3301, 3410, 3411, 3412, or permission of the instructor.

3781. History of Criticism of German Literature. (3).

A study of the main theories of literary criticism from the Renaissance through the 20th Century, with an introduction to methods of research.

GREEK

1101. Elementary Greek. (3).

Elements of Greek grammar and syntax; practice in reading and translation.

1102. Elementary Greek. (3).

Completion of basic grammar and syntax, with additional readings. PREREQUISITE: Greek 1101 or the equivalent.

2201. Xenophon. (3).

Readings and interpretation of Xenophon's *Anabasis*. PREREQUISITE: Greek 1102 or the equivalent.

2202. Homer. (3).

Reading and interpretation of Book IX of Homer's *Odyssey*. PREREQUISITE: Greek 2201 or the equivalent.

3111. Herodotus. (3).

Reading and analysis of Books VI-VIII of Herodotus' *History*

3511. Euripides. (3).

Reading and analysis of the dramas *Alcestis* and *Medea*.

3561. Sophocles. (3).

Reading and analysis of selected dramas.

3911. Plato's *Apology, Crito*. (3).

Reading and analysis of the dialogues of Plato which give a prelude to the death of Socrates.

3912. Plato's *Republic*. (3).

Reading and analysis of selected books of Plato's *Republic*.

ITALIAN

1101. Elementary Italian. (3).

Elements of grammar and pronunciation, with the reading of simple selections.

1102. Elementary Italian. (3).

A continuation of Italian 1101, with selections of increasing difficulty. PREREQUISITE: Italian 1101 or the equivalent.

2201. Intermediate Italian. (3).

A comprehensive review of Italian grammar, exercises in writing, and reading in Italian literature and culture. PREREQUISITE: Italian 1102 or the equivalent.

2202. Intermediate Italian. (3).

A continuation of Italian 2201, with more advanced readings. PREREQUISITE: Italian 2201 or the equivalent.

3411. Survey of Italian Literature. (3).

The development of the Florentine dialect as the literary language of Italy. The study of representative writers from the thirteenth to the eighteenth century. Dante. PREREQUISITE: Italian 2202 or permission of the instructor.

3412. Survey of Italian Literature. (3)

A study of outstanding writers of the eighteenth, nineteenth, and twentieth centuries, with special attention to Goldoni, Alfieri, Leopardi, Manzoni, Pirandello, and Benedetto Croce. PREREQUISITE: Italian 3411 or permission of the instructor.

4421. The Sixteenth Century. (3).

Literature of the Italian Renaissance: Ariosto, Machiavelli, Cellini, Sasso, and others.

4441. Dante. (3).

A study of the *Vita Nuova* and the *Divina Commedia*.

4451. The Nineteenth Century. (3).

Literary movements and writers of the nineteenth century from Monti and Foscolo to Pascoli and D'Annunzio.

LATIN

1101. Elementary Latin. (3).

Elements of grammar; practice in Latin composition and translation.

1102. Elementary Latin. (3).

Completion of elementary Latin grammar, with additional readings. PREREQUISITE: Latin 1101 or the equivalent.

2201. Intermediate Latin. (3).

A review of basic Latin grammar with reading selections from *The Golden Fleece* and Roman history. PREREQUISITE: Latin 1102 or the equivalent.

2202. Caesar. (3).

The reading and analysis of selections from Caesar's *De Bello Gallico*. PREREQUISITE: Latin 2201 or the equivalent.

3111. Livy. (3).

Reading and analysis of Livy's *History*, Books XXI, XXII.

3112. Tacitus. (3).

Reading and analysis of selections from the *Histories*, *Agricola*, and *Germania*.

3211. Vergil. (3).

Reading and analysis of the *Aeneid*.

3411. Pliny, Martial. (3).

Reading and analysis of the *Letters* of Pliny and the *Epigrams* of Martial.

3511. Roman Comedy. (3).

A thorough study of Roman comedy in the representative works of Plautus and Terence.

3561. Roman Tragedy. (3).

Study of the development of Roman tragedy and analysis of the tragedies of Seneca.

3611. Horace's Satires. (3).**3811. Ovid. (3).**

Reading and analysis of the myths in Ovid's *Metamorphoses*.

3911. Lucretius. (3).

Reading and analysis of Roman philosophy in Lucretius' *De Rerum Natura*.

- 3912. Cicero. (3).**
Reading and analysis of *De Amicitia* and *De Senectute*.
- 4411. Roman Letter Writers. (3).**
Reading and analysis of Cicero's *Letters*.
- 4611. Roman Satire. (3).**
Reading and analysis of Juvenal's *Satires*.
- 4711. Catullus, Horace. (3).**
Reading and analysis of Catullus' *Lyric Poems* and Horace's *Odes*.

PORTUGUESE

- 1101. Elementary Portuguese. (3).**
Elements of grammar and pronunciation, with the reading of simple selections.
- 1102. Elementary Portuguese. (3).**
A continuation of Portuguese 1101, with reading selections of increasing difficulty. PREREQUISITE: Portuguese 1101 or the equivalent.
- 2201. Intermediate Portuguese. (3).**
A comprehensive review of Portuguese grammar with readings and exercises designed to increase the student's vocabulary, contribute to his mastery of idiomatic constructions, and introduce him to Portuguese and Brazilian literature. PREREQUISITE: Portuguese 1102 or the equivalent.
- 2202. Intermediate Portuguese. (3).**
A continuation of Portuguese 2201 with further readings in Portuguese and Brazilian literature; conversation and composition designed to enlarge the student's vocabulary and improve his pronunciation. PREREQUISITE: Portuguese 2201 or the equivalent.
- 3511. Masterpieces of Brazilian Literature. (3).**
The reading in Portuguese and analysis of representative works of leading Brazilian authors such as Jose de Alencar, Aluizio Azevedo, Machado de Assis, Olavo Bilac, Manoel Bandeira, Gilberto Freyre and Erico Verissimo. PREREQUISITE: Portuguese 2202 or the equivalent.

RUSSIAN

- 1101. Elementary Russian. (3).**
Elements of grammar and pronunciation, with the reading of simple selections.
- 1102. Elementary Russian. (3).**
A continuation of Russian 1101, with reading selections of increasing difficulty. PREREQUISITE: Russian 1101 or the equivalent.
- 2201. Intermediate Russian. (3).**
A comprehensive review of Russian grammar, exercises in writing, and readings in Russian literature and culture. PREREQUISITE: Russian 1102 or the equivalent.
- 2202. Intermediate Russian. (3).**
A continuation of Russian 2201, with more advanced readings. PREREQUISITE: Russian 2201 or the equivalent.
- 3301. Conversation and Composition. (3).**
PREREQUISITE: Russian 2202 or the equivalent.

- 3302. Conversation and Composition. (3).**
PREREQUISITE: Russian 3301 or permission of the instructor.
- 3411. Survey of Russian Literature. (3).**
Survey of Russian literature from the earliest chronicles, folktales, and legends through the classical period to the end of the eighteenth century.
- 3412. Survey of Russian Literature. (3).**
Survey of Russian literature from the beginning of the nineteenth century to the Soviet period. Authors include Pushkin, Gogol, Lermontov, Turgenyev, Doestoevski, Tolstoi, and Chekhov.
- 3441. Russian Literature of the Nineteenth Century. (3).**
An introduction to the authors who herald the *Golden Age* of Russian Literature, with representative works from Pushkin, Lermontov, Gogol, and Turgenyev.
- 3442. Russian Literature of the Nineteenth Century. (3).**
Readings in representative works of Doestoevski, Tolstoi, Chekhov, and Gorki.
- 3443. Russian Literature of the Twentieth Century. (3).**
An introduction to the works of Bunin, Zamjatin, Bely, A. Tolstoy, Scholochov, and Solzhenitsyn.
- 3444. Russian Literature of the Twentieth Century. (3).**
An introduction to works which herald the *Silver Age* of Russian Poetry. Authors include Blok, Brusov, Achmatova, Zwetaeva and Mandelstam.

SPANISH

- 1101. Elementary Spanish. (3).**
Elements of grammar and pronunciation, with the reading of simple selections.
- 1102. Elementary Spanish. (3).**
A continuation of Spanish 1101. PREREQUISITE: Spanish 1101 or the equivalent.
- 2201. Intermediate Spanish. (3).**
A comprehensive review of Spanish grammar, exercises in writing, and readings in Hispanic literature and culture. PREREQUISITE: Spanish 1102 or the equivalent.
- 2202. Intermediate Spanish. (3).**
A continuation of Spanish 2201, with more advanced readings. PREREQUISITE: Spanish 2201 or the equivalent.
- 3301. Conversation and Composition. (3).**
PREREQUISITE: Spanish 2202 or the equivalent.
- 3302. Conversation and Composition. (3).**
PREREQUISITE: Spanish 3301 or permission of the instructor.
- 3411. Survey of Spanish Literature. (3).**
Formation of the Spanish language and literature, with readings of representative works to illustrate principal periods and genres from the beginnings to 1700.

- 3412. Survey of Spanish Literature. (3).**
A continuation of Spanish 3411, covering Neo-classicism, Romanticism, *costumbrismo*, Realism, Naturalism, and the contemporary period.
- 3511. Survey of Spanish American Literature. (3).**
A survey of Spanish American literature from the Colonial Period to the end of Romanticism.
- 3512. Survey of Spanish American Literature. (3).**
A survey of Spanish American literature from the beginnings of Modernism to the present.
- 3611. Survey of Spanish Civilization. (3).**
Spain and its people; highlights of Spanish civilization as revealed in the fields of literature, music, painting, and architecture.
- 3612. Survey of Latin American Civilization. (3).**
Latin America and its people; highlights of Latin American civilization as revealed in the fields of literature, music, painting, and architecture.
- 3301. Spanish Phonetics. (3).**
The sounds and intonation patterns of Spanish; analysis and practice; comparison with the sounds and intonation patterns of English. Especially recommended for teachers of Spanish.
- 3302. Advanced Grammar. (3).**
A thorough and systematic presentation of Spanish grammar. Recommended for all Spanish majors. PREREQUISITE: 3301 or 3302.
- 3421. The Golden Age. (3).**
A study of Spanish lyric poetry and drama of the sixteenth and seventeenth centuries. PREREQUISITES: Spanish 3411 and 3412, or permission of the instructor.
- 422. The Golden Age. (3).**
A study of Spanish prose of the sixteenth and seventeenth centuries. PREREQUISITES: Spanish 3411 and 3412, or permission of the instructor.
- 4423. Cervantes. (3).**
A study of *Don Quixote* and the *Novelas ejemplares*.
- 4431. Contemporary Spanish Prose. (3).**
A study of Spanish prose from the Generation of 1898 to the present. PREREQUISITES: Spanish 3411 and 3412, or permission of the instructor.
- 4432. Contemporary Spanish Poetry and Drama. (3).**
A study of Spanish poetry and drama from the Generation of 1898 to the present. PREREQUISITES: Spanish 3411 and 3412, or permission of the instructor.
- 4501. Applied Spanish Linguistics. (3).**
Application of linguistic theory to the learning and teaching of Spanish; recommended for teachers. PREREQUISITE: Spanish 4301 or permission of instructor.
- 4561. Spanish American Prose Fiction I. (3).**
Development of the novel and short story in Spanish America from the beginnings through the Mexican Revolution. PREREQUISITE: Spanish 3511.
- 4562. Spanish American Prose Fiction II. (3).**
The Spanish American novel and short story from the Mexican Revolution to the present. PREREQUISITE: Spanish 3512.
- 4781. History of Criticism of Hispanic Literature. (3).**
A study of the main theories of literary criticism from the Renaissance through the 20th Century, with an introduction to methods of research.

Graduate courses in Spanish: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

FOUNDATIONS OF EDUCATION

PROFESSOR CARLTON H. BOWYER, *Chairman*

Room 404, The College of Education Building

The department does not offer a major or minor at the undergraduate level. Its primary role at the undergraduate level is to provide study in the socio-cultural and psychological foundations of education for all students seeking to qualify for teacher certification and/or the Bachelor of Science in Education degree. Letters following each subheading are prefixes used by the College of Education.

EDUCATIONAL FOUNDATIONS (EDFD)

- 401. Exploring Careers in Education. (1).**
Provides experiences designed to help students develop on-the-scene familiarity with varied educational situations, move toward determination of a preferred teaching interest, observe cultural differences, become aware of socio-educational relationships, and develop backgrounds clarifying and adding meaning to other professional courses.

- 411. Foundations of Educational Thought and Practice. (3).**
A consideration of the development of Western

education as directed by the precedents and contributions of (1) history, (2) the underlying philosophical theories, (3) the influence of society at large, and (4) the consequent and contemporary practices in American education.

- 4008. Special Problems in Cultural Foundations of Education. (1-3).**
Individual investigation and report of a specific problem under the direction of a faculty member. PREREQUISITE: Permission of the instructor.
- 4012. History of American Education. (3).**
This course aims to trace, describe, and evaluate the development and growth of educational practices, institutions, and theories in the United States from the colonial period to the present.
- 4021. Philosophy of Education. (3).**
A guide to the philosophical treatment of educational problems, designed to develop in the student some facility in critical and systematic thinking.

4031. School and Society. (3).

Group behavior in the educational process; sociological factors involved in the interaction of pupils, teachers, administrators, and community.

4032. Sociological and Psychological Implications of Urban Education. (3).

Examination of literature on the sociology and psychology of urban education, including a study of changing trends in urban education. Emphasis is on the implications for educators in an urban setting.

4042. Survey of Educational Systems in Latin America. (3).

This course examines the development of selected educational systems in Central and South America, determining how religious, economic, and political forces shaped educational policies and practices and how education in these systems differs from that in the United States.

4051. Anthropology and Education. (3).

(Same as Anthropology 4051).

A study of the cultural transmission process with emphasis on identifying different behavioral, cognitive, and learning styles of various ethnic groups within American society and selected third world countries. Encounters of U.S. subcultural groups within the public education system are examined.

RESEARCH METHODOLOGY AND STATISTICS (EDRS)**4511. Measurement and Evaluation. (3).**

The principles underlying the construction of objective tests and the problems relating to the use and interpretation of school measurements by teachers and administrators, practice in the construction of new-type and essay tests, and in the elements of statistical procedure necessary for the interpretation of school measurements.

4518. Special Problems in Educational Measurement. (1-3).

Individual investigation and report of a specific problem under the direction of a faculty member. PREREQUISITE: Permission of the instructor.

4541. Introduction to Educational Statistics and Practicum Applications I. (3).

This course deals with techniques used in educational research. The course contains the development of skills dealing with mathematical probability, frequency functions, moments, and measures of dispersion. Applications of course content will be coordinated with the research seminar. PREREQUISITE: Restricted to selected students.

4542. Introduction to Educational Statistics and Practicum Applications II. (3).

The course includes the use of statistics in research designs, the problem of replicability, and the methodology used in proposing and reporting research. The course will be directed toward the development of competence in statistical applications. PREREQUISITE: Educational Foundations 4541, and restricted to selected students.

4701-10. Workshops in the Foundations of Education.

NOTE: Not more than 9 semester hours of workshop credit can be applied toward a degree.

4701. Workshop In the Social, Cultural and Behavioral Characteristics of the Inner-City Learner. (1-3).**4702. Workshop in the Social, Cultural and Behavioral Characteristics of the Suburban School Learner. (1-3).****EDUCATIONAL PSYCHOLOGY (EDPS)****2111. Human Growth and Development. (3).**

An attempt to help the student understand child nature and development, to appreciate the fact that all behavior is caused, and to form the habit of seeking bases for both normal and abnormal behavior in situations at home, at school, and in the community.

3121. The Psychology of Learning. (3).

The psychology of learning as applied to activities under the guidance of the school. PREREQUISITE: Student must have filed and not been rejected for admission to the Teacher Education Program or declare no intention of securing teacher certification.

4108. Special Problems In Educational Psychology. (1-3).

Individual investigation and report of a specific problem under the direction of a faculty member. PREREQUISITE: Permission of the Instructor.

4112. The Psychology of Adolescence. (3).

A laboratory study of the physiological, sociological, and psychological factors which act as antecedents of adolescent behavior as well as categories for the observation of behavioral outcomes during adolescence. Emphasis will be placed on the relationship of specific behavior to problems encountered by teachers of adolescents. Community facilities will be used for laboratory observations.

4122. Management of Classroom Behavior. (1-3).

A study of psychological principles and paradigms that can be used by educators to cope with behavioral problems and to improve the social and emotional behavior of pupils. Emphasis is placed on the requirement that students in this course demonstrate competence in applying psychological principles in appropriate educational laboratory settings.

LECTURE/LAB: Approximately 2/3 of total course time will be spent in academic study; about 1/3 in laboratory application.

4701-10. Workshops in the Psychological Foundations of Education.

NOTE: Not more than 9 semester hours of workshop credit can be applied toward a degree.

4701. Workshop in the Psychological Effects of Learning Interaction. (1-3).**4702. Workshop in Learning Problems in the Elementary School. (1-3).****4703. Workshop in Learning Problems in the Secondary School. (1-3).**

GEOGRAPHY

PROFESSOR PAUL HARDEMAN SISCO, *Chairman**Room 115, Johnson Hall*

Requirements for the major and minor in geography are listed on page 64.

IMPORTANT NOTE: The prerequisite for all 3000 and 4000 level courses is either junior standing (a minimum of 55 semester hours credit) or the permission of the instructor.

1101. Introduction to Earth Science I. (4).

An introductory study of earth-sun and earth-moon relations, the oceans and their movements, weather, and climate.

Three lecture, two laboratory hours per week.

1102. Introduction to Earth Science II. (4).

An introductory study of maps as a basic tool in understanding earth phenomena, landforms, the structure and composition of rocks, soils, and their capabilities.

Three lecture, two laboratory hours per week.

301. A Survey of World Regions I. (3).

An introduction to the essential elements of geographical analysis to establish a framework for understanding many of the complexities of the contemporary world. A survey will be made of those regions of the world generally referred to as "developing" and will encompass most of Africa, Asia, and Latin America.

311. A Survey of World Regions II. (3).

This course is a continuation of the approach developed in 2301. The emphasis however, will be on the more highly "developed" areas, including Europe, North America, and the Soviet Union.

201. Spatial Economic Systems I. (3).

An analysis of the spatial characteristics of economic systems which are directly related to the physical environment, with a particular emphasis on agricultural systems.

11. Spatial Economic Systems II. (3).

An analysis of the spatial characteristics of manufacturing, trade, and service systems as they relate to the physical environment and their relationship to urban development.

01. North Africa and the Middle East. (3).

A study in areal differentiation based on the analysis of co-varying phenomena, physical and non-physical, in a region inhabited by people who are predominantly Moslem.

02. Africa South of the Sahara. (3).

An analysis of the resources and regional complexities with stress on the significance of the relationship between cultural and physical phenomena to economic and political development.

12. Anglo-America I. (3).

An analytical study of the cultural-physical complex in the area of the United States east of the Rockies.

13. Anglo-America II. (3).

An analytical study of the cultural-physical complex in the western United States, Canada, and Alaska.

3314. Central America and the Caribbean. (3).

A study of the regions and resources of Central America and the West Indies as they relate to present and potential economic development.

3315. South America. (3).

An analysis of the regional economies, resources, and trade in the continent, with stress upon the changing significance of the landscape as related to national and international problems.

3401. Historical Geography of Europe. (3).

An analysis of human occupancy in Europe during selected periods, with a study of significant relationships between the physical and cultural features.

3402. Historical Geography of the United States. (3).

A study of the geography of selected areas of the United States for sequent periods of their occupancy by the white man.

3411. Principles of Conservation. (3).

Current problems and responsibilities relating to the conservation of soil, minerals, forests, water, wild life, and the natural beauty of the earth.

3501. Cartography. (3).

An introductory course in (1) map projections, grids, scales, symbols, and (2) map drafting for geographical uses. Lectures and laboratory work.

3502. Map Intelligence. (3).

An intensive investigation of charts, graphs, maps, and aerial photography as geographical tools. Lectures and laboratory work in the Johnson Hall Map Library, a depository of the United States Army Map Service for all maps and material it provides.

3511. Photo Interpretation. (3).

A survey course dealing with the art and science of obtaining geographic information from landscape surveys by means of photography.

4111. Earth Science I. The Atmosphere. (3).

An analytical study of the physical processes underlying the behavior and responses of the atmosphere and the application of this general body of knowledge to an understanding of the relationship of man to this important element of his environment.

4121. Earth Science II. The Earth. (3).

An analytical study of land forms, their changes, and their uses to man.

4122. Earth Science III. The Soil. (3).

An analytical study of soils to include their physical, chemical, and biological qualities, and their classes, uses, and measures of conservation.

4131. Earth Science IV. The Oceans. (3).

An analytical study of the oceans to include their physical, chemical, and biological qualities; their movements, resources, climatic influences, and importance for transportation.

4304. Western Europe. (3).

A geographic analysis of the lands west of the Iron Curtain.

4305. The Soviet Realm. (3).

A regional analysis of the Soviet Union and its satellites.

4306. The Far East. (3).

A consideration of the significance of regional differences in Japan, China, and India, and a brief survey of the remaining areas.

4314. Geography of Mexico. (3).

A comprehensive and systematic survey of the geographic regions, resources, and potentialities of Mexico and their significance in the economic and political affairs of Latin American and the world.

4315. Geography of Brazil. (3).

A comprehensive and systematic survey of the geographic regions, resources, and potentialities of Brazil and their significance in the economic and political affairs of Latin America and the world.

4316. The South. (3).

A specialized study of selected regions in the South with emphasis on changes and trends in the cultural-physical complex.

4317. Tennessee. (3).

A comparison of the human-use, political, and physical regions of the state.

4421. Political Geography. (3).

An introduction to the study of the spatial distribution, characteristics, and interaction of political processes and systems. Individual student study of selected problems will be required.

4431. Urban Geography. (3).

A study of the allocation of land for urban uses; the adjustments and adaptations to existing physical phenomena; the patterns, functions, and forms of specific urban land areas; and some of the continuous problems of urban development and growth.

4521. Quantitative Methods. (3).

An introduction to quantitative methods in geographic analysis.

4611. Field Study. (6).

A comparative study of selected regions of the world, including library study and oral and written reports. Repeatable up to maximum of six hours.

Graduate courses in Geography: For course descriptions and further details of the graduate program, see The Bulletin of the Graduate School.

GEOLOGY

PROFESSOR RICHARD W. LOUNSBURY, *Chairman*

Room 312, Engineering Building

Requirements for the major and minor in geology are listed on page 97.

1101. Physical Geology. (4).

A study of the earth's composition and structure and the processes which affect it. Emphasis is on the crust of the earth and the processes which continually modify the surface.

Three lecture, two laboratory hours per week.

1201. Historical Geology. (4).

The history of the earth and its life as interpreted from the rock and fossil records. The principles of interpreting the records and the succession of geologic and biologic events which have led to the modern world. PREREQUISITE: Geology 1101.

Three lecture, two laboratory hours per week.

2203. Modern Carbonate Deposits of the Florida Keys. (4).

The Florida Keys are classic areas for the study of the origins of limestone and dolostone. This field course will investigate modern unconsolidated deposits on the Atlantic and Gulf sides of the Keys from a base station at Pigeon Key. Collection via shallow snorkel diving followed by laboratory analysis will form the bulk of the course content. PREREQUISITE: Geology 1201 or consent of instructor.

2311. Crystallography and Mineralogy. (4).

Introduction to crystallography and crystal chemistry. Physio-chemical properties and identification of the important ore and rock forming minerals. PREREQUISITES: Geology 1101 and 1201.

PREREQUISITE: Chemistry 1111. COREQUISITE: Chemistry 1112.

Three lecture, two laboratory hours per week.

2312. Mineralogy and Petrology. (4).

A continuation of Geology 2311, with emphasis on mineral and rock identification. PREREQUISITE: Geology 2311.

Two lecture, four laboratory hours per week.

3100. Life of the Past. (3).

An investigation of the fossil record of the history of life and a consideration of the concepts used in interpreting the significance of that record. This course is designed primarily for the general student. Credit will not be given toward the degree requirements for a major in geology.

3211. Introduction to Paleontology. (4).

A study of fossil invertebrate animals and the importance in the interpretation of ancient environments, evolution, and geologic time. PREREQUISITES: Geology 1101 and 1201.

Three lecture, two laboratory hours per week.

3512. Structural Geology. (4).

Rock structures; origin, criteria for recognition and solution of structural problems. PREREQUISITE: Geology 1201.

Two lecture, two laboratory hours per week.

3712. Sedimentation and Stratigraphy. (4).

Principles of stratigraphy and sedimentation; interrelationships of structure, stratigraphy, and environments of deposition. PREREQUISITE:

Geology 1201 or consent of instructor.
Three lecture, two laboratory hours per week.

802. Introduction to Oceanography. (3).

Principles of physical and chemical oceanography. Sea floor topography, geology, salinity and contribution of life to physical and chemical aspects. Taught from the point of view of a geological engine that is driven by internal forces and creates earth surface features. PREREQUISITE: Geology 1201 or consent of instructor.

Three lecture hours per week.

121. Optical Crystallography. (3).

The principles and methods of study of optical crystallography. The use of the polarizing microscope in the identification of minerals by the immersion method. PREREQUISITE: Geology 2312.

Two lecture, four laboratory hours per week.

202. Geomorphology. (4).

The origin and characteristics of land forms and physiographic provinces based on a consideration of geologic processes and geologic structure. Descriptive and basic quantitative approaches to the effects of weathering, mass-wasting, fluvial, glacial, wind and marine processes on the earth's surface. Laboratory study of maps and aerial photographs. PREREQUISITE: Consent of instructor.

Three lecture, three laboratory hours per week.

301. Geostatistics. (3).

Application of statistical techniques to selected geological problems. Hypothesis testing, regression, correlation, time trend analysis, curve fitting, Markov chains, etc. A problem-oriented course. PREREQUISITE: Senior standing in geology or consent of the instructor.

Two lecture, two laboratory hours per week.

312. Introduction to X-Ray Diffraction. (3).

The basic principles of x-ray diffraction. Its application to crystallographic and mineralogic problems including mineral identification by the powder method. PREREQUISITE: Permission of the instructor.

One lecture, four laboratory hours per week.

322. Microscopic Petrography. (4).

Classification, description, and thin-section study of rocks by means of the petrographic microscope. PREREQUISITE: Geology 4121.

Three lecture, two laboratory hours per week.

32. Introduction to Geochemistry. (3).

A study of the geological and chemical processes which govern or control the migration and distribution of the elements and atomic species of the earth in space and time. PREREQUISITES: Geology 2312.

Three lecture hours per week.

11. Micropaleontology. (3).

A study of microscopic fossils. Morphology, classification, evolution, and stratigraphic distribution of some of the more common groups. Photography and laboratory techniques in preparing microfossils for study. PREREQUISITE: Geology 3211.

Six laboratory hours per week.

4421. Stratigraphic Paleontology and Paleocology. (3).

Concepts and methods of biostratigraphy and paleocology. The importance of ancient organisms as contributions to sedimentation, indicators of environment, and guides to correlation of strata. PREREQUISITES: Geology 3711 and 3712.

Three lecture hours per week.

4511. Economic Mineral Deposits. (3).

Origin, occurrence, and composition of metallic and non-metallic mineral deposits. PREREQUISITES: Geology 2311, 2312, and 2512.

Three lecture hours per week.

4523. Igneous and Metamorphic Petrology. (3).

Selected topics relating to the origin and evolution of igneous and metamorphic rocks. PREREQUISITE: Geology 4322 or consent of instructor.

Three lecture hours per week.

4601. Engineering Geology. (3).

The application of principles and knowledge of geology to engineering practice, especially in highways, construction, dam sites, foundations, water resources, and location of certain engineering materials. PREREQUISITE: consent of instructor.

Three lecture hours per week.

4622. Geology Field Camp. (6-8).

Mapping of the structure and lithology of a prescribed geologic area. To be offered during the summer. Course may be taken at a college field camp offered by other schools subject to approval of major adviser.

4632. Applied Geophysics. (4).

A survey of geographical methods which emphasizes seismic and electrical investigations employed in engineering practice. The use of resistivity and the seismograph in the investigation of subsurface materials. The location of sand, gravel, and subsurface water are discussed and will be supplemented by field measurements with these instruments.

Two lecture, four laboratory hours per week.

4701. Spring Field Trip. (1-2).

Conducted field trip to Ouachita-Arburkle-Wichita Mountains of Oklahoma during spring vacation. About 30 hours of field work will follow 2-4 hours lectures. Open to non-majors. PREREQUISITE: consent of instructor.

Dates, hours, and credits to be arranged.

4702. Spring Field Trip. (1-2).

Conducted field trip to Ouachitas, Ozark dome, and adjacent mineral districts during spring vacation. About 30 hours of field work will follow 2-4 hours of lectures. Open to non-majors. PREREQUISITE: consent of instructor.

Dates, hours, and credits to be arranged.

4703. Spring Field Trip. (1-2).

Conducted field trip to central and southern Appalachians during spring vacation. About 30 hours of field work will follow 2-4 hours of lectures. Open to non-majors. PREREQUISITE: consent of instructor.

Dates, hours, and credits to be arranged.

4704. Spring Field Trip. (1-2).

Conducted field trip to the Gulf Coastal Plain during spring vacation. About 30 hours of field work will follow 2-4 hours of lectures. Open to non-majors. PREREQUISITE: consent of instructor.

Dates, hours, and credits to be arranged.

4705. Spring Field Trip. (1-2).

Conducted field trip to the Upper Mississippi Valley and Lake Superior District during spring

vacation. About 30 hours of field work will follow 2-4 hours of lectures. Open to non-majors. PREREQUISITE: consent of instructor.

Dates, hours, and credits to be arranged.

4731. Senior Thesis. (1-3).

An original study, on a subject of geological significance, to be carried on independently by the student with faculty supervision. PREREQUISITE: Senior standing in Geology.

GERMAN

(See FOREIGN LANGUAGES)

GREEK

(See FOREIGN LANGUAGES)

GUIDANCE AND PERSONNEL SERVICES

PROFESSOR ROBERT E. DAVIS, *Chairman*

Room 123, Patterson Building

The Department of Guidance and Personnel Services offers majors at the Graduate level only. The prefix GUID is used by The College of Education for courses in Guidance and Personnel Services.

GUIDANCE (GUID)

1661. Career Development. (3).

Relationship of interests, aptitudes and careers. Experiences include exploration of work settings and activities to support individual career planning. Students are expected to investigate work settings, relate this investigation to academic programs, and utilize this information in individual career development.

4611. Introduction to Guidance. (3).

Principles and concepts, organization and administration, and implementation of guidance services in various settings with emphasis on schools. Personal growth and interpersonal relationship experiences provide opportunities for gaining skills applicable to a wide range of

human relations situations. Students will demonstrate understanding of guidance services and skills in interpersonal relationships.

4691. Practicum in Residence Hall Staff Counseling and Advising. (3).

Practical experience for residence hall staff. Instruction and supervision will be provided. The practicum deals with individual and group activities in counseling, advising, communication and leadership. Concerns such as drug abuse, family planning information, and student discipline will be considered. It utilizes interdepartmental disciplines. *Only Pass-Fail grades will be given.*

4693. Practicum in Leadership Development. (3).

Supervised experiences for campus student leaders. Practice in leadership style, communication, advising and counseling. Students will demonstrate leadership development through coordination of actual events.

HEALTH, PHYSICAL EDUCATION,
AND RECREATION

PROFESSOR RALPH L. HATLEY, *Chairman*

Room 211, Field House

Majors and/or minors are offered in (1) health, (2) physical education, and (3) recreation. Requirements are listed on page 89.

CORRECTIVE AND RECREATIONAL THERAPY PROGRAMS

The University, in cooperation with Kennedy Veterans Hospital, offers programs in corrective and recreational therapy designed to prepare the student to meet civil service requirements. Physical education majors may offer either of these programs in fulfillment of the second area of endorsement required for a degree in College of Education. For further infor-

mation students should consult with the chairman of the Department of Health, Physical Education, and Recreation.

Letters following each subheading are prefixes used by The College of Education.

HEALTH (HLTH)

1102. Personal Health. (3).

The physiological basis of correct living, including fundamental biological facts; the psychological aspects of human behavior as they affect individual health conduct and mental hygiene.

the agents of disease and modern scientific methods of controlling them.

1202. Introduction to Community Health. (2).

A study of the health problems requiring community action. An introduction to the official and non-official health agencies whose programs are designed for the prevention of disease and disorders and the conservation and promotion of health. Activities in the areas of environmental health, sanitation, epidemiology, health education, and related areas are included.

1302. Foundations of Health Science. (2).

A historical and philosophical study of the growth and development of health science.

2102. First Aid and Emergency Care. (3).

Designed to assist the student in safety skills and techniques of immediate and temporary care in the event of an injury or sudden illness. Successful completion qualifies the student for the standard and advanced ARC certificate in first aid.

2202. Safety Education. (2).

Stress is placed on the causes of accidents and action designed for the prevention of accidents in the home, school, and community. An examination of content and materials for safety education in the school instructional program.

3102. Materials and Methods in Health Education. (3).

Methods, materials, and resources for health teaching with emphasis on improving health behavior through sound health teaching. PREREQUISITES: Foundations of Education 2011, 2111, and 3121.

3202. The School Health Program. (3).

Organization of the total health program including health services, healthful school environment and health instruction. Emphasis is placed on methods of organizing and implementing health services in the schools; screening tests, detection of defects and follow-up; and the promotion of health through the school environment.

3306. Elementary School Health Education. (3).

The school health program involving health services, healthful school living, and health instruction is considered. Content and materials suitable for an elementary school health course are stressed.

402. Instructor's Course in First Aid. (2).

Advanced consideration of first aid subject matter; orientation in methods, techniques, and teaching devices in first aid courses, and practical classroom experience. Successful completion of this course qualifies one for Red Cross first aid Instructor's certificate. PREREQUISITE: Health 2102 or ARC advanced certificate.

502. Prevention and Care of Athletic Injuries. (3).

Practical and theoretical aspects of treatment of athletic injuries in an athletic training program; supplies, training table, therapeutic equipment, and techniques in conditioning and bandaging.

602. Critical Issues in Health. (3).

Critical and controversial issues of health are explored.

4202-20. Workshops in Health. (1-3).

Special study of selected phases of health and health education through group study. This course is designed to provide indepth study in areas of interest to persons in health education and related fields.

4202. Workshop in School and Community Health. (1-3).

Procedures in seeking solutions to health problems of the school and community. Examination of cooperative efforts between schools and various official and voluntary health agencies.

4302. Observation in Community Agencies. (3).

An introduction to the purposes, objectives, functions, and programs of a variety of community health and welfare agencies, with opportunities to visit official and volunteer agencies. Application should be made at least 60 days before the student plans to enroll in the course. PREREQUISITE: permission of the chairman of the Department of Health, Physical Education, and Recreation.

4402. Practicum in Public Health Education. (1-6).

Field experience in public health education. Practical work under supervision of government or voluntary agencies.

***4502. Problems in Health Education. (1 to 3).**

Designed to afford opportunities for prospective or in-service school and other professional personnel to work individually or in groups on health education factors in the solution of practical problems. PREREQUISITE: Permission of the instructor.

4602. Organization and Administration in Health. (3).

A study of the basic functions, principles, and procedures of organization and administration as applied to health. Emphasis is placed on the relationship and responsibilities of personnel in planning, promoting, and improving and evaluating the total health activities in the family-centered health services. Legal and legislative aspects of health activities are included.

4702. Trends and Problems in Public Health. (3).

A review of the historical development and current trends in professional nursing as a community service; the various needs and demands for medical care; the contribution of the professional personnel in providing for total health services and education.

Graduate Courses in Health: For details of the graduate program, see The Bulletin of The Graduate School.

PHYSICAL EDUCATION (PHED)

(For details of the physical education requirements for graduation, see page 46.)

1103. Orientation for Physical Education Majors and Minors. (1).

Seminar in programs, career opportunities, professional societies, and literature in health, physical education, recreation, and related areas. Will meet twice weekly.

1001-1941. Selected Physical Activities. (1).

Required Physical Education courses are to be selected from the following courses.

Credit may be earned in only one of the following courses: Health 4502, Physical Education 4303.

NOTE: The prerequisite for each advanced activity course is the introductory course or its equivalent.

- 1001. Figure Control and Conditioning
- 1103. See description above
- 1201. Adapted Physical Education
- 1301. Weightlifting (men)
- 1331. Camping
- 1332. Advanced Camping
- 1361. Equitation
- 1412. Judo
- 1413. Advanced Judo
- 1431. Wrestling
- 1432. Advanced Wrestling
- 1441. Karate
- 1442. Advanced Karate
- 1451. Boxing Skills
- 1461. Fencing
- 1501. Tennis
- 1502. Advanced Tennis
- 1521. Four-Wall Racket Sports
- 1522. Advanced Four-Wall Racket Sports
- 1531. Handball
- 1532. Advanced Handball
- 1541. Badminton
- 1542. Advanced Badminton
- 1551. Archery
- 1561. Bowling
- 1571. Golf
- 1572. Advanced Golf
- 1581. Recreational Games
- 1621. Gymnastics
- 1622. Advanced Gymnastics
- 1651. Riflery
- *1711. Beginning Swimming
- 1712. Elementary Swimming
- 1713. Intermediate Swimming
- 1721. Survival Swimming
- 1722. Swimming-Lifesaving
- 1731. Synchronized Swimming
- 1741. Competitive Swimming
- 1751. Water Polo
- 1761. Springboard Diving
- 1762. Advanced Springboard Diving
- *1771. Scuba
- 1772. Advanced Scuba
- *1781. Canoeing
- 1811. Rhythms for Elementary School
(for elementary education majors)
- 1812. Square and Round Dance
- 1813. Folk and Social Dance
- 1821. Modern Dance
- 1822. Advanced Modern Dance
- 1823. Adagio
- 1831. Tap Dance
- 1911. Softball
- 1921. Basketball
- 1922. Volleyball-Basketball
- 1923. Volleyball
- 1931. Soccer and Fieldsports
- 1941. Track and Field Events

*The prerequisite for Physical Education 1771 and 1781 is Physical Education 1713.

**Beginning swimming is offered on a credit-no-credit basis.

2003. Analysis of Movement. (3).

Designed to develop a basic understanding of how and where the body moves and what the body can do. Opportunities will be provided to demonstrate an understanding of the mechanical

principles and concepts of movement and to apply these concepts to sport, dance, gymnastics, and aquatics. Laboratory and Lecture.

2103. Fundamentals and Techniques of Football. (2).

Fundamentals of football coaching with special emphasis on blocking, tackling, passing, punting, catching; principles of line and backfield work, playing the various positions; formation of plays, generalship, signal systems, and scouting; coaching problems; study of the rules.

2203. Fundamentals and Techniques of Basketball. (2).

The theory and practice of basketball coaching, history of the game, and study of the rules; offensive and defensive systems; drills for the development of fundamental skills; training and conditioning of basketball squads.

2303. Fundamentals and Techniques of Track and Field. (2).

The accepted forms of starting, hurdling, distance running, pole vaulting, discus and javelin throwing, and sprinting; physical conditions affecting speed, endurance, and fatigue; and selection and preparation of contestants for track and field events; managing and officiating games and meets; study of rules.

2403. Fundamentals and Techniques of Baseball and Softball. (2).

The theory and practice of baseball coaching, with attention given to the coaching of the individual in base running, fielding, batting, and pitching; detailed study of each position; offensive and defensive team play; officiating; scoring; study of rules.

2503. Coaching Methods in Swimming. (2).

Coaching techniques and methods stressed. A course designed for those planning to coach swimming teams. PREREQUISITE: Either lifesaving or W.S.I. qualifications.

2603. Sports Officiating. (3).

A study of the rules, interpretations, and mechanics of officiating in football, basketball, baseball, etc.

2703. Water Safety Instructor. (2).

Analysis, practice, and teaching of swimming and life saving skills and general water safety practice. PREREQUISITE: Physical Education 1722.

2803. Methods and Materials of Gymnastics. (2).

A study of the materials, methods, and teaching techniques utilized in the instruction of gymnastics for women. Tumbling, re-bound tumbling, floor exercise, balance beam, uneven parallel bars, and vaulting progression and skills are included along with the spotting techniques particular to each event. PREREQUISITE: Physical Education 1621.

2903. History and Principles of Physical Education. (2)

Origins and nature of modern physical education as a developmental experience and medium of education. Scientific and philosophical principles of physical education are examined.

3103. Materials and Methods in Team Sports For Women. (3).

Study of materials, methods, teaching, and coaching techniques of team sports. Laboratory experiences required. PREREQUISITES: Physical Education 1921 and 1923.

203. Material and Methods In Individual Sports. (3).

Study of materials, methods, and teaching techniques of life-time sports. Laboratory experience required.

303. Adapted Physical Education. (2).

A theory course including lectures, demonstrations, and problems of the mechanics of physical deformities and their causes; abnormalities of the spine, feet, and other postural and functional conditions; and methods of class organization.

Two lecture hours per week, plus laboratory periods to be arranged.

403. Kinesiology. (3).

Analysis of bodily movements in terms of the muscular forces operating on the bones. PREREQUISITES: Biology 1631 and 1632.

503. Materials and Methods of Dance. (3).

Basic theory, participation, techniques, materials, and teaching methods in rhythmic activities from grades 7 through 12. Laboratory experiences are required. PREREQUISITE: Physical Education 1813.

603. Methods and Supervision of Physical Education in the Elementary Schools. (2).

Theory of and activities for physical education in grades 1 through 9, including teaching methods, program planning, and participation in stunts, mass gymnastics, relays, informal games, team games, individual and dual sports, and mimetics; practical experience is gained through observing and directing play activities for children in the city schools. (For majors and minors in physical education and majors in recreation.)

Laboratory periods to be arranged.

703. Physiology of Exercise. (3).

Primarily designed to establish a sound scientific basis of physiological principles on the various systems and organs of the body during muscular activity. Special emphasis is given in the principles of motor performance and training. PREREQUISITES: Biology 1631 and 1632.

Three lecture hours per week.

803. Motor Learning and Teaching Methods in Physical Education. (3).

Inquiry into perceptual motor and psychomotor behavior. Emphasis on variables conducive to skill acquisition and their implications for formulating teacher behavior. (Same as Secondary Education 3331 and Elementary Education 3803.)

806. Physical Education for the Elementary School. (3).

Materials and methods for physical education in grades 1 through 6, including philosophy, program planning, and practical experience gained through observing and directing play activities for children in the city schools. (For elementary education majors only.) PREREQUISITE: Physical Education 1811.

Laboratory periods to be arranged.

816. Gymnastics in the Elementary and Middle School. (3).

The study of the scope, content, and methodology

of the gymnastics program. The student will learn how to teach the development of efficient and skilled use of the body in practical situations, when working alone and with others, on the floors and on apparatus. Laboratory experiences in the public school are included. PREREQUISITES: Physical Education 2003, 1621.

3826. Educational Dance in the Elementary and Middle School. (3).

The study of the scope, content, and methodology of the rhythms and dance program. Emphasis is on the creative and aesthetic values therein, and the integration and correlation with the other arts in the school curriculum. Observations and laboratory experiences in the public schools are included. PREREQUISITES: Physical Education 2003, 1813.

3836. Games and Sport Activities for the Elementary and Middle School. (3).

Designed to develop an understanding of the importance of a variety of games, sports, and manipulative activities and to learn the skills, progressions and teaching methods appropriate for games and sports. Lecture-laboratory experiences will be included. PREREQUISITE: Team sports activity course.

3846. Planning the Elementary and Middle School Programs. (3).

The examination of current and traditional theory in curriculum development. Selection of content, program development and purchase and care of supplies and facilities. Observation and laboratory experiences will be included. PREREQUISITES: Physical Education 2003, 3816, 3826, 3836.

4103. Workshop in Physical Education. (3-6).

Through group study, demonstration, directed observation, discussion, and laboratory experiences, participants will develop programs for each grade level K-12.

4204. Tests and Measurements in Health and Physical Education. (3).

A study of the various tests in the field of health and physical education, including uses and interpretation of elementary statistical techniques.

***4303. Problems in Physical Education. (1 to 3).**

Designed to afford opportunity for prospective or in-service school and other professional personnel to work individually or in groups on physical education factors in the solution of practical problems. PREREQUISITE: Permission of the instructor.

4403. Supervised Clinical Training in Corrective Therapy. (6).

(formerly Clinical Practice)

Supervised clinical practice in the Department of Physical Medicine and Rehabilitation Service at the Kennedy Veterans Hospital; instruction will be given in the conditioning, ambulation, and self-care of patients with neurological, pulmonary, geriatric, neuropsychiatric, speech, spinal cord, cardiac, and other type of disabilities.

4503. Organization and Administration of Health and Physical Education. (3).

A study of administrative problems of health and physical education, including curriculum, facilities, buying and caring for equipment, general

class organization, and organization of an intramural program.

4603. Intramural Sports and Activities for Schools and Colleges. (3).

History, present status, and the objectives of the intramural movement; organization and affiliation with other departments; units of competition from elementary to college level; program of activities; group, team, and individual schedule-making and scoring plans; rules and regulations, awards, and special administrative problems. PREREQUISITE: Permission of instructor.

Graduate Courses in Physical Education: For details of the graduate program, see The Bulletin of The Graduate School:

RECREATION (RECR)

2105. Introduction to Recreation. (4).

Knowledge of the history and development of the recreation and park movements; an understanding of the nature of the recreation experience and its importance to the individual and the influence of leisure on society. Knowledge of private, public, voluntary, military, and commercial delivery systems for recreation and park services.

2205. Youth Service Organization. (2).

An introduction to agencies servicing the leisure time needs of children and adults. Special emphasis on YMCA, YWCA, CYO, JCC, BSA, and GSA. Objectives, organization, program, and membership of principal national youth agencies.

3005. Camp Counseling. (2).

This course is designed to orient the student with camping as practiced in America today: It acquaints the student with the problems faced by the camp counselor and furnishes background to aid the counselor in the performance of his multiple duties.

3105. Philosophy and Principles of Recreation. (2).

A careful study of work leisure, play, and recreation with special attention being given to sound principles of recreation. PREREQUISITE: Permission of instructor.

3205. Park and Recreation Facilities. (2).

A study of planning, development, and maintenance of parks and recreation facilities. Includes inspection, comprehensive recreation surveys, and planning a layout. PREREQUISITE: Permission of instructor.

3305. Program Planning in Recreation. (4).

An understanding of the program fields in relation to programming principles, planning objectives, structural organization, purposes and values of types of activities, programs for special groups, and program evaluation. PREREQUISITE: Consent of instructor.

3405. Resource Management in Recreation. (4).

A study of management, operation and maintenance of areas and facilities within field of recreation and parks. Includes the identification, acquisition, allocation, development and management of land and water resources. PREREQUISITE: Consent of instructor.

3505. Camp Administration. (2).

A study of the organization and administration of

various types of camps and camping programs with particular emphasis on program planning selection and training of staff.

3605. Outdoor Recreation. (2).

The organization and administration of program and activities in large park areas and forests. Outings, campfire programs, picnics, hiking, outdoor cookery, trailing, climbing, class and field activity.

3705. Outdoor Education. (2).

The philosophy, modern trends, administration program content, and methods of leadership in outdoor education activities. Opportunities for field trips and practice in leadership skills.

3805. Leadership Seminar in Recreation. (3).

An understanding of the dynamics of leadership the theories, principles, and practices of leadership, research in leadership, issues and problems of working with individuals and groups. PREREQUISITE: Consent of instructor.

4105. Recreational Leadership. (3).

Development of skills and techniques necessary for successful leadership in city, county and school recreation programs.

4205. Supervised Clinical Training in Recreational Therapy. (6).

Instruction will be given in arts and crafts, radio television programming, social activities, adapted sports, music, allied ward and clinic activities for patients with varied illnesses and disabilities.

4305. Field Problems in Recreation. (1-6).

This course is designed to offer opportunities to study selected problems in the areas of recreation through individual and group field experience. PREREQUISITE: Permission of instructor.

4405. Organization and Administration of Recreation. (3).

An understanding of community organization, its philosophy, foundation and principles. An understanding of selected administrative practices that relate to successful recreational organization and administration.

4505. Recreation Surveys. (3).

Observation of different types of recreational programs in action under professional leadership and supervision. Written analysis of program and facilities in connection with course work.

4605. Internship in Recreation and Parks. (3-9).

Professional field experience including all those situations in which the student has an opportunity to relate theory to practical experience. At least 280 clock hours in professional recreation and park programs. A progression of professional laboratory experiences in selected settings according to students particular area of emphasis. PREREQUISITE: Consent of instructor.

4705. Workshop in Recreation and Parks. (1-6).

Workshop planned especially for inservice education and continuing education for professional recreation and park personnel or in-depth specialization for majors in recreation and parks. PREREQUISITE: Consent of instructors.

Graduate Courses in Recreation: For details of the graduate program, see The Bulletin of The Graduate School.

HISTORY

PROFESSOR AARON M. BOOM, *Chairman**Room 100, Mitchell Hall*

Requirements for the major and minor in history are listed on page 64. All candidates for graduation at Memphis State University are required to complete History 2601 and 2602; these courses are not open to students with fewer than 25 semester hours credit. Courses numbered above 3000 are not open to students with fewer than 55 semester hours credit.

History Honors Program. History majors who have completed at least 75 hours of course work with a minimum grade point average of 3.0 (in both general course work and the field of history) may apply for admission to the honors program in history. Enrollment is limited, and final selection of participants will be made by a faculty committee of the Department of History. The program involves special tutorial courses, a senior-year honors paper, and a comprehensive examination over the areas covered in the tutorials. Those who successfully complete the program and the regular B.A. requirements will be awarded the degree of Bachelor of Arts with Honors in History. A detailed description of the program, together with application forms for admission, may be obtained in the office of the Chairman, Department of History.

301. The Development of World Civilization I. (3).

Especially recommended for freshmen, this course traces the forms of civilization from their ancient beginnings through the seventeenth century.

302. The Development of World Civilization II. (3).

Especially recommended for freshmen, this course traces the forms of civilization from the beginning of the eighteenth century to the present.

301. The United States to 1877. (3).

A survey of the United States from discovery to the end of political reconstruction.

302. The United States since 1877. (3).

A survey of the United States from 1877 to the present.

321. England Before 1714. (3).

A survey of the development and growth of England into a nation, with special emphasis on constitutional progress and the achievements of the Tudor and Stuart periods.

322. England Since 1714. (3).

A survey of the development of England's democratic government, considering economic, social, intellectual, diplomatic, and imperial affairs.

200. History of Spain. (3).

A survey of Spanish institutions, culture, and politics from ancient times to the present.

211. Colonial Latin America. (3).

A survey of political, economic, social and cultural development in Latin America from the pre-conquest era to 1808.

212. The Latin American Nations. (3).

A survey of the major political, economic, and social trends in Latin America since 1808. Em-

phasis is placed on Argentina, Brazil, Chile, and Mexico.

3231. History of the Spanish Borderlands. (3).

A study of northern Mexico and areas of the southern United States originally colonized by Spain, from the Spanish discovery to the treaty of Guadalupe Hidalgo.

3291. The Far East in Modern Times. (3).

A survey of the Far East during the nineteenth and twentieth centuries.

3801. American Diplomatic History to 1913. (3).

A study of the diplomacy of the United States to 1913. The relationship of diplomacy to domestic policy and attitudes will be emphasized.

3802. American Diplomatic History Since 1913. (3).

A study of the diplomacy of the United States since 1913. The relationship of diplomacy to domestic policy and attitudes will be emphasized.

3821. Economic History of the United States to 1865. (3).

A study of American economic development to 1865.

3822. Economic History of the United States since 1865. (3).

A study of American economic development since 1865.

3840. United States Constitutional History. (3).

A survey of constitutional developments from the colonial period to the present with emphasis on the English heritage, the constitutional antecedents of the revolutionary era, the origins and growth of the federal system under the Constitution of 1787, and the evolution of modern constitutional government in the United States.

3861. Social and Intellectual History of the United States to 1865. (3).

A study of the main social and intellectual trends in the United States to 1865.

3862. Social and Intellectual History of the United States since 1865. (3).

A study of the main social and intellectual trends in the United States since 1865.

3871. United States Urban History. (3).

A study of the development of American cities, including formation of local social, economic, and political institutions, and the impact of urbanization on the United States.

3900. History of Tennessee. (3).

A study of the political, economic, and social development of Tennessee from earliest times.

3920. The Old South. (3).

A study of southern institutions prior to the outbreak of the Civil War.

3930. The New South. (3).

A study of the South from the Civil War to the present.

3940. The West. (3).

A study of the significance of the frontier in the development of the United States from the Revolutionary period to 1890.

4003. Historiography and the Philosophies of History. (3).

A survey of the important ideas which men in Western Civilization have entertained about the nature and meaning of history. Approximately one-fourth of the course will be devoted to a common body of readings and to class discussion of the basic problems involved; the remainder will be conducted on the basis of individual tutorials. **PREREQUISITE:** admission to the honors program.

4103. Honors Course in European History (3).

An investigation of selected aspects of the history of Europe, to be conducted largely on the basis of individual tutorials. **PREREQUISITE:** admission to the honors program.

4126. Victorian England, 1840-1900. (3).

Readings and discussion on selected topics such as the development of English liberal thought, Victorian society and values, and imperialism.

4145. History of Modern Germany. (3).

A study of Germany from the origins of the unification movement in the Napoleonic Era through the Second World War.

4160. History of Russia to 1801. (3).

A study of the political, economic, social, and cultural development of Russia from early times to the beginning of the nineteenth century.

4161. History of Russia from 1801 to 1917. (3).

A study of the political, economic, cultural, and intellectual development of the Russian Empire from the reign of Alexander I to the Bolshevik Revolution of 1917.

4162. History of the Soviet Union. (3).

A detailed study of the 1917 Revolution and the major developments in government, economy, cultural and social life, and international affairs which followed.

4163. History of Socialism and Marxism. (3).

A study of socialist and Marxist thought and the rise of socialist and Marxist social and political movements in Europe, Russia and the Far East. The unique social, economic and political conditions which gave rise to the experimentation with and the application of Marxism will be stressed.

4230. History of Inter-American Relations, 1808 to the Present. (3).

Relations among the American nations, with emphasis on the relationship between the United States and Latin America. Among topics to be discussed are recognition, the Monroe Doctrine, Pan Americanism and trade relations, intervention, the Good Neighbor Policy, the Organization of American States, and the Alliance for Progress.

4240. History of Mexico. (3).

A survey of the political, economic, social, and cultural development of Mexico from ancient times to the present.

4250. History of Brazil. (3).

A survey of the political, economic, social, and cultural development of Brazil from early times to the present.

4281. Africa South of the Sahara. (3).

A survey with major emphasis on black Africa in the nineteenth and twentieth centuries. The age of imperialism and the impact of the West on Africa; the colonial policies of the European powers; the rise of the nationalist movements; the problems of newly independent nations; the role of African countries in world affairs.

4282. The History of North Africa. (3).

A survey with major emphasis on the nineteenth and twentieth centuries. The extension of European influence and control; the rise of nationalist movements; the role of these areas in world affairs.

4283. The History of Southern Africa. (3).

A study of the course of European colonization and its impact on the African people from 1652 to date in the Republic of South Africa, Rhodesia and the former High Commission territories.

4284. European Imperialism in Africa. (3).

Readings and discussion of selected case histories of European annexations of African territory, largely in the period 1870-1900. The partition of Africa is studied against the background of great power politics.

4292. History of Modern China, 1800 to the Present. (3).

A study of China since 1800.

4294. History of Modern Japan, 1800 to the Present. (3).

A study of Japan since 1800.

4321. History of Ancient Civilization I. (3).

A study of the Ancient Near East and Greece through the time of Alexander the Great. **NOTE: Students who have received credit for History 3321 will not be allowed credit for History 4321.**

4322. History of Ancient Civilization II. (3).

A study of the Hellenistic World and of the rise and fall of the Roman Empire. **NOTE: Students who have received credit for History 3322 will not be allowed credit for History 4322.**

4361. History of the Byzantine Empire. (3).

A history of the Byzantine or East Roman Empire from 330 to 1453 and its influence on the Slavic, Turkic, and Islamic peoples. **NOTE: Students who have received credit for History 3371 will not be allowed credit for History 4361.**

4371. Early Middle Ages. (3).

A study of the Late Roman Empire, the migration period, the emergence of Islamic, Byzantine, and West European cultures through the period of the Investiture Controversy. **NOTE: Students who have received credit for History 4370 will not be allowed credit for History 4371.**

4372. The High Middle Ages. (3).

A study of the urban emergence, the growth of feudal monarchy, the foundations of modern political institutions, the medieval universities and the intellectual fabric of scholasticism. **NOTE:**

Students who have received credit for History 4370 will not be allowed credit for History 4372.

4380. Renaissance Europe, 1300-1520. (3).

A study of the transition from medieval to early modern institutions in Europe with an emphasis on urban growth, capitalism, emergent nationalism, international diplomacy, and humanism.

4390. Europe in the Age of the Reformation. (3).

A consideration of the characteristic political, social, economic, intellectual, and cultural developments and the religious conflicts of the late fifteenth and sixteenth centuries.

4401. Europe in the Age of the Baroque. (3).

A study of the political crises, the development of monarchical absolutism, the rise of modern science, and the cultural synthesis in the seventeenth century. *NOTE: Students who have received credit for History 4400 will not be allowed credit for History 4401.*

4402. The Age of the Enlightenment. (3).

A study of intellectual, cultural, social, and political developments in eighteenth-century Europe. *NOTE: Students who have received credit for History 4400 will not be allowed credit for History 4402.*

4440. The Era of the French Revolution. (3).

A study of the origins and course of the French Revolution in the context of the revolutionary and counter-revolutionary movements in the Atlantic world.

4451. Europe, 1815-1870. (3).

A study of Europe during the period 1815-1870. *NOTE: Students who have received credit for History 4450 will not be allowed credit for History 4451.*

4452. Europe, 1870-1914. (3).

A study of Europe during the period 1870-1914. *NOTE: Students who have received credit for History 4450 will not be allowed credit for History 4452.*

4461. Europe, 1914-1939. (3).

A study of Europe during the period 1914-1939. *NOTE: Students who have received credit for History 4460 will not be allowed credit for History 4461.*

4462. Europe, 1939 to present. (3).

A study of Europe since 1939. *NOTE: Students who have received credit for History 4460 will not be allowed credit for History 4462.*

4501. Intellectual History of Europe I. (3).

Topics in the history of European thought and culture from the thirteenth through the seventeenth century.

4502. Intellectual History of Europe II. (3).

Topics in the history of European thought and culture from the eighteenth century to the present.

4603. Honors Course in United States History. (3).

An investigation of selected aspects of the history of the United States, to be conducted largely on the basis of individual tutorials. **PREREQUISITE:** admission to the honors program.

4620. Colonial America, 1607-1763. (3).

A study primarily of the political development and institutions of the English Colonies in America before 1763, with some attention given to Spanish, French, and Dutch colonization.

4630. Era of the American Revolution, 1763-1790. (3).

A study of the origins and conduct of the American Revolution, the United States under the Articles of Confederation, and the writing and ratification of the Constitution.

4641. The Early American Republic, 1790-1825. (3).

A study of American history from unification until 1825. *NOTE: Students who have received credit for history 4640 will not be allowed credit for History 4641.*

4642. The Jacksonian Period, 1825-1850. (3).

A study of American history from 1825 to 1850.

NOTE: Students who have received credit for History 4640 will not be allowed credit for History 4642.

4660. Civil War, 1850-1865. (3).

A study of division and conflict.

4670. Reconstruction, 1865-1877. (3).

A study of national and sectional issues following the Civil War.

4680. Emergence of Modern America, 1877-1914. (3).

A study of the United States from the end of Reconstruction to the outbreak of World War I.

4701. The United States, 1914 to the Second World War. (3).

A study of the United States from the outbreak of World War I to World War II. *NOTE: Students who have received credit for History 4700 will not be allowed credit for History 4701.*

4702. The United States from the Second World War. (3).

A study of the United States from World War II to the present. *NOTE: Students who have received credit for History 4700 will not be allowed credit for History 4702.*

4811. United States Military and Naval History. (3).

A survey of developments since the colonial period with emphasis on the background and growth of national military and naval establishments, military and naval thought, the difficulties accompanying modernization and assumption of global responsibilities, and the problem of the relationship between the civilian and military-naval sectors in a democracy.

4881. American Negro History. (3).

A survey of the role of the Negro in America from Jamestown to the present.

4941. History of the American Indian. (3).

A study of the role of the Indian in American history.

Graduate Courses in History: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

HOME ECONOMICS

PROFESSOR MARQUITA IRLAND, *Chairman**Room 404, Manning Hall*

Requirements for the major and minor in home economics are listed on page 89.

A co-operative relationship exists between Memphis State University and the Merrill-Palmer Institute of Detroit, Michigan, whereby a second-semester junior or first-semester senior majoring in Home Economics-Child Development may enroll for one semester of study at Merrill-Palmer with the semester hours earned being transferred toward graduation at Memphis State.

A co-operative relationship also exists with the Fashion Institute of Technology in New York City, whereby Merchandising majors may enroll for one semester of study in New York with the semester hours earned being transferred toward graduation at Memphis State University.

The prefix used by The College of Education for courses in Home Economics is HMEC.

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

1100. Home Economics as a Profession. (1).

The scope of Home Economics; educational preparation, professional orientation, and research pertinent to the field. PREREQUISITE: Home Economics major or minor.

1101. Personal Development and Human Relations. (3).

Individual and group adjustment, influences contributing to successful marriage and family life.

2101. Infant and Child Development. (3).

A study of the affective, cognitive, and psychomotor development of the child from conception to eight years of age; guided observation of infants and young children.

Three lecture hours, one laboratory hour per week.

3101. Nursery School Curriculum. (3).

Application of child development principles to program planning; infancy through four years of age.

Two lecture, two laboratory hours per week.

3900. Home Economics Study Tour. (1-3).

An opportunity to gain on-the-scene knowledge about specific academic areas of specialization within Home Economics. PREREQUISITE: Permission by instructor. May be repeated with 3 hr. maximum credit.

4100. Senior Seminar in Home Economics. (1).

The scope and direction of current research and trends in Home Economics; discussion of the roles of modern woman and an understanding of the professional ethics required of a home economist. PREREQUISITE: Senior standing.

4200. Readings in Home Economics. (1-3).

Designed to provide senior Home Economics majors an opportunity for in-depth reading or research in their area of specialization. PREREQUISITE: Senior Home Economics majors only.

4201. Preparation for Marriage. (3).

Courtship, marriage, and achievement of satisfaction in family life. PREREQUISITE: Home Economics 1101.

4301. Nursery School Practicum. (3).

Participation in and direction of various nursery school activities. PREREQUISITE: Home Economics 2101.

One conference, five laboratory hours per week.

4401. Nursery School Practicum. (3).

For the student who has had or is taking Home Economics 4301 and desires additional experience.

FOODS, NUTRITION AND INSTITUTIONAL MANAGEMENT

2102. Food Selection and Preparation. (3).

Principles underlying the selection and preparation of foods with an introduction to the planning and serving of meals. Open to freshmen.

One lecture, four laboratory hours per week.

2202. Elementary Nutrition. (3).

Nutritive value of food, factors influencing body food requirement and health. Open to freshmen.

3302. Meal Preparation and Table Service. (3).

Nutrition fundamentals in individual and family dietaries, meal planning, marketing and table service for various occasions. PREREQUISITE: Home Economics 2102.

One lecture, four laboratory hours per week.

3402. Advanced Nutrition. (3).

Fundamental principles of nutrition and their application in selection and planning of adequate diets for individuals and families. PREREQUISITE: Home Economics 2202.

One lecture, two laboratory hours per week.

3502. Quantity Cookery and Purchasing. (3).

Practical problems in preparing and serving foods for large groups. Use of standardized recipes, calculation of food costs, and use of institution equipment. PREREQUISITE: Home Economics 2202. (Enrollment must parallel that in 3602).

3602. Institutional Management and Equipment. (3).

Observation and practice in handling problems of organization and management of quantity food service. (Enrollment must parallel that in 3502).

3702. Catering. (3).

Special food preparation and service for parties, dinners, and teas. Historical background of sectional foods in the United States with laboratory preparation. PREREQUISITES: Home Economics 3502 and 3602.

Six lecture and laboratory hours per week.

3802. Food Production (Practicum). (3).

Personnel management, cost control, and quality control in specific organizations. Experience in approved food services. PREREQUISITES: Home Economics 3502 and 3602.

One lecture, four laboratory hours per week.

3902. Advanced Food Production (Practicum). (3).

Special problems in quantity food production, organization, and management of institutional food service. PREREQUISITE: Home Economics 3802.

One lecture, four laboratory hours per week.

102. Diet Therapy (3).

Dietary problems applicable to the prevention and treatment of disease in which therapeutic diets are of major importance. PREREQUISITE: Home Economics 2202.

HOME MANAGEMENT

103. Family Economics. (3).

Management of family resources as they relate to satisfying home and family life. Includes problems in consumer goods and services.

203. Housing and Equipment. (3).

A study of housing as it relates to conditions of family living. Principles underlying the construction, use, and care of household equipment.

Two lecture, two laboratory hours per week.

303. Equipment Practicum. (3).

Ten hours per week of supervised work experience with a home economist in a local utility or equipment service organization. PREREQUISITE: Home Economics Teacher Education or Vocational Home Economics Majors must have completed student teaching and Home Economics 4203.

One lecture per week, plus ten hours work experience.

503. Home Management Laboratory. (3).

Practical application of the theories of decision-making and group dynamics involved in the management of the resources of a home. PREREQUISITE: Home Economics 4103.

HOUSING AND RELATED ARTS

104. Art in Everyday Life. (3).

A study of the elements of art and the principles of design as they relate to the practical aesthetics of living.

1104. Trends in Residential Furnishings. (3).

An analysis of the major trends and influences on contemporary residential furnishings as these affect home furnishings merchandising. PREREQUISITE: Home Economics 1104.

1704. Socio-Economic Aspects of Housing/Government & Housing. (3).

Analysis of the family housing needs and present social and economic conditions affecting housing, building processes, furnishings, and the role of government in housing. PREREQUISITE: Home Economics 1104.

1104. Home Furnishings I. (3).

Principles of design and color theory applied to the selection and arrangement of the house and its furnishings. PREREQUISITE: Home Economics 1104.

Two lecture, two laboratory hours per week.

1204. Home Furnishings II. (3).

Problems in planning, coordinating, and purchasing of home furnishings. PREREQUISITE: Home Economics 4104.

One lecture, three laboratory hours per week.

4604. Principles of Home Furnishings Marketing*. (3).

Patterns of production and distribution in the home furnishings industry, the market area and in merchandising techniques. Student may not enroll in more than a total of 12 semester hours during the Professional Semester. PREREQUISITE: Marketing 3320. *Corequisite HMEC 4804.

4804. Home Furnishings Merchandising Practicum.* (6).

Eight weeks of full-time work experience in Home Furnishings Merchandising in approved business establishments. Students may not be enrolled for more than a total of 12 semester hours during the professional semester. PREREQUISITE: Marketing 3320. *Corequisite HMEC 4604.

TEXTILES AND CLOTHING

1105. Clothing Selection and Construction. (3).

Standards in selecting and purchasing; construction of cotton garments to meet individual needs.

One lecture, four laboratory hours per week.

2205. Clothing Construction. (3).

Fundamental principals of clothing construction, fitting and finishing garments to develop techniques in handling wool, silk, and synthetic fabrics. PREREQUISITE: Home Economics 1105.

One lecture, four laboratory hours per week.

3305. Textiles. (3).

A study of textile fibers used for clothing and house furnishing.

Two lecture, two laboratory hours per week.

3405. Consumer Problems in Clothing.

A course in clothing selection and buying for men and women with emphasis on individual needs and economic problems involved.

3505. Tailoring. (3).

Selection and construction of tailored wool garments, using various tailoring techniques. PREREQUISITES: Home Economics 1105 and 2205.

3605. Draping Design. (3).

Dress design and construction developed through the media of draping techniques. PREREQUISITES: Home Economics 1105 and 2205.

3705. Fashion Merchandising. (3).

An analysis of the fashion buying function in the retail store involving an understanding of the function of fashion in today's world, the fashion industry, and careers in fashion. PREREQUISITE: Marketing 3320.

3805. Principles of Fashion Design. (3).

A study of forces influencing contemporary fashion, and practical application of techniques of clothing design. PREREQUISITE: Home Economics 3605.

One lecture, four laboratory hours per week.

4705. Fashion Marketing Practicum. (3).

Ten hours per week of supervised work experience in fashion merchandising in a local department store. PREREQUISITE: Home Economics 3705.

INTERNATIONAL STUDIES INTERDEPARTMENTAL COURSES

PROFESSOR GERALD S. PIERCE, *Director*

Office of International Studies, Mitchell Hall, 113

Courses offered for the International Studies program with the cooperation of two or more University departments are listed below. Although some of the interdepartmental courses at the upper-division level are designed primarily to serve the needs of students participating in interdisciplinary programs, enrollment in the courses is not limited to these students.

INTERNATIONAL STUDIES

1101. An Introduction to Third World Countries: Problems of Change. (3).

An interdisciplinary survey of developing nations which is designed to provide undergraduate students a basic understanding of other societies and of the problems of technologically developing nations.

1102. The Third World: A Regional View. (3).

An interdisciplinary survey of contemporary developing nations within a major world region. The regional focus will be on Africa, Latin America, Southeast Asia, or the Indian Subcontinent.

4201. Seminar in Latin American Studies. (3).

An interdisciplinary seminar which focuses on a specific theme or region in Latin America and

incorporates significant materials from the several disciplines in the program in Latin American Studies. A written report will be presented for a panel discussion. PREREQUISITE: Permission of the Latin American Studies Adviser.

4301. Seminar in African Studies I. (3).

An interdisciplinary seminar designed to help the upper-classman to integrate his knowledge of Africa and to exercise his competence in several disciplines through supervised research. PREREQUISITE: Nine hours of course work in African studies representing three disciplines from the group anthropology, geography, history, and political science, or permission of the African Studies Adviser.

4302. Seminar in African Studies II. (3).

A continuation of International Studies 4301. PREREQUISITE: International Studies 4301.

4601. Seminar in International Relations. (3).

Investigation of selected topics in international relations from an interdisciplinary perspective. Individual research and presentation of a major paper which integrates the tools, data or concepts of two or more disciplines. PREREQUISITE: Permission of the International Relations Adviser.

ITALIAN

(See FOREIGN LANGUAGES)

JOURNALISM

PROFESSOR HERBERT LEE WILLIAMS, *Chairman*

Room 300, Meeman Journalism Building

Requirements for the major and minor in journalism are listed on page 64.

1011. Survey of Mass Communication I. (3).

Social background, scope, functions, and organization of modern communication media, with attention given to newspapers, magazines, motion pictures, radio, television, books, and comics.

1012. Survey of Mass Communication II. (3).

The philosophy and goals of modern journalism: their development and impact upon governmental, social and economic systems. NOTE: Journalism 1012 may be taken before Journalism 1011.

Note: All journalism students must have typing proficiency before admission to courses numbered 2000 and above.

2111. Elementary News Writing. (3).

A study of news story structure and the factors that determine the value of news, with consideration given to both the theoretical and practical aspects of news gathering and reporting; lecture and laboratory sessions.

2112. Reporting. (3).

Gathering and writing news of the University community, with assignments arranged on *The Statesman* or suburban newspapers, and with the University Public Information Office. PREREQUISITE: Journalism 2111.

2211. Typography. (3).

A lecture-laboratory study of the development of type and the processes of composition, engraving, stereotyping, and printing. Students are provided opportunities to practice the effective use of type and illustration in mass communication.

2300. Survey of Advertising. (3).

An exploration of the creative function of advertising with emphasis on the role of the media.

3011. Picture Editing. (3).

Selection and arrangement of illustrative material for newspapers and magazines; analysis, use and influence of the news picture; techniques of the picture story; and the role of the picture magazine in the field of communication.

11. Press Photography. (3).

Taking pictures with the news camera, developing films, making enlargements, cropping and scaling for publication. Students may bring their own cameras. Open to non-majors with permission of the instructor.

12. Editing I. (3).

Practices in headline writing, editing, and newspaper makeup and study of contemporary editing problems.

13. Editing II. (3).

Continuation of Editing I with emphasis on practical application. Students are charged with the responsibility for the production of the *Statesman*.

14. Feature and Article Writing. (3).

Techniques involved in writing the feature story; study of the magazine market and the specialized requirements of periodicals to which stories are submitted; students will write and submit articles for publication in magazines and newspapers and for acceptance by syndicates.

15. Interpretative Reporting. (3).

Reporting of the significantly important news with attention to analysis, interpretation, and investigation. PREREQUISITES: Journalism 2112 and junior or senior standing.

16. The Magazine. (3).

Historical backgrounds, contents, purposes, and readership of general magazines, business and industrial papers, and specialized journals.

17. Magazine Editing and Production I. (3).

Editing and production problems of magazines with emphasis on business, industrial, and home periodicals; headline and title writing, pictorial copy layout, staff organization, and production processes. PREREQUISITE: Journalism 3116, or permission of the instructor.

18. Magazine Editing and Production II. (3).

Internships in editorial offices of approved magazines published in Memphis to offer exposure to the duties, procedures, and skills demanded in editing successful company and business magazines. PREREQUISITE: Journalism 3117.

10. Advertising Layout. (3).

Basic techniques in laying out the printed advertisement; introduction to the use of advertising mat service in layout. Non-majors by permission of department chairman only.

21. Advertising Copy Writing. (3).

The principles of advertising psychology studied in relation to the proved techniques for writing effective copy; approximately half of the course is devoted to practice in writing copy and in preparing rough layouts.

22. Advertising Sales. (3).

Practical experience in the preparation and selling of completed advertisements; the student will service his own clients throughout the semester, using *The Helmsman* as a space medium. PREREQUISITE: Journalism 3221.

3331. Radio and Television News Writing and Editing. (3).

The processing of news for radio and television with attention to present-day style used by the electronic media.

3332. Trends In Broadcast Communication. (3).

A survey in the history of radio and television, principles of transmission and reception of signals, governmental and self-imposed regulations, and the responsibility of the broadcaster; intended to develop an awareness of the social implications of radio and television. Guest lecturers, class discussion, and case histories relating to the current problems and policies in broadcasting.

3333. Radio and Television Reporting of Special Events. (3).

Preparation and presentation of special programs such as news, sports, interviews, documentaries, etc.

3340. Cinematography. (3).

Introduction to fundamentals of 16mm motion picture photography, with emphasis on shooting news film for local television stations.

4001. Mass Communication Law and Professional Ethics. (3).

Origin and development of the legal principles affecting freedom of expression, and provisions of the laws of libel, slander, copyright, and other statutes limiting communication in the fields of publishing and broadcasting.

4002. Writing Projects. (3).

Internship for students who have completed basic journalism courses or whose experience has prepared them to handle the duties; students will work in practical assignments or will do approved research in journalism.

4003. Writing Projects. (3).

Continuation of Journalism 4002.

4004. Journalism In the Secondary Schools. (3).

Organization and direction of journalism courses in the high school; financial problems of high school publications and their relation to educational objectives; public relations and preparation of news releases for school administrators. Intended primarily for those students who expect to teach journalism or to supervise publications in the high school.

4005. History of Journalism. (3).

A study of the origin and development of American journalism; students who enroll in this course should have completed History 2601 and 2602 or the equivalent.

4006. Literature of Journalism. (3).

A bibliographical approach to the field of mass communication, consisting of critical reading of selective works.

4008. Advanced Press Photography. (3).

A continuation of Journalism 3111 with emphasis placed on materials for duotones and for two-color, three-color, and four-color separation processes.

4009. Current Trends In Media Photography. (3).

A seminar course in which students study current literature of photography, test new ideas and report techniques and results to the class.

4050. Fashion Advertising Copy Writing. (3).

Introduction to evaluating, writing, and editing of copy for fashion advertising and sales promotion. Students analyze advertising and other promotional practices of retail and wholesale firms, evaluate the fashion market, and prepare sample books of fashion copy writing. PREREQUISITE: Journalism 3221.

4100. Advertising Management. (3).

Researching, planning, writing, scheduling, budgeting, and evaluating the complete advertising campaign. Includes media selection, layouts, tapes, storyboards, and preparation of detailed budgets for product or service. PREREQUISITE: senior standing.

4101. Advertising Production. (3).

A lecture-laboratory study of typography and photography to develop creative advertisements. The course will include comprehensive paste-ups of one-color and multiple-color designs. PREREQUISITE: Journalism 2211.

4111. Journalistic Influence and Commentary. (3).

Analysis of mass media handling of influence and opinion material with emphasis on editorial problems, methods, policies and style. Practical experience in developing and writing editorial copy.

4200. Industrial and Business Journalism. (3).

Company publications, both internal and external,

businesspapers, and other specialized, multi-purpose publications, including newsletters. An examination of the editorial, business, advertising, and circulation departments of business papers.

4210. Religious Journalism. (3).

An introduction to media coverage of religion; the history of religious publications; religious journals today; career opportunities in the field of religious journalism. PREREQUISITE: junior standing or permission of instructor.

4221. Community Newspaper Management. (3).

A survey of the economic, social, and cultural aspects of small town daily and weekly newspapers, with emphasis on the role of the editor in community life.

4222. Public Relations. (3).

The development, scope, and modern role of public relations, with emphasis on case studies, lectures, and experimentation with major public relations tools and practices.

4232. Public Relations Techniques. (3).

Booklet production, writing news releases, preparing visuals for speeches, producing slide presentations, writing annual reports, planning and budgeting, and other tasks customarily assigned to the public relations practitioner. PREREQUISITE: Journalism 4222.

4242. Public Relations Projects. (3).

Students who have completed basic journalism and public relations courses are assigned as interns in local public relations offices to work under supervision of qualified practitioners. PREREQUISITE: Journalism 4232.

LATIN

(See FOREIGN LANGUAGES)

MEMPHIS STATE UNIVERSITY
LIBRARIES**2010. The Use of Library Materials, Resources, and Bibliography. (2).**

An introduction to the organization of academic library material with emphasis on bibliographic

access to information. Course content will consist of lectures and assigned research problems designed to acquaint the student with general and specialized methods of access to library material.

LIBRARY SERVICE

ASSOCIATE PROFESSOR EVELYN GEER CLEMENT,
Chairman

Room 201, John Willard Brister Library

The prefix LIBS is used by The College of Education for courses in Library Service.

4111. Books and Related Library Materials for Children. (3).

Primarily a reading course based on materials suitable for elementary school children; leisure-time interests and curricular needs; criteria for evaluating books and related materials such as

magazines, photograph records, radio program and films; aids used in their selection; types of literary and informational books, authors, illustrators, and publishers; story-telling and other devices for encouraging reading.

4121. Books and Related Library Materials for Young People and Adults. (3).

This course is presented in the same manner

Library Service 4111, but is adapted to materials on the junior and senior high school levels; attention is also given to adult books to enable librarians to work more effectively with faculty and community groups.

4131. Introduction to Bibliography. (3).

An introduction to the theory and purpose of bibliography as a form of access to information, with emphasis on general reference sources. Introduces principles, practices, and methods of reference service. Sets the foundation for advanced bibliography courses by developing recognition of types and characteristics as well as representative reference tools.

4231. Organization of Materials. (3).

Instruction and practice in simplified procedures for acquisition, preparation, organization, and circulation of books and related library materials.

4232. Cataloging and Classification. (3).

Introduction to the principles and techniques of the cataloging and classification of books and

other library materials.

4331. School Library Administration. (3).

The place of the library in the instructional and guidance program of the school and the philosophy and purposes of libraries and librarianship, including such problems as standards and evaluation, public relations and publicity, support, housing and equipment, training of assistants, and library-study hall relationships; field trips to different types of libraries.

4401. Foundations of Librarianship. (3).

An introduction to librarianship as a profession and the library as an institution in the cultural and political setting. The influence of social issues, societal needs, professional organizations, and federal legislation on the goals, ethics, organization, programs, and problems of libraries and librarians.

Graduate courses in Library Service: For details of the graduate program, see The Bulletin of The Graduate School.

MANAGEMENT

PROFESSOR BRUCE D. McSPARRIN, *Chairman*

Room 202, The College of Business Administration Building

Requirements for the major and minor in management are listed on page 73.

NOTE: Prerequisite(s) for the following courses may be waived by the chairman for students not enrolled in the College of Business Administration.

1010. Introduction to Business. (3).

A survey course to acquaint business students with the major institutions and practices in the business world. Management fields include such areas as personnel management, labor-management relations, and production management. Other major fields include such areas as business law, accounting, finance, and marketing. The course is designed to provide the elementary concepts of business, to act as an orientation course for selection of a specific major, and to provide information on business career opportunities. Open to freshmen only.

2750. Introduction to Data Processing Systems. (3).

This course is designed to give an introduction to the characteristics of electronic machines and their potential uses. Emphasis is placed on the area of: data equipment operation; the concepts of programming as required by an appropriate business related computer language; data processing equipment acquisition and use; and, the data processing organization. The objective is to equip the student to communicate with data processing personnel but not, in itself, to prepare the student for technical employment in the field.

3110. Organization and Management. (3).

An examination of the management functions and the basic concepts and principles of management. Topics to be covered include planning, decision-making, organization, coordination and control, and the basic elements of production

management. PREREQUISITE: Second semester sophomore.

3215. Industrial Relations. (3).

This course is designed to provide the manager with an understanding of the role played by the modern labor organization. Included are early efforts of workers to organize, factors which hampered growth of labor unions, and identification of labor leaders. Growth and development of local unions and giant labor federations is traced. Internal policies and tactics of local unions are analyzed. PREREQUISITE: Management 3110.

3710. Business Statistics I. (3).

An introduction to the procedures for the collection, analysis, presentation, and interpretation of business and economic data. Topics include a comprehensive coverage of probability theory and business decision making under conditions of uncertainty. PREREQUISITE: Mathematics 1203 or higher.

3711. Business Statistics II. (3).

An extension of the range of topics covered in Business Statistics I. Topics to be covered include the application of techniques of sampling theory, hypothesis testing, time-series analysis, and regression and correlation techniques, both linear and multiple. PREREQUISITE: Management 3710.

4210. Personnel Administration. (3).

Employer-employee relationship; job analysis; recruitment, selection, training, transfer, promotion, and dismissal of employees; industrial unrest; wage plans and policies; employee health, interest, and morale; dealing with unions. PREREQUISITE: Management 3110.

4220. Collective Bargaining. (3).

Labor-management relations from the standpoint of collective bargaining contracts, with emphasis on the process of negotiating agreements, including procedures, tactics, and subject matter. PREREQUISITE: Management 3110.

4230. Labor Legislation. (3).

Historic and philosophic background for labor legislation with emphasis on recent legislation in the labor area and the effect of these laws on social and economic institutions. PREREQUISITE: Management 3110.

4240. Wage and Salary Administration. (3).

Systematic examination of the administration of wage and salary as a tool of management. Through the use of job descriptions, job analysis, and job evaluation methods instruction is given in the techniques of rationalizing wage structures. Analyses of some of the outstanding considerations which must be taken into account in installing and administering wage programs are made. PREREQUISITE: Management 3110.

4420. Human Relations in Organizations. (3).

A study of human relations as applied to people at work in all kinds of organizations. Emphasis is placed on the understanding of human behavior and the motivation of employees to work together in greater harmony. Topics to be covered include fundamentals of organizational behavior, leadership and its development, organizational environment, and communication and group processes. PREREQUISITE: Management 3110.

4510. Production Management. (3).

A course devoted to the development of scientific management, organization of the production function, operation and control of production systems, application of the analytical methods of cost analysis, simulation, and statistical analysis. Applications of schematic analysis to production will also be covered. PREREQUISITE: Management 3711 and Management 3110.

4710. Business Policy. (3). (Same as Marketing 4710) (formerly MGMT 4410.)

Advanced problems in policy evaluation, determination, execution, administration, and control. Policy objectives in integration of product, marketing, manufacturing, finance, and organization. PREREQUISITES: Management 3110 and senior standing in the College of Business Administration.

4711. Advanced Statistical Analysis.

This course is designed to provide the student with an understanding of advanced statistical concepts for management decision making and to give students experience in solving complex problems with the aid of the computer. Particular emphasis is given to the statistical library programs available on the computer, a detailed review of various probability distributions needed for sampling theory and computer simulation, and the mechanics of sample design for the purpose of providing management with reliable information. Also covered are the general techniques of hypothesis testing, Bayesian analysis, experimental design, and regression and time-

series analysis. PREREQUISITE: Management 2750 and 3711.

4750. Computer Programming Principles and Applications. (3).

A course emphasizing the programming of electronic digital computers. Current programming languages will be taught such as FORTRAN and COBOL. The students will be encouraged to program and run several business oriented problems in both languages. PREREQUISITE: Management 2750 and one college level mathematics course, or permission of the instructor.

4760. Operations Research. (3).

An introductory study of decision-making which concentrates on the model building process within the decision theory framework. The electronic computer will be used where appropriate to solve problems of linear programming, waiting line theory, simulation, game theory, and other statistical problems of a business and economic nature. PREREQUISITES: Management 3711 and 4750 or consent of instructor.

4780. Systems Design for Business Activities. (3).

Emphasis will be given to computer systems design for typical business applications involving the automation of business activities. This course will concern estimates of computer requirements, organizational arrangement, planning the total system, flow-charting, conversion problems, cost and performance evaluation. The objective is to simulate the middle level executive role in the transition and integration of business operations into computer oriented systems. PREREQUISITE: Management 2750 and 3711.

4790. Information Systems for Management. (3).

Problems and techniques concerning the design and installation of responsive systems will be brought together with special attention to the executive use of the system's product. System approaches utilizing current planning and control models will be studied through current literature and texts in the computer field. PREREQUISITE: Management 4750.

4810. International Management. (3).

Constructed to provide fundamental knowledge of contemporary managerial problems as presented in a foreign-influenced environment. Uniqueness of problems in planning, control, choosing foreign associates, plan location, labor, bureaucracy, legal constraints, and trade with foreign governments will be highlighted by texts and through discussion of articles from current business periodicals. PREREQUISITES: Management 3110 and Marketing 3010.

4910. Management Problems. (1 to 3).

Student will carry on approved research projects in his major area under supervision of staff members. PREREQUISITE: Senior standing and permission of the department chairman.

Graduate courses in Management: Some of the 4000 courses described in the preceding section may be taken for graduate credit. For further details of the graduate program see The Bulletin of The Graduate School.

MARKETING

PROFESSOR HERBERT J. MARKLE, *Acting Chairman*

*Room 105, The College of Business Administration
Building*

Requirements for the major and minor in marketing are listed on page 74.

3010. Basic Marketing. (3).

General survey of the marketing structure; development, functions, costs, institutions and pricing. Both semesters. PREREQUISITE: Second semester sophomore.

3011. Marketing Management. (3).

This, the first course for Marketing Majors, is designed to help the business decision process. It will advance the concepts studied in the basic marketing course with theory, policy and practice in analysis, forecasting, planning, execution, and administration control. Quantitative, qualitative, building, and cases will be the vehicle used to take the students to fuller understanding of the science of marketing management. (Replaces old MKTG 3011 — Marketing Systems). PREREQUISITE: Junior standing and MKTG 3010.

3012. Marketing Promotions. (3).

An interdisciplinary approach to the total area of promotion, including an overview of the promotional process, insights into the operations of promotions (e.g., communications, psychology, sociology, and other disciplines), and an exploration into the "why" of the promotional process. Both semesters. PREREQUISITE or COREQUISITE: MKTG 3010.

3014. Advertising Fundamentals. (3).

Survey of the field of advertising including agencies, media, layout, copy, typography. Both semesters. PREREQUISITE or COREQUISITE: MKTG 3012, or permission of the instructor.

3017. Advertising Problems. (3).

A case study of the advertising functions, emphasizing the determination of advertising strategy; the planning of creative strategy; planning of media strategy; evaluation of advertising results and an introduction into organization and management of the advertising function. Both semesters. PREREQUISITE: MKTG 3140.

3020. Logistics Administration. (3).

A critical examination of the managerial aspects of the logistics function in the business enterprise. Consideration is given to the functioning of the logistics system from both an internal and external point-of-view. Fall semester. PREREQUISITE or COREQUISITE: MKTG 3010.

3020. Industrial Marketing. (3).

A comprehensive survey of the industrial market —products, structure and functioning. An examination of those segments of the industrial market concerned with agricultural raw materials and products purchased by governmental agencies is also included. Spring semester. PREREQUISITE or COREQUISITE: MKTG 3011.

3030. Retail Store Management. (3).

A study of the principles that underlie the successful operation of retail institutions as well as a survey of career opportunities and literature in the field of retailing. Both semesters. PRERE-

QUISITE or COREQUISITE: MKTG 3011, or permission of instructor.

3330. Retail Merchandising. (3).

An analysis of the buying function at the retail level. Study is directed into the areas of organizing the buying function; determination of what to buy; selection of sources; timing of purchases; pricing and merchandising; and control of the buying function. Both semesters. PREREQUISITE: MKTG 3320.

3410. Sales Fundamentals. (3).

Covers the basic essentials of salesmanship, sales theory, sales techniques and sales role playing. The history of selling and the salesman's role in our economy are included to provide a deeper understanding of the contributions made by the American salesman. Both semesters. PREREQUISITE or COREQUISITE: MKTG 3012, or permission of instructor.

3430. Sales Promotion. (3).

This course is designed to acquaint students with the vast and often unassigned area of marketing that exists between advertising and personal selling. This course brings into focus the vital marketing functions that must be performed by manufacturers or middlemen as products flow down the channels of distribution. Both semesters. PREREQUISITE: MKTG 3010 or permission of instructor.

3510. Marketing of Services. (3).

Study of the structure and organization of service firms. Attention will be given to the role of offering, pricing, place and promotion of services with emphasis on the problem of intangibility and image. PREREQUISITE: MKTG 3010.

3520. Contractual Marketing Systems. (3).

The objective of this course is to acquaint the student with the expanding role of franchising and other contractual and legal arrangements utilized in the marketing of products and services. PREREQUISITE: MKTG 3010.

3610. Transportation. (3).

The role of the different modes of transportation (rail, motor, air, water, and pipelines) analyzed in terms of the economic characteristics and services rendered. PREREQUISITE: MKTG 3010.

4010. Marketing Administration. (3).

Study of marketing in depth using the case approach. Study includes consumer, product, market analysis, pricing, channel selection, promotion, wholesaling, retailing, and legal implications of the marketing system. Both semesters. PREREQUISITE: Marketing core and senior standing.

4080. Marketing Research. (3).

Research methods and procedures used in the field of marketing to help solve business problems. Both semesters. PREREQUISITES: Management 3710 and six (6) hours of Marketing including MKTG 3010.

4150. Advertising Media and Campaigns. (3).

An investigation of the characteristics and uses of media by companies, products lines and reasons for selection. The last part of both semesters will be devoted to the development of a campaign for a particular firm. Fall semester. PREREQUISITE: MKTG 3140.

4220. Purchasing. (3).

A study of the policies for effective and efficient procurement of goods and services for today's industry. Close attention will be given to the measurement and evaluation of purchasing performance. Fall semester. PREREQUISITE: MKTG 3010.

4330. Credit and Collections. (3).

A study of the American credit system and collection methods used today, significance of credit information, management of charge accounts, credit and collection correspondence, mercantile credit and Importance of credit to our economic well-being. Spring semester. PREREQUISITE: MKTG 3010.

4410. Sales Management. (3).

A survey course designed to define and describe the major sales management functions and to provide controlled practical application of sales management functions through the utilization of the case study approach. Ultimately, the student gains an overview of the operation of marketing departments through the synthesis of three primary divisions of marketing management—sales administration, sales personnel activities, and sales control. Both semesters. PREREQUISITE: MKTG 3410.

4420. Sales Training. (3).

This course covers one of the most important staff activities within any marketing department—the training of sales personnel. Designed to develop salesmanship, the art of persuasion, into a

teachable subject which will apply to the business world. Student is taught and self-taught, how to become a sales trainer and to develop an understanding of the training director's responsibilities. Spring semester. PREREQUISITE: MKTG 3410.

4530. International Marketing. (3).

A study of the bases and promotion of foreign trade; international marketing organizations and methods; technical and financial features of international marketing. Fall semester. PREREQUISITE: MKTG 3010.

4710. Business Policy. (3).

(Same as Management 4710). Advanced problems in policy evaluation, determination, execution, administration, and control. Policy objectives in integration of product, marketing, manufacturing, finance, and organization. PREREQUISITES: Management 3110 and senior standing in the College of Business Administration.

4910. Problems in Marketing. (1-3).

Students will carry on approved research projects in their major area under the supervision of staff members. Both semesters. PREREQUISITE: senior standing and permission of the department chairman.

4991. Marketing Internship. (3).

Seniors majoring in marketing may, after receiving approval of the department chairman and professor concerned, obtain actual experience by working a minimum of 200 hours in approved marketing positions. Student may not be enrolled for more than 12 academic hours when enrolling for credit in work experience. Both semesters.

Graduate courses in Marketing: For further details of the graduate program see The Bulletin of The Graduate School.

MATHEMATICAL SCIENCES

PROFESSOR STANLEY FRANKLIN, *Chairman*

Room 373, Mathematics-Foreign Languages Building

Requirements for a major or minor in mathematics are given on page 65.

The Department of Mathematical Sciences offers general courses in mathematics, statistics and computer science for students in all departments of the University, with specially designed programs for the principal divisions of the University. Courses which satisfy specific graduation requirements of the several colleges or departments are as follows:

For the College of Arts and Sciences:

Mathematics 1181 and 1182; or
Mathematics 1203 and 2291; or
Mathematics 1203 and 2611; or
Mathematics 1203 and 1312; or
Mathematics 1211 and 1212; or
Mathematics 1321 and 2321.

For the Elementary Education Major in the College of Education:

Mathematics 1181, 1182, and 2581

For the College of Business Administration:

Mathematics 1203

The courses Mathematics 1000, 1100, 1211, and 1212 provide preparatory instruction, as needed, for required courses. Mathematics 1000 provides remedial instruction in elementary algebra as preparation for Mathematics 1100; and Mathematics 1100, Intermediate Algebra, prepares the student for either Mathematics 1203 or Mathematics 1211. Mathematics 1211 provides preparation for Mathematics 1212, and Mathematics 1212 provides preparation for Mathematics 1321.

A placement test is recommended for students who plan to register in any of the courses Mathematics 1203, 1211, 1212 or 1321. On prior payment of the required fee, a student may earn credit by examination in college algebra (either Mathematics 1203 or 1211, but not both), or trigonometry (Mathematics 1212).

NOTE: A student who wishes to take a course without having had all of its prerequisites must obtain permission of the instructor and of the Chairman of the Department of Mathematical Sciences.

Honors Program in Mathematics

The Department of Mathematics offers an honors

program in mathematics for the talented student who desires to achieve mathematical maturity at a rate consistent with his own exceptional ability. The core of this program is a two-year sequence of course work in mathematics in which the student will explore, in considerable depth, the ideas which underlie all of contemporary mathematics. After completion of this two-year sequence, the participant will be treated as a mature student of mathematics and he will be allowed to register for any mathematics course at the B.S. or M.S. level, (subject to the regulation of the Graduate School concerning combination undergraduate-graduate students as set forth on page five of Policies of the Graduate School) regardless of the normal course prerequisites. The second two years of the honors program are thus characterized by a high degree of flexibility and this part of the program offers many possible avenues for further maturation in mathematics. The Honors Committee of the Department of Mathematics will make all decisions concerning admission of students to this program.

GENERAL MATHEMATICS

1000. Basic Mathematics. (3).

Signed numbers; order of operations; variables, first degree equations; products and factors of polynomials; basic operations on algebraic fractions; ratio and proportion; first degree equations in two variables; radical expressions. RESTRICTION: This course satisfies no mathematics requirement for any degree. It is offered solely as preparation for Math. 1100. NOTE: Students who have received credit for Math. 1201 will not be allowed credit for Math. 1000. No more than three hours credit in Math. 1000 and 1100 may be applied toward any degree program.

1001. Intermediate Algebra. (3).

Set notation, first degree inequalities, absolute value equations and inequalities; operations on polynomials; operations on rational expressions; integral, fractional and negative exponents; operations involving radical expressions; complex numbers; quadratic equations; systems of linear equations; determinants. RESTRICTION: This course satisfies no mathematics requirement for any degree. It is offered solely as preparation for College Algebra (either Math. 1203 or Math 1211). NOTE: No more than three hours credit in Math. 1000 and 1100 may be applied toward any degree program.

1011. Concepts of Number. (3).

Introduction to logic; elements of set theory; systems of numeration; the real number system; algorithms; number sentences.

1012. Concepts of Algebra. (3).

Relations and functions; equations; exponents; polynomials; applications. PREREQUISITE: Math. 1181.

1023. College Algebra With Business Applications. (3).

Basic algebraic techniques with applications to economic and business problems. Development of conceptual understanding and practical application of linear equations, inequalities, vectors, and matrices. Uses of algebra and finite mathematics in economics, finance, marketing and production. PREREQUISITE: Math. 1100 or its equivalent. Placement test recommended, but not required). NOTE: Only one of the courses Math.

1203 or Math. 1211 can be used to satisfy degree requirements.

1211. College Algebra. (3).

Inequalities; quadratic equations; relations and functions; absolute value; exponential and logarithmic functions; systems of equations and inequalities; matrices; complex numbers; roots of polynomials; sequences and series; binomial expansion. PREREQUISITE: Math. 1100 or its equivalent. (Placement test recommended but not required.) NOTE: Only one of the courses Math. 1203 or Math. 1211 can be used to satisfy degree requirements.

1212. College Algebra and Trigonometry. (1-3).

Algebraic and trigonometric functions; absolute value; inequalities; applications and graphs; identities and inverse trigonometric functions; polynomials; logarithmic and exponential functions; quadratic systems. PREREQUISITE: Placement test recommended but not required; Math. 1203 or 1211.

1312. Elementary Calculus. (3).

Introduction to the concepts and methods of elementary calculus of one real variable as related to rational, exponential, and logarithmic functions; the nature of derivatives; differentiation; application of the derivative; the nature of integration; the definite integral; applications of the definite integral. PREREQUISITES: Math. 1182, 1203 or 1211. NOTE: Only one of the courses Math. 1312 or 1321 may be used to satisfy degree requirements.

1321. Analytic Geometry and Calculus. (4).

Essentials of analytic geometry of the plane with vectors; the nature of derivatives; differentiation of algebraic and trigonometric functions; applications of the derivative; basic concepts of integration and definite integral with applications. COREQUISITE: Math. 1212 or its equivalent. (Placement test recommended but not required.) NOTE: Only one of the courses Math. 1312 or 1321 may be used to satisfy degree requirements.

1401. Honors Mathematics, I. (5).

Elements of linear algebra; underlying concepts in integral and differential calculus. PREREQUISITE: Permission of the Honors Committee.

1402. Honors Mathematics, II. (5).

Axiomatic set theory; development of the real number system. PREREQUISITES: Math. 1401, and permission of the Honors Committee.

2291. Mathematics of Finance. (3).

Compound interest and annuities with applications; introduction to mathematics of life insurance. PREREQUISITE: Math. 1203 or 1211.

2321. Analytic Geometry and Calculus. (4).

Differentiation, integration and analytical aspects of the elementary transcendental functions; techniques of integration; limits and continuity; applications of the definite integral; polar coordinates. PREREQUISITE: Math. 1321.

2322. Analytic Geometry and Calculus. (4).

Indeterminate forms; improper integrals; vectors and analytic geometry in 3-space; partial differentiation; multiple integrals; infinite series. PREREQUISITE: Math. 2321.

2401. Honors Mathematics, III (5).

Introductory point set topology; elements of abstract algebra. PREREQUISITE: Math. 1402, and permission of the Honors Committee.

2402. Honors Mathematics, IV. (5).

Topics in abstract algebra and real analysis. PREREQUISITES: Math. 2401, and permission of the Honors Committee.

2581. Concepts of Geometry. (3).

Introduction to the idea of proof in a postulational system; development of the 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.

3111. Advanced Calculus. (3).

Arguments and proofs; symbolic logic; the axiomatic method; the real number system; functions and sequences; limits; continuity; differentiation. PREREQUISITE: Math. 2322.

3241. Matrix Theory. (3).

Matrix algebra; elementary operations; equivalence; determinants; similarity, polynomial matrices; matrix analysis; applications. PREREQUISITES: Math. 1312 or 1321.

3391. Differential Equations. (3).

Ordinary differential equations including series solutions. PREREQUISITE: Math. 2322.

3392. Vector and Tensor Analysis. (3).

Determinants, e-systems and certain transformation equations; calculus of vectors, integrals dependent on a parameterized arc; integral transformations including Gauss' divergence theorem and Stokes' theorem; tensors and applications. COREQUISITE: Math. 3391.

4111. Philosophy of Mathematics. (3).

Logical methods; axiomatic systems; independency and consistency; the nature of mathematics. PREREQUISITE: Math. 1312 or 1321 or permission of instructor.

4151. History of Mathematics. (3).

The development of mathematics from the earliest times to the present; problem studies; parallel reading and class reports. PREREQUISITE: Math. 3111 or its equivalent.

4171. Special Problems in Mathematics. (1-3).

Directed individual study in a selected area of mathematics chosen in consultation with the instructor. Repeatable by permission of the chairman of the department. PREREQUISITE: Permission of instructor.

4221. Theory of Numbers. (3).

Divisibility properties of integers; prime numbers; congruences; diophantine equations; quadratic residues; number theoretic functions. PREREQUISITE: Math. 1312 or 1321.

4241. Linear Algebra. (3).

Systems of linear equations; matrices and elementary row operations; vector spaces and subspaces; inner product spaces; linear transformations; linear functionals; annihilators; poly-

nomials. PREREQUISITE: Math. 2321 or permission of instructor.

4261. Abstract Algebra. (3).

(Formerly Mathematics 3262).

Groups; homomorphisms; rings; integral domains; polynomials; fields. PREREQUISITE: Math. 4241 or permission of instructor.

4262. Abstract Algebra. (3).

Semi-groups, groups, rings and ideals; finite fields; Galois theory. PREREQUISITE: Math. 4261.

4351. Advanced Calculus. (3).

Integration theory; Riemann and Lebesgue integrals; partial differentiation; implicit function theorem. PREREQUISITE: Math. 3111 or permission of instructor.

4361. Complex Variables. (3).

Complex numbers; analytic functions; Cauchy-Riemann conditions; Taylor and Laurent series; integration. PREREQUISITE: Math. 2322.

4391. Applied Mathematics. (3).

Laplace transforms; Fourier series; introduction to partial differential equations. PREREQUISITE: Math. 3391.

4392. Applied Mathematics. (3).

Partial differential equations. PREREQUISITE: Math. 4391.

4411. Topology. (3).

Introductory set theory; metric spaces; topological spaces; continuous functions; separation axioms; separability and countability axioms; connectedness and compactness. PREREQUISITE: Math. 3111 or 4241 or permission of instructor.

COMPUTER SCIENCE

4710. Computer Programming. (3).

A first course in the programming of digital computers with complete treatment of the FORTRAN language and problem examples in various fields of application. (Note: Students who have received c-credit for Math. 3711 will not be allowed credit for Math. 4710.) PREREQUISITE: Math. 1203 or its equivalent.

4711. Advanced Computer Programming. (3).

Advanced digital computer programming including the full utilization of Operating Systems, Scientific Sub Routine Packages, and hardware capabilities such as tape and disk data management. PREREQUISITE: Math. 4710 or its equivalent.

4713. Numerical Computer Methods. (3).

Methods of numerical computation; interpolations; numerical differentiation and integration; solution of algebraic and transcendental equations; inversion of larger matrices, determination of proper vectors and proper values; solution of differential and integral equations; estimation of error and error control. PREREQUISITE: Math. 4710 or its equivalent.

4721. Numerical Analysis. (3).

Derivation and application of computer-oriented, numerical methods for functional approximation,

differentiation, quadrature, and the solution of ordinary differential equations. PREREQUISITES: Math. 2321 and 4710 or its equivalent.

4722. Numerical Analysis. (3).

A continuation of Mathematics 4721; numerical methods for solving applied problems from calculus and differential equations. PREREQUISITE: Math. 4721.

4741. 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. 4241 and 4710 or its equivalent.

4769. Programming Languages. (3).

Formal description of procedure-oriented languages and techniques useful in the translation of these languages into computer programs. PREREQUISITE: Math. 4710 or its equivalent.

4791. Topics in Computer Science. (1-3).

Directed individual study of selected areas of computer science. Repeatable by permission to six semester hours. PREREQUISITE: Permission of instructor.

STATISTICS

2611. Elementary Statistics. (3).

Basic statistical concepts; elementary probability theory; normal curve and applications; linear, multiple, and partial correlation; statistical inference. PREREQUISITE: Math. 1100 or its equivalent.

MECHANICAL ENGINEERING

PROFESSOR W. G. LAMBERT, *Chairman*

Room 108A, Engineering Building

Requirements for the B.S. in Mechanical Engineering are listed on page 97.

2332. Dynamics. (3).

Kinematics and kinetics of particles and rigid bodies. PREREQUISITE: Civl. 2131.
Three lecture hours per week.

3311. Engineering Thermodynamics I. (3).

Laws of thermodynamics and their applications to engineering problems. PREREQUISITE: Mathematics 2322; Physics 2512.
Three lecture hours per week.

3312. Engineering Thermodynamics II. (3).

Continuation of Mech. 3311 Engineering Thermodynamics I. PREREQUISITE: Mech. 3311, 3331.
Three lecture hours per week.

3321. Principles of Design. (3).

Kinematic analysis of linkages, cams, gears, and mechanisms. Velocity, acceleration and force analysis of mechanisms; gyroscopic forces, balancing of machinery. PREREQUISITES: Mathematics 2322, Mech. 2332.
Two lecture, three laboratory hours per week.

3631. Introductory Probability. (3).

Permutations and combinations; probabilities for finite sample spaces; conditional probabilities; discrete and continuous random variables; moments and moment-generating functions. PREREQUISITE: Math. 2322.

4611. Statistical Methods. (3).

Intended for students in the engineering, physical, and mathematical sciences, Binomial, hypergeometric, Poisson, multinomial and Chi-square distributions; tests of randomness and non-parametric tests; t-tests; tests of hypotheses; correlation analysis. PREREQUISITE: Math. 2321.

4612. Statistical Methods. (3).

Continuation of Statistics 4611. An introduction to experimental design and the analysis of variance; regression analysis; analysis of covariance. PREREQUISITE: Statistics 4611.

4613. Introductory Statistical Theory. (3).

Distributions of functions of random variables; limiting distributions; correlation and regression; Neyman-Pearson Lemma; likelihood ratio tests; sufficient statistics; point estimations. PREREQUISITE: Math. 2322.

4631. Probability. (3).

Stationary and non-stationary stochastic processes; Markov chains and applications; continuous time Markov chains; Poisson processes and applications; Brownian motion; branching processes. PREREQUISITE: Statistics 3631.

Graduate courses in Mathematics; For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

3322. Mechanics of Materials. (4).

Analysis of stress and strain of deformable solids; tension, compression, torsion and flexure. PREREQUISITE: Civl. 2131.
Three lecture, three laboratory hours per week.

3331. Mechanics of Fluids. (4).

Statics and dynamics of fluids; applications to the measurement of properties of water and air flows. COREQUISITE: Mech. 2332.
Three lecture, three laboratory hours per week.

3361. Materials Science. (4).

Structure and properties of solids; modification of structure for engineering purposes; characteristics of polymers, ceramics, and metals. PREREQUISITE: Physics 2512.
Three lecture, three laboratory hours per week.

3381. Manufacturing Operations. (3).

Machines, tools, and processes used in modern production. PREREQUISITE: Mech. 3322.
Three lecture hours per week.

4309. Gas Dynamics. (3).

Thermodynamics of fluid flow including dynamic

and energy relations, adiabatic and diabatic flows. PREREQUISITE: Mech. 3312.

Three lecture hours per week.

4311. Heat Transfer I. (3).

Fundamentals of conduction and convection heat transfer. Discussion of Fourier Series, Laplace transforms, and Numerical methods used in heat transfer analyses. PREREQUISITE: Mech. 3311.

Three lecture hours per week.

4312. Mechanical Power Generation. (4).

Applications of principles of thermodynamics, heat and mass transfer and fluid mechanics to stationary power plants; fossil and nuclear fuel characteristics, selection, handling, and system design. PREREQUISITE: Mech. 4311.

Three lecture, three laboratory hours per week.

4313. Heat Transfer II. (4).

Continuation of Heat Transfer I with laboratory experiments and an Introduction to heat transfer by radiation. PREREQUISITE: Mech. 4311.

Three lecture, three laboratory hours per week.

4314. Thermal Elastic Design. (3).

Derivation of the Heat Conduction equation and the equations of Elasticity. The Thermal Elastic Equations and Boundary Conditions. Examples involving statically and dynamically-thermally loaded beams, frames, plates, cylinders, shells, welded joints, heat exchangers, nuclear reactor vessels, rocket engines, boilers, heat transfer equipment in general. PREREQUISITE: Consent of the instructor.

Three lecture hours per week.

4315. Ventilation and Air Conditioning. (3).

Psychrometrics. Heating, ventilating, air conditioning, refrigeration. PREREQUISITE: Mech. 3311.

Three lecture hours per week.

4321. Mechanical Design and Analysis I. (3).

Design of machine parts, bearings, gears, shafts, brakes, clutches, etc. Study of failure theory, impact, fatigue, creep, thermal stress, etc., for machine parts. PREREQUISITES: Mech. 3321 and Mech. 3322.

Three lecture hours per week.

4322. Mechanical Design and Analysis II. (4).

Concepts of economics, availability, use, etc., in machine design. Student special design project. PREREQUISITE: Mech. 4321.

Three lecture, three laboratory hours per week.

4325. Advanced Mechanics of Materials. (3).

Unsymmetrical bending and torsion of flexural members of non-circular cross-section, beams on elastic foundations and other selected topics; deformations beyond the elastic limit, theories of failure.

4326. Mechanics for Bio-Medical Engineers. (3).

The analyses 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. PREREQUISITE: Mech 3322, 4321.

4331. Turbomachinery. (3).

Aerodynamics and flow of fluids in stationary and rotating passages. One, two and three dimensional analysis. PREREQUISITE: Mech. 3331.

Three lecture hours per week.

4332. Fluid Mechanics for Bio-Medical Engineers. (3).

Elements of Hydrodynamics, Cardio-vascular System, Flow of fluids in Tubes with Elastic Walls, Pulsatile Blood Flow, Input Impedance and Pulse Waves, Vascular Walls, Flow through Arterial Walls, Models of the circulation system. PREREQUISITE: Consent of instructor.

4341. Mechanical Engineering Analysis. (3).

Engineering methods, classical analysis, computer techniques, and their interactions with mechanical engineering problems. PREREQUISITES: Upper division standing, consent of instructor.

Two lectures with demonstration laboratory.

4351. Nuclear Engineering. (3).

Power generation. Peaceful uses of nuclear energy. PREREQUISITES: Upper division standing, consent of instructor.

Three lecture hours per week.

4361. Metallurgy. (4).

Physical metallurgy, heat treatment, and metallography. PREREQUISITE: Mech. 3361.

Three lecture, three laboratory hours per week.

4371. 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. PREREQUISITE: Math. 3391.

Three lecture hours per week.

4381. Aerospace Propulsion I. (3).

An introduction to the principles of propulsion by air-breathing jet engines. Included are discussions of ramjet, turbojet, and turboprop propulsion systems. PREREQUISITE: Mech. 3312.

4382. Aerospace Propulsion II. (3).

An introduction to the principles of rocket propulsion and the propulsion requirements of various missions. Included are treatments of solid, liquid, nuclear, and electrical propulsion systems. PREREQUISITE: Mech. 4381.

4391. Mechanical Engineering Projects I. (1-3).

Independent investigation of a mechanical engineering problem in consultation with instructor. PREREQUISITE: Consent of instructor.

4392. Mechanical Engineering Projects II. (1-3).

Independent investigation of a mechanical engineering problem in consultation with instructor. PREREQUISITE: Consent of instructor.

MUSIC

PROFESSOR ROBERT SNYDER, *Chairman*

Room 123B, Music Building

Requirements for the major and minor in music are listed on page 65. The program for the Bachelor of Music degree is outlined on page 59. Requirements

for the Bachelor of Music Education are listed on page 90.

PIANO PROFICIENCY: All music majors in all degree programs must demonstrate proficiency in piano. This may be done in either of two ways: (1) by successful completion of Music Education 1614, Class Instruction in Piano, or (2) by passing without credit the proficiency in piano based on the level of study described in Music Education 1614, Class Instruction in Piano. Copies of the requirements for the piano proficiency examination are available on request in the Music Office. Students must attempt the piano proficiency examination prior to attainment of junior classification. If the examination is failed, enrollment in piano class at an appropriate level is mandatory until the student either attains a passing grade in Music 1614 or successfully passes the proficiency examination. Transfer students must attempt the proficiency during the first semester of residence.

I. THEORY AND COMPOSITION

1001. Basic Music Theory. (1).

Designed for students who plan to major in music but do not meet minimum standards for Music 1051. Not allowable as credit toward the satisfaction of requirements for the major or minor.

Two laboratory hours per week.

1012. Aural Music Theory I. (1).

Sight-singing and ear-training using the unison material studied in Music 1032; keyboard harmony. COREQUISITE: Music 1032.

Two laboratory hours per week.

1013. Aural Music Theory I. (1).

Continuation of Music 1012 with more difficult unison and easier two-three-, and four-part materials. COREQUISITE: Music 1033.

Two laboratory hours per week.

1032. Music Theory I. (3).

Traditional harmony including major and minor scales and triads in all positions in four-part writing. COREQUISITE: Music 1012. PREREQUISITE: theory placement examination.

1033. Music Theory I. (3).

Continuation of Music 1032 up to and including the dominant seventh chord; non-chordal tones; two-part counterpoint; harmonic analysis. COREQUISITE: Music 1013.

1051. Comprehensive Musicianship. (5).

An integrated approach to musical problems involving extensive exploratory experiences in the processes of shaping sounds into logical designs in new and traditional styles to develop listening, performing, compositional, and descriptive skills and understanding; a brief survey of Western music; identification of common elements in folk and art music of various cultures.

1052. Comprehensive Musicianship. (5).

Continuation of Music 1051. PREREQUISITE: Music 1051.

2014. Aural Music Theory II. (1).

Continuation of Music 1013 with classwork correlated with Music 2034. COREQUISITE: Music 2034.

Two laboratory hours per week.

2015. Aural Music Theory II. (1).

Continuation of Music 2014 with classwork cor-

related with Music 2035. COREQUISITE: Music 2035.

Two laboratory hours per week.

2023. Composition. (2).

Class instruction in free composition with emphasis on smaller forms. May be repeated for additional credit. PREREQUISITE: Music 1012-1032 or Music 1051.

2024. Composition. (2).

Works for piano, voice, chorus, and small ensembles; a study of style and analysis of works from music literature. May be repeated for additional credit. PREREQUISITE: Music 2023 or permission of instructor.

2034. Music Theory II. (3).

Continuation of Music 1033 with attention to secondary seventh chords; modulation to related keys; instrumental style. COREQUISITE: Music 2014.

2035. Music Theory II. (3).

Continuation of Music 2034 with introduction of altered and highly dissonant chord material; advanced modulation. COREQUISITE: Music 2015.

2231. Music for Recreation. (3).

The rudiments of music, conducting and song leadership, materials and methods, designed for recreation majors.

3028. Counterpoint I. (2).

A study of the modal contrapuntal technique of the sixteenth century; writing in two and three parts in the style of Palestrina and Lassus; analysis. PREREQUISITES: Music 1013 and 1033.

3029. Counterpoint II. (2).

A study of contrapuntal techniques of the eighteenth century; writing in two to four parts; canon and fugue. PREREQUISITE: Music 3028.

3030. Counterpoint III. (2).

A study of contrapuntal techniques of the classic and romantic periods. PREREQUISITE: Music 3028.

3031. Counterpoint IV. (2).

Contrapuntal techniques of the twentieth century; analysis of serial techniques in contemporary styles. PREREQUISITE: Music 3028.

3033. Form and Analysis I. (2).

A study of the basic principles underlying the formal structure of music; analysis of outstanding examples of the suite, sonata, and symphony. PREREQUISITES: Music 1013 and 1033.

3034. Form and Analysis II. (2).

Continuation of Music 3033. PREREQUISITE: Music 3033 or permission of the instructor.

3035. Orchestration. (3).

A study of the compass, possibilities, and tonal characteristics of orchestral and band instruments; arranging of various types of compositions for string, woodwind, and brass ensembles; arranging of piano, organ and choral compositions for full orchestra. PREREQUISITES: Music 1013 and 1033.

3036. Band Arranging. (3).

Transcriptions of selected works for band and wind ensemble; stage band arranging. PREREQUISITE: Music 3035.

3061. Comprehensive Musicianship. (6).

Continuation of Music 1052. PREREQUISITE: Music 1052.

3062. Comprehensive Musicianship. (6).

Continuation of Music 3061 with more emphasis on individual student interests and needs; concentrated work on identified personal musical deficiencies. PREREQUISITE: Music 3061.

4024. Composition. (2 or 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 the upper division examining committee.

4030. History of Theory. (3).

The development of harmony, counterpoint, theoretical systems in the western world from Pythagoras to the present.

4031. Seminar: Music Theory and Analysis. (3).

An advanced course in theory, counterpoint, and analysis of literature. Contrapuntal and harmonic techniques. Research; theoretical problems from a pedagogical point of view; writing in strict and free styles. Recommended as a review course for graduate students. PREREQUISITE: permission of the instructor.

4033. Critical Studies in Music. (3).

Directed research in music theory, history and literature; a study in depth related to the major concentration area; required of theory majors; term paper.

4039. Compositional Techniques of the Twentieth Century. (3).

A writing course employing the harmonic and contrapuntal techniques and devices from Debussy to the present.

II. HISTORY, LITERATURE, AND APPRECIATION**1121. Introduction to Music I. (2).**

An introduction to music history and literature; significant compositions from the 16th Century to the present are oriented to the proper social, cultural, economic and political setting in order to bring about the most effective understanding and enjoyment of the music. Required of all music majors.

1122. Introduction to Music II. (2).

Continuation of Music 1121.

1131. Music Appreciation. (3).

An introduction to music through a study of its literature and history; significant compositions are oriented to their proper social, cultural, economic and political settings in order to bring about the most effective understanding and enjoyment of the music. Open without prerequisite to non-music majors.

2131. Afro-American Music. (3).

A study of the development of significant musical styles with special attention to individual contributions of the major composers. PREREQUISITES: Music 1013 and 1033 or permission of the instructor.

3131. History of Music to 1700. (3).

A study of the development of significant musical styles with special attention to the individual contributions of the major composers. PREREQUISITES: Music 1013 and 1033 or permission of the instructor.

3132. History of Music Since 1700. (3).

A continuation of Music 3131. PREREQUISITES: Music 1013 and 1033 or permission of the instructor.

3825. Dramatic Coaching. (2).

Individual and/or class instruction in the interpretation of operatic and song literature. May be repeated for credit.

4111. Baroque Music. (3).

The age of the basso continuo, 1580-1750; opera and oratorio, instrumental forms, keyboard music, and performance practices. PREREQUISITE: Music 3131 and 3132 or permission of the instructor.

4112. Classic Music. (3).

Rococo and Pre-classic music in England, France, Italy, Spain and Germany. The Viennese classical tradition. PREREQUISITE: Music 3131 and 3132 or permission of the instructor.

4113. Romantic Music. (3).

The development of romanticism in music from late Beethoven through Bruckner. PREREQUISITE: Music 3131 and 3132 or permission of the instructor.

4114. Music in the Twentieth Century. (3).

Music since Debussy and Mahler with emphasis on current developments and techniques. PREREQUISITE: Music 3131 and 3132 or permission of the instructor.

4121. Song Repertory I. (2).

Basic repertoire of old Italian airs and German lieder, as well as an introduction to the French repertoire of the nineteenth century.

4122. Song Repertory II. (2).

The French art song and solo vocal works of other nationalistic schools, as well as English and American song literature.

4131. 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.

4133. The Opera and Music Drama. (3).

A survey of the opera before Richard Wagner; study of Wagner's music dramas and operas of his contemporaries; dramatic and musical significance of each phase of the development of the two forms. PREREQUISITES: Music 3131 and 3132 or permission of the instructor.

4137. Judeo-Christian Music. (3).

History of church music from the temple to 1000 A.D. Considerable emphasis on Hebrew music, its use as related in scripture and the form and use of service music in the present day temples. Music for sabbath and festival services.

4138. History of Liturgies. (3).

A study of the services of the liturgical churches and the music used generally and specifically by these churches.

4139. Hymnology. (3).

A study of hymns, their authors, composers, and role in liturgical churches.

4140. Piano Repertory. (3).

A survey of stringed keyboard repertory from Bach and his contemporaries to the present. Representative works will be analyzed in regard to historical, stylistic, formal and aesthetic features. PREREQUISITE: junior standing in music or permission of the instructor.

4143. Problems in Editing. (1-3).

The preparation of performance editions from facsimiles of early prints and manuscripts: continuo realization, transcription of tablatures and works in mensural notation. (May be repeated for a maximum of three hours credit). PREREQUISITE: Permission of instructor.

COLLEGIUM MUSICUM: Laboratory in Music History

0141, 1141, 3141. Early Musical Instruments: Performance. (1, 1, 1).

(lute, viols, recorders, 18th century transverse flute, etc.)

0142, 1142, 3142. Early Musical Instruments: Repertory. (1, 1, 1).

(madrigal, motet, chanson, consort music, cantata and dance suite for instruments and/or voices)

0145, 1145. Musical Fundamentals for the Non-Specialist. (1, 1).

For *The collegium musicum* participant lacking background in formal theoretical training. PREREQUISITE: Permission of the instructor.

Note: All courses except Music 0145 and 1145 may be repeated for credit, but not for the purpose of improving the grade originally given.

III. CONDUCTING

3236. Instrumental Conducting. (3).

A study of the various problems encountered in preparation and conducting in instrumental scores; individual practice with the opportunity for each student to conduct instrumental groups. PREREQUISITES: Music 1013 and 1033.

3239. 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.

4237. Church Choir and Console Conducting. (3).

Instruction in the techniques of conducting for both adult and youth or children's choirs de-

signed to meet the need of all church music majors, directors and combination organist-directors who must conduct and play simultaneously.

4238. Service Playing. (3).

Designed to give the student practical keyboard work in performance of the basic music used in liturgical and non-liturgical services. Includes keyboard harmony, modulation and simple improvisation.

IV. PEDAGOGY

4160. Piano Pedagogy. (3).

A study of recommended literature at various levels of musical and technical accomplishment with emphasis on teaching techniques for the satisfaction of problems at each of these levels. A requirement for piano majors but open to non-keyboard majors with keyboard facility and to piano teachers.

4170. String Pedagogy. (3).

A study of various methods of teaching strings with special emphasis on contemporary theories of pedagogy; observation and laboratory teaching in MSU String Preparatory and the Suzuki Talent Education Divisions. For string majors. PREREQUISITE: Permission of the instructor.

V. APPLIED MUSIC

Applied music is offered at three levels: (1) major group instruction, (2) lower division, and (3) upper division. Lessons are given by members of the university faculty and by special instructors. Since 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.

FEES: In addition to the regular student fees, all persons taking applied music will be assessed \$25.00 for each half-hour lesson. Students registering for one (1) semester hour credit will receive one half-hour lesson per week. All others will receive one hour lesson per week regardless of credit hours.

REGISTRATION: Students will register for lessons in the same manner and at the same time as they register for other courses; however, a student may not be assigned to a course number until he has 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 chairman of the Department of Music.

CREDITS AND GRADES: A student 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 his level of performance. Additional credit may be earned at the lower division and upper division level (see Music 1340, 1440, 1540, etc., and Music 4340, 4440, 4460, etc.). 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.

EXAMINATIONS: For an examination in applied music, each student 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 his 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.

0001. Applied Music Workshop. (NC).

All students electing individual instruction in applied music and all full-time music majors are required to register for this course each semester and to attend one workshop per week.

MAJOR GROUP INSTRUCTION

Regardless of his degree of advancement, any student of the University may register for lessons at the major group level except in organ; organ students must have the ability to play the piano before beginning organ instruction. No applied music fee is charged for major group classes.

1305. Major Group Instruction in Brass. (2).

1405. Major Group Instruction in Organ. (2).

1505. Major Group Instruction in Percussion (2).

1605. Major Group Instruction in Piano. (2).

1705. Major Group Instruction in Strings. (2).

1805. Major Group Instruction in Voice. (2).

1905. Major Group Instruction in Woodwinds. (2).

LOWER DIVISION COURSES

Applied music courses in the lower division include the study normally carried out during the freshman and sophomore years. The piano or instrumental student at this level should have had several years of intensive study prior to University entrance so that he has a secure, reliable, and well-grounded technique on his 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 Piano 1605. 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.

1310. Brasses. (1).

1320. Brasses. (2).

1340. Brasses. (4).

1410. Organ. (1).

1420. Organ. (2).

1440. Organ. (4).

1510. Percussion. (1).

1520. Percussion. (2).

1540. Percussion. (4).

1610. Piano. (1).

1620. Piano. (2).

1640. Piano. (4).

1615. Harpsichord (1).

1625. Harpichord. (2).

1645. Harpsichord. (4).

1710. Strings. (1).

1720. Strings. (2)

1740. Strings. (4).

1810. Voice. (1).

1820. Voice. (2).

1910. Woodwinds. (1).

1920. Woodwinds. (2).

1940. Woodwinds. (4).

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.

4310. Brasses. (1).

4320. Brasses. (2).

4340. Brasses. (4).

4410. Organ. (1).

4420. Organ. (2).

4440. Organ. (4).

4460. Organ. (6).

4510. Percussion. (1).

4520. Percussion. (2).

4540. Percussion. (4).

4610. Piano. (1).

4620. Piano. (2).

4640. Piano. (4).

4660. Piano. (6).

4615. Harpsichord. (1).

4625. Harpsichord. (2).

4645. Harpsichord. (4).

4665. Harpsichord. (6).

4710. Strings. (1).

4720. Strings. (2).

4740. Strings. (4).

4810. Voice. (1).

4820. Voice. (2).

4840. Voice. (4).

- 4910. Woodwinds. (1).
- 4920. Woodwinds. (2).
- 4940. Woodwinds. (4).

JUNIOR AND SENIOR RECITALS

Most degree plans include a junior and/or a senior recital. Degree requirements for the Bachelor of Music degree are listed on page 59; for the Bachelor of Music Education degree on page 90; and for the Bachelor of Arts degree on page 56. A student must register for recital during the semester in which the recital is to be presented. Recital dates are scheduled tentatively at the beginning of the semester.

All required recitals must be approved by the faculty. This is normally accomplished no later than two weeks prior to the scheduled date at which time the entire program is performed for a faculty committee. Only upon successful completion of this hearing may a student confirm the scheduled date and make arrangements for the printing of the program.

For details regarding recommended and/or required recital literature see the Memphis State University Music Department Handbook.

- 4101. Senior Conducting Recital. (NC).
- 4102. Senior Composition Recital. (NC).
A recital of original compositions as a demonstration of the student's progress in various media. Equivalent to senior recital in one of the performing areas.
- 3301. Junior recitals in brass instruments. (NC).
- 4301. Senior recitals in brass instruments. (NC).
- 3401. Junior recitals in organ. (NC).
- 4401. Senior recitals in organ. (NC).
- 3501. Junior recitals in percussion instruments. (NC).
- 4501. Senior recitals in percussion instruments. (NC).
- 3601. Junior recitals in piano or harpsichord. (NC).
- 4601. Senior recitals in piano or harpsichord. (NC).
- 3701. Junior recitals in string instruments. (NC).
- 4701. Senior recitals in string instruments. (NC).
- 3801. Junior recitals in voice. (NC).
- 4801. Senior recitals in voice. (NC).
- 3901. Junior recitals in woodwind instruments. (NC).
- 4901. Senior recitals in woodwind instruments. (NC).

VI. SMALL ENSEMBLES AND CHAMBER MUSIC

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 adviser. Three one-hour meetings per week.

- 3381. Brass Ensemble. (1).
- 3382. University Jazz Band. (1).
- 3581. Percussion Ensemble. (1).
- 3582. Contemporary Chamber Players. (1).
- 3681. Piano Ensemble. (1).
- 3682. Accompanying. (1).
- 3781. String Ensemble. (1).
- 3881. Madrigal Group. (1).
- 3882. Opera Workshop. (1-6).
- 3883. Opera Soloists. (1).
- 3884. Opera Production Laboratory. (1-6).
- 3983. Woodwind Ensemble. (1).

VII. LARGE MUSICAL ORGANIZATIONS

Each music major is required to participate in one of the following major musical organizations during each semester as a full-time resident student: the University Band, the University Orchestra, the University Chorale, and the University Glee Club; he must obtain permission of the department chairman to receive ensemble participation credit for other musical organizations. Selection for membership is based on an audition; courses may be repeated with the approval of the student's adviser. Three one-hour meetings per week.

- 1392. University Concert Band. (1).
- 1393. Marching Band. (1).
- 1891. Men's Glee Club. (1).
- 1892. Women's Glee Club. (1).
- 1893. University Glee Club. (1).
- 3391. University Wind Ensemble. (1).
- 3791. University Orchestra. (1).
- 3891. University Chorale. (1).
- 3892. Opera Chorus. (1).
- 3893. Oratorio Chorus. (1).

Graduate courses in Music; For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

DIVISION OF MUSIC EDUCATION

PROFESSOR ROBERT SNYDER, *Chairman*

Room 123B, Music Building

Requirements for the major and minor in music education are listed on page 90. See page 179 for statement concerning piano proficiency.

FIELD OF ENDORSEMENT FOR TEACHING. Endorsement may be obtained in Instrumental Music, in School Music, and in General Music. Normally a stu-

dent can expect to be recommended in only one of these areas. School Music (vocal emphasis) applicants should be able to play piano accompaniments of average difficulty, should possess an adequate solo voice for school music purposes, and should schedule courses in a wide variety of choral activities. Instrumental Music applicants may satisfactorily meet piano and voice requirements with completion

of Music Education 1614 and Music Education 1812, with their prerequisites. Study in one instrument of major emphasis, and participation in concert and marching bands, orchestra and a variety of smaller ensembles will also be required. A graduation recital is required of all students who expect to graduate with the Bachelor of Music Education with a major in School Music or in Instrumental Music. A major in General Music will prepare a student to teach both vocal and instrumental music. A graduation recital is not required in General Music.

The following courses, Music Education 1312 through 1912, are designed to teach the music education major, already a competent performer in one field, the playing techniques of the major instruments of band and orchestra and the methods of instructing others in these techniques. Practice facilities are provided and there are no additional fees.

1231. Basic Music for Classroom Teachers. (2).

A remedial option for Elementary Education majors wishing to take the nine-hour music concentration but who are below standard in fundamental functional musicianship.

1312. Class Instruction in Brass Instruments. (2).

Trumpet is used as the basic instrument; outside practice is required.

Two laboratory hours per week.

1512. Class Instruction in Percussion Instruments. (2).

Snare drum is treated as the basic instrument.

Two laboratory hours per week.

1611. Class Instruction in Piano. (1).

Basic technique, with emphasis on sight-reading.

Two laboratory hours per week.

1612. Class Instruction in Piano. (1).

Playing of songs used in school music teaching; community songs and hymns.

Two laboratory hours per week.

1613. Class Instruction in Piano. (1).

Simpler Bach chorales, more difficult songs, and accompaniments, appropriate to the student's major field; memorization optional.

Two laboratory hours per week.

1614. Class Instruction in Piano. (1).

Selected easier studies and compositions by Czerny, Concone, Beethoven, Chopin, Schumann, Bartok, and others. The final examination will include materials to satisfy the requirements for the piano proficiency examination, copies of which are available in the music office.

Two laboratory hours per week.

1711. Class Instruction in Stringed Instruments. (1).

Two laboratory hours per week.

1712. Class Instruction in Stringed Instruments. (1).

Two laboratory hours per week.

1811. Class Instruction in Voice. (1).

Two laboratory hours per week.

1812. Class Instruction in Voice. (1).

Two laboratory hours per week.

1912. Class Instruction in Woodwind Instruments. (2).

Clarinet is used as the basic instrument; outside practice required.

Two laboratory hours per week.

The following course, Music Education 1391, provides familiarity with materials and routines suitable for use with school bands; it enables a student who plays his major instrument in the University Orchestra or the University Band to gain needed playing experience on other instruments and also enables voice, piano and organ majors to gain ensemble experience; may be repeated for additional credit; meets three hours per week.

1391. Music Education Band. (1).

A laboratory course designed for the music education major providing familiarity with materials and routine suitable for young school bands. Each student will be expected to perform on a secondary instrument and to direct or teach the group. Emphasis will be placed on pedagogical procedures and teaching materials. PREREQUISITES: Music Education 1312, 1512, 1712, 1912.

3233. Teaching for Appreciation in Grades 1 through 9. (3).

The listening experience and other related music activities as an approach to the appreciation of music. PREREQUISITE: permission of the instructor.

3234. Classroom Music Methods I. (3).

Required of all Elementary Education Majors. Experiences in singing, moving, listening, performing, and describing simple music appropriate for use in the elementary school. Music Education 1231 or equivalent is recommended for students lacking minimal informal musical skills.

3235. Classroom Music Literature. (3).

Survey of and techniques for presenting the music of all periods appropriate for the elementary school child. PREREQUISITE: Music Education 3234.

3236. Classroom Music Techniques. (3).

Study of performance techniques on typical classroom instruments including recorder, autoharp, guitar, percussion, and voice. Applications of suitable literature from Music Education 3235. Fundamentals of music reading. PREREQUISITE: Music Education 3235.

3237. Classroom Music Programs and Methods. (3).

Experiences with planning and teaching contemporary music methodologies in depth including those of Orff, Kodaly, Contemporary Music Project and the Manhattanville Project. PREREQUISITE: Music Education 3236.

4201. Special Problems in the Teaching of Music. (1-3).

This course provides for class or individual study of the problems and opportunities faced by the person who teaches music in the schools; for classroom teachers, music teachers and supervisors, principals, and administrators.

4202. Introductory Workshop in Orff Schulwerk. (1-3).

A study of basic Orff Schulwerk techniques including body movement, soprano recorder, percussion, vocal performance, improvisation and arranging. PREREQUISITE: Junior standing in music education or equivalent experience.

4203. Intermediate Workshop in Orff Schulwerk. (1-3).

A study of intermediate level Orff Schulwerk techniques including modal harmonization, irregular

rhythms, alto recorder performances and more extensive improvisation and arranging. **PREREQUISITE:** Music 4202 or its equivalent in experience.

4204. Teachers Workshop In Orff Schulwerk. (1-3).

A study of advanced Orff Schulwerk techniques including original composition, complex form, movement and instrumental arrangements, tenor and bass recorder performance, and advanced improvisation. **PREREQUISITE:** Music 4203 or its equivalent in experience.

4205. Workshop in Comprehensive Musicianship. (1-3).

A practical introduction to the methods and materials of teaching music comprehensively to general music and ensemble classes, grades 7-12. Activities will include the development of listening, analytical, descriptive, performance, and writing skills appropriate for all music. **PREREQUISITE:** Junior standing in music or music education or equivalent experience.

4232. Materials and Methods in Instrumental Music. (2).

Developing the band or orchestra; balance and tone quality; conducting and interpretation; problems of intonation; literature for solos, ensembles, and groups of all grades.

4233. Materials and Methods of Music, Grades K through 6. (2).

A study of the aims and principles of music and of the traditional and contemporary methods of teaching music in the elementary schools. Creative approach to rhythmic, listening, instrumental and singing activities. The development of musical concepts.

4234. Materials and Methods of Music, Grades 7 through 9. (2).

A continuation of Music Education 4233, with appropriate emphasis on the junior high school music program.

4235. Music Education: Principles and Programs. (3).

Historical, philosophical, psychological, social, and aesthetic foundations of the total music education programs, grades K through 12. Administrative procedures and problems. The music educator's role in the community. Evaluative techniques.

4236. Choral Materials, Literature and Techniques. (2).

Fundamentals of conducting; organizing and developing choral groups at all levels; rehearsal procedures; materials. **PREREQUISITE:** Music 1013 and 1033.

4237. Orff Schulwerk I. (2).

Designed for persons with general musical backgrounds but minimum knowledge of the Orff concept of music teaching.

4238. Orff Schulwerk II. (2).

For persons having prior basic experience with the Orff process of music education. A transcript or certificate showing Orff training is required.

4239. Kodaly Method (basic). (2).

For music teachers or students with general musical backgrounds. The American adaptations of Kodaly's system of music teaching will be emphasized.

4240. Church Choir Organization and Training. (3).

Designed to provide devices and materials for recruiting choir members of various age groups and for integrating them into an active musical program.

NURSING

ASSOCIATE PROFESSOR LOIS HOLLOMON, *Chairman*

Room 316, Manning Hall

Requirements for the Associate Degree in Nursing are listed on page 102.

1000. Drug Dosage Computation. (1).

This course is designed to assist the student to transfer basic mathematical concepts to dosage computations, become familiar with the most commonly used systems of drug measurement, exchange between these systems, and compute dosage safely and accurately.

1101. Fundamentals of Nursing Care I. (5).

A foundation for other nursing courses. Concepts of basic human needs and principles of nursing care related to meeting the needs are combined with nurse-patient and nurse-team relationships. Laboratory experience provides correlation with classroom learning. **COREQUISITE:** Biology 1731.
Three lecture, six laboratory hours per week.

1102. Fundamentals of Nursing Care II. (5).

Continuation of Fundamentals of Nursing I. Emphasis is on more specific patient needs and nursing problems. Nursing intervention is developed toward meeting the psychological as well as the physiological needs of the patient. Laboratory

experience provides opportunity for identification of needs and the formulation of a plan of care for the individual patient. **PREREQUISITES:** Nursing 1000 and 1101. **COREQUISITE:** Biology 1732.

Three lecture, six laboratory hours per week.

2112. Fundamentals of Nursing Care III. (5).

The normal physiological process is emphasized in the study of the mother and the newborn, progressing to the abnormalities which may occur. Problem solving techniques are utilized in planning and initiating nursing care in the clinical laboratory. **PREREQUISITES:** Nursing 1000, 1101, 1102, Biology 1731 and 1732, and Home Economics 2202.

Six lecture, twelve laboratory hours per week.

2113. Fundamentals of Nursing Care IV. (5).

A study of normal growth and development of the child within a family from infancy through adolescence. Emphasis is placed on the problem solving technique in identifying the scientific principles of nursing care of the sick child, and how behavior deviates during illness. Laboratory experience is designed to help the student in formulating, implementing, and evaluating nurs-

ing care within the hospital and community agencies. PREREQUISITES: Nursing 1000, 1101, 1102, and Biology 1731 and 1732, Psychology 1101, and Home Economics 2202.

Six lecture, twelve laboratory hours per week (offered summer and/or one half fall semester).

2114. Fundamentals of Nursing Care V. (5).

A study of individual and group behavior with emphasis on appropriate skillful nursing intervention of the mentally ill. Laboratory experience provides opportunity for nurse-patient interaction. PREREQUISITES: 1000, 1101, 1102, Biology 1731 and 1732, and Psychology 1101.

Six lecture, twelve laboratory hours per week (offered summer and/or one half fall semester).

2201. Nursing Perspective. (1).

This course is designed to assist the student in

adjusting to nursing practice. The status and problems of the occupation of nursing are studied with emphasis on the responsibilities of the registered nurse and her relationship with the nursing organizations. PREREQUISITES: Nursing 1000, 1101, 1102.

2202. Fundamentals of Nursing Care VI. (10).

A common-problems approach to nursing principles basic to the care of adults and children. Emphasis is placed on deviation from normal health patterns, both physical and emotional, and appropriate nursing intervention is explored. Laboratory experience is designed for depth and scope in formulating, implementing, and evaluating nursing care. PREREQUISITES: Nursing 1000, 1101, and 1102, Biology 1731 and 1732, and Home Economics 2202.

Six lecture, twelve laboratory hours per week.

OFFICE ADMINISTRATION

PROFESSOR CHARLES E. REIGEL, *Chairman*

Room 300, The College of Business Administration Building

Requirements for the majors and minors in office administration-secretarial and in office administration-management are listed on page 74.

1210. Elementary Typewriting. (3).

Use and operation of the parts of the typewriter, mastery of the keyboard, simple business and professional letters and reports, introduction to tabulations. Both semesters. Students who have completed one or more units of typewriting in high school may not take Office Administration 1210 for credit.

***1220. Intermediate Typewriting. (3).**

The typing of different styles of business letters, tabulations, and manuscripts; developing a typing rate of 45 words or more per minute. Both semesters.

2120. Fundamentals of Shorthand. (3).

Basic principles of Gregg shorthand—alphabet, brief forms, phrases, and abbreviations; beginning dictation and pre-transcription training. Both semesters. Students who have completed one or more units of shorthand in high school may not take Office Administration 2120 for credit.

2130. Intermediate Shorthand. (3).

(formerly Fundamentals of Shorthand II.) Review of shorthand theory, acquisition of ability to take shorthand and to transcribe accurately. Both semesters. PREREQUISITES: Office Administration 1220 or equivalent; Office Administration 2120 or equivalent.

3140. Advanced Shorthand. (3).

Review of shorthand principles, daily speed practice, development of transcription skill for production of mailable transcripts. Both semesters. PREREQUISITE: Office Administration 3250 or Office Administration 1220.

3250. Advanced Typewriting. (3).

Review of business letter styles, manuscripts and

reports, statistical tables. Development of a typing rate of better than 60 words per minute. Both semesters. PREREQUISITE: Office Administration 1220.

3510. Business Communication. (3).

The fundamentals of business communication are examined and studied with a view to a thorough understanding of the techniques of report writing and of some of the basic forms of letters. Emphasis is placed on the writing of reports, financial statements, minutes of meetings, abstracts, and specific types of routine letters. Attention is also given to selection and use of research mediums. Fall, spring and summer terms. PREREQUISITE: Completion of freshman English plus the ability to type.

4160. Secretarial Dictation. (1 or 3).

Students will do stenographic work in some office on campus. The instructor, after conferring with the office head, will plan remedial work designed to prepare student for stenographic employment upon completion of course. Both semesters. PREREQUISITE: Permission of the instructor.

Three or nine hours of office work per week.

4270. Secretarial Typewriting and Office Machines. (3).

(Formerly two courses, 3310 and 4260.) Instruction and practice in use of secretarial office machines including executive typewriters; transcribing from voicewriting equipment; ink, spirit and offset duplication; copying machines. Spring, Fall, and first summer term. PREREQUISITE: Office Administration 3250.

Four hours per week.

4320. Applied Secretarial Practice. (3).

Qualifications, duties and training of a secretary requirements for employment; organization of work; telephone etiquette; business reference books; receptionist techniques. Fall and summer

4330. Records Management and Control. (3).

(formerly Applied Secretarial Practice II.) Handling of incoming and outgoing mail; filing

*Credit not allowed if student has credit for Secretarial Science 2230 or Secretarial Science 222.

procedures; installation, administration, and control of geographic, numeric, subject and Soundex filing systems; practice in the several types of filing. Spring and summer.

4400. Punched-Card Methods. (3).

Introductory course in the operation and use of punched-card equipment. Key punching, sorting, tabulation and preparation of reports, card designing and application to problems in the fields of economic, marketing, accounting, personnel, education, and other areas of research. Both semesters.

4401. Punched-Card Applications. (3).

An advanced course in the field of data processing. The course provides study in flow charting, systems analysis, card layout, systems design and production work on unit record equipment. Both semesters. PREREQUISITE: Office Administration 4400 and Accounting 2020.

4410. Office Management. (3).

Modern methods used in office organization and management, scientific office management, office reports, office correspondence, calculating and checking, filing, records retention, duplicating, handling the mail, planning procedures, planning for equipment, office machines, automation, planning for office space, physical working conditions and office layout. Fall semester.

4910. Problems In Office Administration. (1-3).

Students will engage in directed individual study in their major area under the supervision of staff members. Both semesters. PREREQUISITE: Permission of the department chairman.

Graduate Courses in Office Administration—Office Management: Certain of the 4000 courses, described in the preceding section, may be taken for graduate credit. For further information concerning the graduate program, see The Bulletin of The Graduate School.

OFFICE MANAGEMENT

(See Office Administration)

PHILOSOPHY

ASSOCIATE PROFESSOR GENE G. JAMES, *Chairman*

Room 319, Clement Hall

Philosophy Honors Program. This program is open to philosophy majors with an average of 3.0 or better. The student will write a senior honors thesis, the topic of which must be approved by his director prior to the semester in which he registers for Philosophy 4891.

Students beginning the study of philosophy should take Philosophy 1111 and Philosophy 1611. Either course may be taken first. See page 65 for requirements for a major or minor in philosophy.

1111. Introduction to Philosophy. (3).

An introduction to philosophy through the problems arising from man's reflection on the nature of the world and his place and conduct in it. Readings from classical and contemporary sources.

1611. Elementary Logic. (3).

An introduction to the principles of valid reasoning with emphasis on the nature of language, the fundamentals of deductive and inductive inference, and the use of logic as a practical human instrument.

2411. The Conflict of Ideals in Contemporary Civilization. (3).

The philosophical implications of important current issues, with attention to the philosophical presuppositions of the cultural, intellectual, political, and economic conflicts of the modern world. Readings from contemporary authors. The topics of this course will vary from semester to semester.

211. History of Ancient Philosophy. (3).

Selected readings from primary sources, supplemented by commentary from antiquity and modern scholarship, including the Pre-Socratics, Plato, Aristotle, and the Hellenistic period. PREREQUISITE: two courses in philosophy or one course and permission of instructor.

3212. The History of Medieval Philosophy. (3).

Selected readings from the Christian, Jewish, and Islamic philosophers of the Middle Ages, beginning with the emergence of Judeo-Christian ideas in the context of Greek thought and ending with later scholastics. PREREQUISITE: Philosophy 3211 or permission of instructor.

3221. Plato and His Interpreters. (3).

An examination of Plato's *Dialogues* with emphasis upon his methods and techniques; the basic doctrines and problems raised by differing interpretations of his thought. PREREQUISITE: Philosophy 3211.

3232. The Philosophy of Aristotle. (3).

This course constitutes an introduction to the thought of Aristotle and its problems. The reading will be from the *Categories*, *Physics*, *Metaphysics*, *DeAnima*, and the *Nicomachean Ethics*. PREREQUISITE: Philosophy 3211.

3301. Classical American Philosophy. (3).

The development of philosophical ideas in America from the Puritans until 1900, and their relationship to the growth of social, political, and scientific thought. PREREQUISITE: two courses in philosophy, or one course in philosophy and permission of instructor.

3311. History of Modern Philosophy. (3).

A survey of the history of philosophy from the late Renaissance through the Eighteenth Century. PREREQUISITE: two courses in philosophy or one course in philosophy and permission of the instructor.

3341. Continental Rationalism. (3).

Continental philosophy in the seventeenth century: Descartes, Spinoza, Malebranche, Leibniz, and Wolff. PREREQUISITE: Philosophy 3311 or permission of the instructor.

3351. British Empiricism. (3).

A critical and historical review of the philosophies of Locke, Berkeley, and Hume. Special attention will be given to the place of British Empiricism in modern thought. PREREQUISITE: Philosophy 3311 or permission of instructor.

3372. Philosophy of the Nineteenth Century. (3).

Extensive readings in representative 19th century philosophers from Fichte to Nietzsche, with special attention given to such movements as dialectical materialism, existentialism, positivism, Darwinism, neo-Kantianism and English idealism. PREREQUISITE: Philosophy 3311 or permission of the instructor.

3402. Recent American Philosophy. (3).

The development of philosophy in America from 1900 to the present, with particular emphasis on pragmatism, realism, naturalism, and analytic philosophy. PREREQUISITE: two courses in philosophy, or one course in philosophy and permission of the instructor.

3451. The Rise of Existentialism. (3).

An historical and comparative study of the different existentialist writers and their relation to literature, religion and psychology. Readings from Kierkegaard, Nietzsche, Jaspers, Heidegger, Sartre, and Marcel. PREREQUISITE: one semester of philosophy, or permission of the instructor.

3511. Ethics. (3).

A course in ethics with emphasis on a critical analysis of classical ethical theories and their application to the problems of the individual and society. (Note: Students who have received credit for Philosophy 2511 will not be allowed credit for Philosophy 3511.) PREREQUISITE: One course in philosophy or permission of instructor.

3551. Social and Political Philosophy. (3).

An examination of the major philosophical theories of man and the state with emphasis upon the concepts of society, culture, institutions, government, law, power, authority, rights, and obligation. Selected readings. PREREQUISITE: one semester of philosophy, or permission of instructor.

3621. Intermediate Logic. (3).

Symbolic logic, including the propositional calculus, the lower functional calculus, and related topics. PREREQUISITE: Philosophy 1611 or permission of the instructor.

3661. The Development of Scientific Thought. (3).

An historical introduction to science and scientific thinking, with selected readings from both ancient and modern scientists and philosophers of science. PREREQUISITE: one course in philosophy or a major in the natural or mathematical sciences.

3662. Philosophy of Science. (3).

An examination of the basic features of science. A detailed analysis of the problems of scientific procedure, theory construction, and verification both in the physical and social sciences will be made. PREREQUISITE: Philosophy 1611, or permission of the instructor.

3701. Foundations of Western Religion. (3).

A study of primitive religion and representative

national religions of the past. Readings from such sources as *The Gilgamesh Epic*, *The Hymn to Aten*, and the hermetic, rabbinic, and apocalyptic literature. Special attention will be given to the mystery religions, agnosticism, the hellenistic philosophers and to their cultural impact on Judaism and Christianity. PREREQUISITE: one semester of philosophy.

3711. Philosophy of Religion. (3).

The contribution of philosophy to the basic issues of religion; a recognition of the principles which make religion valid throughout all its diverse forms and in the face of advancing scientific knowledge. PREREQUISITE: one semester of philosophy, or permission of the instructor.

3721. Oriental Philosophy. (3).

Philosophies of India, China, and Japan, with readings from the primary sources of Hinduism, Jainism, Buddhism, Confucianism, Taoism, and Shintoism. PREREQUISITE: one semester of philosophy or permission of the instructor.

3761. The Philosophy of Art. (3).

The major forms of aesthetics as expressed in painting, sculpture, and music, with readings in the great classics in aesthetics. PREREQUISITE: one semester of philosophy, or permission of instructor.

4011. Theory of Knowledge. (3).

The basic problems of epistemology, with readings in the important philosophers. PREREQUISITE: three courses in philosophy, or two courses and permission of the instructor.

4021. Metaphysics. (3).

An analysis of the basic metaphysical concepts and a critical study of old and new theories of the nature of being. PREREQUISITE: three courses in philosophy, or two courses and permission of the instructor.

4031. Hegel. (3).

A detailed investigation of some of Hegel's most influential works. PREREQUISITES: Philosophy 3311 and two additional courses in philosophy.

4372. The Philosophy of Kant. (3).

An intensive study of the major philosophical works of Immanuel Kant, with special attention given to *The Critique of Pure Reason* and to the relation between Kant's critical philosophy and his ethics, aesthetics, and philosophy of religion. PREREQUISITES: Philosophy 3311 and two additional courses in philosophy.

4421. Philosophy of Mind. (3).

A critical examination of contemporary positions on the mind-body problem, the problem of other minds, and related topics. PREREQUISITE: three courses in philosophy or two courses and permission of instructor.

4422. The Rise of Analytic Philosophy. (3).

The development of the views of analytic philosophers from Russell and Wittgenstein to Ayer, Wisdom and others. PREREQUISITE: three courses in philosophy, or two courses and permission of the instructor.

4431. Philosophy of Language. (3).

A critical examination of contemporary problems

in the philosophy of language to include such topics as theories of meaning, reference, and analyticity. PREREQUISITE: Three courses in philosophy or two courses and permission of instructor.

4441. Phenomenology and its Historical Background. (3).

A reading and discussion of basic texts in translation of Husserl's *Ideas*, *Cartesian Meditations* and from the *Crisis of European Science and Phenomenology*. PREREQUISITE: Philosophy 3311 and two additional courses in philosophy, or two courses and permission of the instructor.

4521. Contemporary Ethical Theory. (3).

An examination of contemporary ethical and metaethical theories. (Note: Students who have received credit for Philosophy 3521 will not be allowed credit for Philosophy 4521.) PREREQUI-

SITES: Philosophy 3511 and two additional courses in Philosophy or permission of the instructor.

4632. Advanced Logic. (3).

The nature of axiomatic systems, techniques of formalization, and the logical foundations of mathematics. PREREQUISITE: Philosophy 3621, or permission of the instructor.

4891. Senior Honors Thesis. (3).

Directed reading and research culminating in a Senior Thesis. The thesis topic is to be selected by the student with the approval of his director before the semester the student intends to take the course. Open only to senior honors students majoring in philosophy.

Graduate courses in Philosophy: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

PHYSICAL EDUCATION

(See Health, Physical Education, and Recreation)

PHYSICAL SCIENCES

(See Chemistry)

PHYSICS

PROFESSOR C. C. IJAMS, *Chairman*

Room 216, Manning Hall

Requirements for the major and minor in physics are listed on page 66.

1111. Foundations of Physics. (3).

A thorough study of certain basic principles of science, with particular stress on the nature of physics, designed for the student who has had no previous training in physics. *Credit in this course will not apply toward a major or a minor in physics, chemistry, or physical science, nor will it satisfy any part of the science requirements in the preprofessional curricula.*

Two lecture, two laboratory hours per week.

1112. Foundations of Physics. (3).

A continuation of Physics 1111. *Credit in this course will not apply to a major or a minor in physics, chemistry, or physical science, nor will it satisfy any part of the science requirement in the pre-professional curricula.*

Two lecture, two laboratory hours per week.

1811. General Astronomy. (3).

Practical astronomy and the solar system; topics include motions of the earth and moon, apparent motions of the stars and planets, eclipses, time and the calendar, properties of bodies in the solar system. Occasional observation periods will be held at night.

Two lecture, two laboratory hours per week.

1812. General Astronomy. (3).

A continuation of Physics 1811 with emphasis on a survey of stellar and galactic astronomy; topics include stellar distances and properties, interstellar matter, multiple stars, clusters, the milky

way and other galaxies. Occasional observation periods will be held at night.

Two lecture, two laboratory hours per week.

2111. General Physics. (4).

The general physics course, covering the topics of mechanics, heat, and sound; required of all technology, pre-medical, pre-dental, and pre-pharmacy students. PREREQUISITE: Mathematics 1212.

Three lecture, two laboratory hours per week.

2112. General Physics. (4).

A continuation of Physics 2111, covering the topics of magnetism, electricity, light, and modern physics. PREREQUISITE: Physics 2111.

Three lecture, two laboratory hours per week.

2511. Physics for Science and Engineering. (4).

Designed primarily for students intending to major in physics, chemistry, or mathematics; required of all students in the pre-engineering curriculum and recommended for students planning to teach physics in the secondary schools. PREREQUISITE or COREQUISITE: Mathematics 2321.

Three lecture, two laboratory hours per week.

2512. Physics of Science and Engineering. (4).

A continuation of Physics 2511. PREREQUISITE: Physics 2511.

Three lecture, two laboratory hours per week.

3000. Special Topics in Applied Physics. (3).

The course emphasizes topics in applied areas of physics, including optics, electronics, acoustics, and radiation. Experiments and projects of

special interest to the student will constitute a major portion of the course. *This course may not be counted toward a major in physics.*

Three lecture hours or the equivalent laboratory hours per week

3010. Introduction to Modern Physics. (4).

A lecture-laboratory course covering the basic principles of special relativity, quantum mechanics, atomic physics, and selected topics in solid state, nuclear, and molecular physics.

Three lecture, three laboratory hours per week.

3020. Biophysics. (3).

An introduction of selected topics from biophysics with emphasis on the understanding of basic physical principles and their relation to biology and medicine. The course is designed especially for life science students and may not be counted toward a major in physics.

Three lecture hours or the equivalent laboratory hours per week.

3111. Mechanics. (3).

An advanced course in classical mechanics covering statistics, and dynamics of particles, rigid bodies, fluid flow, work, energy, momentum, force fields, and harmonic motion. Recommended as good preparation for advanced physics course.

Three lecture hours per week.

3112. Mechanics. (3).

A continuation of Physics 3111. PREREQUISITE: Physics 3111.

Three lecture hours per week.

3211. Electricity and Magnetism. (3).

A study of 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.

3212. Electricity and Magnetism. (3).

A continuation of Physics 3211. PREREQUISITE: Physics 3211.

Three lecture hours per week.

3510. Electronics. (4).

Theory and applications of electronic devices such as vacuum and gas-filled tubes, photoelectric cells, and semi-conductors, with particular emphasis on basic electronic circuitry and laboratory instrumentation.

Three lecture, three laboratory hours per week.

4010. Advanced Experimental Physics. (2).

A course designed to teach the use of the more advanced laboratory equipment and instruments, with emphasis on effective planning and performance of experiments, the treatment and interpretation of data, and the use of scientific literature and library facilities.

Six laboratory hours per week.

4011. Advanced Experimental Physics. (2).

A continuation of Physics 4010.

Six laboratory hours per week.

4051. Astrophysics. (3).

Application of radiation laws to the interpretation of stellar structure. Introduction to radiative transfer in atmospheres. The spectral and luminosity classification of stars. Stellar populations and evolution.

Three lecture hours per week.

4052. Astrophysics. (3).

A continuation of Physics 4051, with emphasis on interstellar matter, stellar system, galactic structure, radio astronomy. PREREQUISITE: Physics 4051.

Three lecture hours per week.

4110. 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.

4211. Optics. (4).

After a brief review of geometrical optics, the course concentrates on wave optics. Topics include polarization phenomena, interference, diffraction, coherence, holography, and scattering.

Three lecture, three laboratory hours per week.

4410. Introduction to Quantum Theory. (3).

Experimental basis of quantum theory; development of the Schrodinger equation and its solution of simple systems; selected applications in atomic and molecular structure.

Three lecture hours per week.

4510. Thermodynamics. (3).

A 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.

4610. Solid State Physics. (3).

Consideration of such topics as lattice vibrations, specific heats, electrical and thermal conductors in solids, magnetism.

Three lecture hours per week.

4710. Spectroscopy. (3).

Atomic and molecular structure as revealed by the study of radiation emitted and absorbed by substances.

Three lecture hours per week.

4911. Introduction to Theoretical Physics. (3).

Special mathematical techniques used in the theoretical treatment of physical phenomena, boundary value problems, matrices, Fourier series and integrals, etc., as applied to advanced physical theory.

Three lecture hours per week.

4912. Introduction to Theoretical Physics. (3).

A continuation of Physics 4911. PREREQUISITE: Physics 4911.

Three lecture hours per week.

Graduate courses in Physics: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

POLITICAL SCIENCE

PROFESSOR H. PIERRE SECHER, *Chairman*

Room 419, Clement Hall

Requirements for the major and minor in political science are listed on page 93. For information concerning the pre-law curriculum, see page 66.

Important note: The prerequisite for all 3000 and 4000 level courses is either junior standing or the permission of the instructor.

1101. Introduction to Political Science. (3).

The study of how people distribute power, confer authority, resolve conflict, and pursue goals within a political system.

2211. National Government. (3).

The origins of our system of government, the framing of the Constitution, the principles underlying constitutional government, citizenship, civil rights, political institutions, the national executive, the congressional organization and function, and the judicial process.

2301. Comparative Politics. (3).

An introduction to the comparative study of politics with application to selected countries.

2501. International Politics. (3).

A basic study of international relations, with emphasis on the methodology of international policies as a discipline and the basic political concepts of national policy and international politics.

3211. State and Local Governments. (3).

The role of the state governments in the Federal System, political institutions, elections; the organization, functions, and problems of state government, with special emphasis on Tennessee government.

3213. Introduction to the Study of Public Policy. (3).

An introduction to the public policy formulation process and some of the major substantive areas of policy concern in America. Special emphasis is on a framework for identifying and analyzing the substance of public problems, policy making, and policy administration.

3216. Political Parties. (3).

An analysis of the political party as a process of government, with emphasis upon party organization, activities, nominating and campaign methods, voter participation, and the two-party system.

3224. Urban Politics. (3).

The functions and role of government in urban America in the context of urban politics and the social, economic, and governmental problems of cities and suburbs.

3302. Western European Government and Politics. (3).

A comparative study of selected political systems of Western European States.

3306. Latin American Government and Politics. (3).

The forms of organization, the functions and operations of government in Latin America. Emphasis will be placed on the development of political institutions and present day trends.

3307. Government and Politics of South Asia. (3).

A study of the political institutions and governmental processes of selected South Asian states.

3308. Government and Politics of Sub-Sahara Africa. (3).

A study of the political and governmental institutions and process of selected African states, emphasizing sub-Sahara Africa.

3309. Government and Politics of North Africa and Middle East. (3).

An analysis of the organization and functions of governments in an area dominated by the tenets of Islam, including an examination of the origin and development of the Arab-Israeli conflict.

3401. Western Political Thought to 1600. (3).

The history, formation, and development of political thought of the West, from the political philosophers of ancient Greece to the seventeenth century.

3402. Western Political Thought Since 1600. (3).

The history, formation, and development of western political thought from the seventeenth century to the present.

3405. Introduction to Law and Jurisprudence. (3).

A study of the sources, functions, and processes of law.

3505. International Organization. (3).

The history and nature of international organizations; political and ideological concepts toward international cooperation. The United Nations, the regional organizations, and international welfare and/or administrative agencies are used as specific studies.

3506. American Foreign Policy Process. (3).

An analysis of American foreign policy, with emphasis on the factors involved in developing and implementing policy.

3601. Public Administration. (3).

The concepts and practices of organization and management in the executive departments, national, state, and local; an analysis of bureaucracy, administrative theory, budgeting, personnel, and administrative leadership.

4101. Techniques of Political Analysis. (3).

An introduction to the analysis of quantitative data used to test hypotheses in the fields of political science and public administration, including both parametric and nonparametric techniques. Particular attention is given to alternative measures of association and significance, regression, factor analysis, path analysis, and causal modeling.

4102. Political Behavior. (3).

An introduction to the contributions of the behavioral sciences to an understanding of the political system. Political behavior is examined as manifested in the formation of attitudes, public opinion, group organization, and political power.

4103. Political Socialization. (3).

A study of the process whereby political attitudes and values are passed from one generation to the next and altered in transmission. Includes the quantitative measurement of political attitudes.

4105. Political Science Research Design. (3).

An Introduction to the techniques of research design and data collection in the field of political science. Theory and model construction, experiment design, the construction of samples and scaling techniques will be considered along with the collection devices of questionnaires, interviews, content analysis and simulation. PREREQUISITE: POLS 4101 or permission of the instructor.

4211. Constitutional Law. (3).

An analysis of the relationships and controls of the three branches and the nature of the division of power between the nation and the states, with emphasis on the role of the Supreme Court as the arbiter in the constitutional system.

4212. Civil Rights and the Constitution. (3).

An examination of the judicial interpretation of political and civil rights with emphasis on the period since 1945.

4213. Public Policy. (3).

The analysis of selected public policy issues and politics in the policy making process.

4214. The Executive Process. (3).

A detailed study of the role of the executive in American politics.

4215. The Judicial Process. (3).

An examination of the structure of the legal system and the factors which enter into judicial decision-making, including political, social, economic, and psychological factors.

4216. Public Opinion and Interest Groups. (3).

A study of the formulation of political attitudes and opinions. Special emphasis is placed upon the role played by interest groups in the formulation of public opinion. Includes an analysis of selected groups and their tactics.

4217. The Legislative Process. (3).

The origins, organization, functions, and activities of the modern legislature; making laws, supervising the administration, representing and informing people.

4221. Urban Administration. (3).

Examination of politics, administration, and public policy in an urban context. Focus is on the administrative aspects of selected governmental policy-making processes; interrelationships of governments at various levels; urban challenges facing modern public administrators.

4224. Urban Problems. (3).

A study of selected problems in urban administration, politics, and policies.

4230. Legislative Internship. (3-12).

Supervised internship working with the Tennessee General Assembly or other legislative bodies on current legislative programs. Seminar sessions

are held to discuss and analyze the problems with which the interns are working. May be repeated for a total of 12 credits. PREREQUISITE: Permission of the department.

4231. Administrative Internship. (3-12).

Supervised internship working with administrative branches of national, state, or local governments. Seminar sessions are held to discuss and analyze the problems with which the interns are working. May be repeated for a total of 12 credits. PREREQUISITE: Permission of the department.

4302. The Politics of Developing Nations. (3).

The special political and economic problems of developing nations.

4305. Soviet Government and Politics. (3).

Organization and functions of the authoritarian state, with emphasis on the role of the Communist Party and ideology.

4306. Contemporary Latin American Politics. (3).

A study of contemporary problems in Latin American politics and inter-American relations.

4307. Government and Politics of Communist China. (3).

A study of the institutions of government, the political process, political elites, political groups and political socialization in Communist China.

4309. Comparative Political Parties. (3).

A comparative study of political parties and party systems in selected countries.

4311. Comparative Political Elites. (3).

A comparative study of the role of political elites in selected political systems.

4399. Research and Studies Abroad. (1-6).

Supervised field research and studies in selected foreign countries. May be repeated up to six hours.

4401. Modern Political Ideologies. (3).

Examination of the major political doctrines of the modern world; democracy, communism, fascism, capitalism and socialism; doctrines of developing nations; nationalism, racism, pacifism, and non-violence.

4403. Contemporary Protest Thought. (3).

Political theories of black protest, the new left, and the far right.

4405. American Political Thought. (3).

An analysis of political thought in the United States from the colonial to the present time, with emphasis placed on the relation between political thought and political institutions and practices.

4407. Black Political Thought. (3).

An analytical survey of black political thought from the colonial period to the present. Emphasis is placed upon recent and contemporary thought.

4501. Contemporary Problems in International Politics. (3).

A study of contemporary problems in international relations with emphasis on the major powers.

- 4502. Soviet Foreign Policy. (3).**
Basic concepts of Soviet foreign policy; development and techniques; present patterns of Soviet relations with key nations; major problems in future relationships.
- 4503. Inter-American Relations. (3).**
Study of political relations among the nations of Latin America and with the United States. Regional organizations and relations with Cuba are given special attention.
- 4504. International Law. (3).**
An analysis of the nature, scope, duties, rights, and evolutionary trends of international law.
- 4505. Comparative Communist Systems. (3).**
A cross-national comparison of the adaptation of ruling and non-ruling communist parties to different political environments. Includes examination of inter-party and intra-block relations.
- 4506. Problems of American Foreign Policy. (3).**
A study of American foreign policy problems taken from specific areas or issues of policy.
- 4507. Problems of European Politics. (3).**
A study of selected political problems of European states.
- 4508. Theories and Concepts in International Politics. (3).**
A survey of theoretical approaches to the study of international politics. Special attention is given to methodology, models, and international political simulation.
- 4602. Public Finance Administration. (3).**
Detailed study of administrative and political problems of fiscal policy, the budgetary process, and fiscal controls.
- 4603. Public Personnel Administration. (3).**
The study of policies, methods, and techniques utilized in public personnel administration. Special attention is given to problems reflecting contemporary demands upon personnel organizations. The capacity to analyze problems, select the most effective means of dealing with them, and plan appropriate courses of action is developed through case example.
- 4604. Problems of Public Administration. (3).**
An investigation of selected problems in the public administration process, with emphasis upon contemporary developments.
- 4611. Administrative Law. (3).**
Study of the role and nature of administrative law, including procedural requirements and judicial review of administrative actions and liability of the government for torts and breach of contract.
- 4701. Senior Seminar in Political Science. (3).**
A review of professional literature generally or in a particular area of political science combined with significant research on special political problems. PREREQUISITES: senior standing and political science major.
- 4702. Independent Study. (3).**
Independent investigation of a research problem or directed reading in a selected area of political science under the tutorial supervision of a member of the political science faculty. PREREQUISITE: Permission of the chairman.
- Graduate Courses in Political Science: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.*

PSYCHOLOGY

PROFESSOR ROBERT VIDULICH, *Chairman**Room 202, Psychology Building*

Requirements for the major and minor in psychology are listed on page 66.

IMPORTANT NOTE: *Psychology 1101 is prerequisite for all other courses in the Department of Psychology; both 1101 and 1102 are required of Psychology majors.*

- 1101. General Psychology I. (3).**
An introduction to psychology as a science of human behavior. Areas of study include individual differences, clinical, social and developmental aspects of psychology, sensory and perceptual processes, as well as learning and the physiological basis of behavior. The history of psychology as well as scientific methodology will also be discussed.
- 1102. General Psychology II. (3).**
A continuation of Psychology 1101, in which some of the important aspects and discoveries in the general area of psychology will be studied in more detail from the social, clinical, learning and physiological viewpoints.
- 2301. Psychological Statistics. (3).**
An introduction to the use of statistics in psychology, with emphasis on elementary theory of measurement and computation. Topics covered include measures of central tendency and variability, tests of significance, correlation procedures, and an introduction to multi-variate analyses, analysis of variance, and non-parametric procedures.
- 2302. Experimental Techniques in Psychology. (4).**
An introduction to methods and techniques of observation and research on psychological topics, with emphasis on controlled laboratory experiments in such areas as learning, motivation, psychophysics, sensation, perception, and concept formation. Individual laboratory experience stressed.
Three lecture, two laboratory hours per week.
- 3101. Psychology of Personality. (3).**
The development, organization, and assessment of the normal person is examined, with an introduction to theories of personality.
- 3102. Abnormal Psychology. (3).**
A survey of 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.

3103. Developmental Psychology. (3).

Patterns of intellectual and behavioral development from birth to maturity. Psychological effects of genetic, organic, and environmental influences as the individual matures.

3301. Industrial and Organizational Psychology. (3).

An examination of the 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.

3302. Social Psychology. (3).

An analysis of the behavior and experience of individuals in group settings, examining such topics as leadership, social influence, and intergroup and intragroup relations.

3303. Thinking and Cognitive Processes. (3).

An analysis of the development and modification of thinking, reasoning, conceptualization, language and symbolic activity, and other mediational processes in the individual.

4101. History of Psychology. (3).

A comprehensive survey and critical analysis of the philosophical and scientific antecedents of contemporary psychology. PREREQUISITE: 10 upper-division hours in psychology.

4201. Experimental Psychology: Physiological Processes. (4).

A study of the physiological functions involved in behavior and experience. A survey of the physiology of the sense organs, nervous systems, and response mechanisms. NOTE: It is strongly recommended that Psychology 2301 and 2302 be completed before enrolling in this course.

Three lecture, two laboratory hours per week.

4202. Experimental Psychology: Comparative Behavior. (4).

Synthesis of the ethological and comparative approaches to the study of animal behavior. Covers such topics as behavior genetics, species specific behaviors, etc. NOTE: It is strongly recommended that Psychology 2301 and 2302 be completed before enrolling in this course.

Three lecture, two laboratory hours per week.

4203. Experimental Psychology: Sensation and Perception. (4).

Detailed survey of the major senses with emphasis on methods of investigation and behavioral applications. Study of the perceptual processes and influences of learning and motivation on

perception. NOTE: It is strongly recommended that Psychology 2301 and 2302 be completed before enrolling in this course.

Three lecture, two laboratory hours per week.

4204. Experimental Psychology: Learning. (4).

A survey and critical analysis of the theories, concepts, and principles of the acquisition and retention of behavior. NOTE: It is strongly recommended that Psychology 2301 and 2302 be completed before enrolling in this course.

Three lecture, two laboratory hours per week.

4301. Psychological Testing. (3).

Essentials of testing, emphasizing the concepts of reliability and validity; limitations of psychological tests; familiarization with standardized interests, aptitude, achievement, intelligence and personality tests; practical experience with some "paper-and-pencil" group tests; questionnaire construction and administration. PREREQUISITES: Psychology 2301 and 3101.

4302. Introduction to Clinical Psychology. (3).

Survey of the history of clinical psychology; services provided by clinical psychologists; different strategies of diagnosis and therapy; ethical considerations of clinical psychologists. Course also includes introduction to interviewing techniques and practice in the use of these techniques, as well as field trips to institutions utilizing clinical psychologists. PREREQUISITES: Psychology 3101 and 3102.

4303. Behavior Modification. (3).

Instruction in the techniques of behavior modification, including observational procedures, methods of remediation, data recording and report writing. PREREQUISITES: Psychology 3102 and 4204.

4501. Senior Seminar in Psychology. (3).

Seminar discussion of current theoretical issues and experimental studies in psychology; open to outstanding advanced students by invitation of the faculty.

4502. Senior Thesis in Psychology. (3).

Supervised individual research on a selected topic in contemporary psychology; open to outstanding advanced students, by invitation of the faculty.

4503. Special Problems in Psychology. (1-3).

A course in which the student, under faculty supervision, may (a) read intensively in a specialized area, (b) conduct psychological research and/or (c) obtain field experience in community institutions where psychological principles are applied. PREREQUISITE: Permission of the Department Chairman. This course may be repeated for up to 6 hours credit.

SECONDARY EDUCATION

(See Curriculum and Instruction)

SOCIOLOGY

PROFESSOR JERRY B. MICHEL, *Chairman*

Room 231, Clement Hall

Requirements for the majors and minors in sociology and social welfare are listed on page 66. For information concerning the pre-social welfare curriculum see page 52.

IMPORTANT NOTE: A student may not major in sociology and minor in social welfare; a student may not major in social welfare and minor in sociology.

IMPORTANT NOTE: Sociology 1111 is a prerequisite for all other courses in sociology.

SOCIOLOGY

1111. Introductory Sociology. (3).

Nature and significance of interaction and culture; social organization and processes; social and cultural change.

1112. Contemporary Social Problems. (3).

Investigation, analysis, and discussion of current social problems.

3311. Social Statistics. (3).

Statistical and non-statistical approaches employed in contemporary social research, review and analysis of important monograph findings, practical applications derived from recurring social behavior.

3322. Methods of Social Research. (3).

An introduction to the selection and formulation of a research problem; the design of the research project, including sampling procedures; the methods of field observation, questionnaire construction, and participant observation techniques; the analysis and interpretation of research data; the preparation of the research report. **PREREQUISITE:** Sociology 3311.

3411. Sociology of Formal Organizations. (3).

Analysis of formal organizations in society and their effects on individual and group behavior. Special emphasis on the nature of bureaucracy—in business, educational, political, welfare, military, religious, and other organizations.

3420. Marriage and the Family. (3).

Marriage and the family in contemporary society. Interrelationships with other major social institutions, mate selection, marital adjustments; parental and family disorganization. Contemporary changes and conflicts in marriage and the family. (*Note: Students who have received credit for Sociology 2420 will not be allowed credit for Sociology 3420.*)

3430. Social Control. (3).

The problem of social control, internalizing social control, social structures and institutions in the maintenance of order, improving social control.

3440. Social Stratification. (3).

Social classes and social status; power, prestige, and social opportunities of the upper, middle, and lower classes; cross-cultural analysis of social stratification; social mobility.

3450. Dynamics of Social Change. (3).

A sociological analysis of the theory, nature, meaning, and consequences of social change.

3510. Sociology of Deviant Behavior. (3).

Contemporary theories of deviant behavior; the major types of deviation in American society; the relationship of deviant behavior and social disorganization to social change.

3521. Criminology. (3).

Nature and significance of criminal behavior; statistics of criminal behavior and criminals; trends in the social reactions to criminal behavior and criminals. Examination of the development and nature of theories of criminal behavior. Current programs for the treatment and prevention of criminal behavior.

3730. Social Attitudes. (3).

Personal and popular attitudes, attitudes and wishes, attitudes as social forces.

3811. Social and Ethnic Minorities. (3).

(Same as Anthropology 3811).

A comparative study of social and ethnic minorities in the United States and elsewhere, with a focus on differences in cultural backgrounds, social relationships with the larger society; social, educational, and legal problems; factors contributing to the satisfactory and unsatisfactory adjustments of minorities.

3820. Educational Sociology. (3).

Sociological analysis of education and its functions; school and community relationships; problems of social change and educational adjustments.

3841. Industrial Sociology. (3).

Social characteristics of business and industrial organizations; role of the consultant in personnel organization and human relations programs.

3860. Sociology of Religion. (3).

The role of religion in social systems; reciprocal influence of religion and modern society; sociological analysis of religious organizations and the roles which comprise them; social correlates of religious opinions and attitudes.

3870. Political Sociology. (3).

A sociological examination of political institutions: cultural and social factors associated with political structure, political attitudes, and political behavior; political decision-making as a sociological process; a comparative and methodological study of social movements and political parties.

3871. Public Opinion and Propaganda. (3).

The nature and development of public opinion with particular consideration of the roles, both actual and potential, of communication and influence.

3881. The Sociology of Adolescence. (3).

Study of the social aspects of adolescence. Emphasis on socialization into youthhood, the changing nature of adolescence in industrial societies, the conflict of institutional demands with peer group membership, self-identity problems, the values of youth subcultures and countercultures.

3883. Sociology of Sex Roles. (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 the life cycle. Class, race, occupational and other institutional differences in sex roles.

3900. Sociology of Mexico. (3).

A study of Mexico's social development, the community, the family, social change, minority group relations and population.

4209. History of Social Thought. (3).

Emphasis on the historic sources of social ideas in Western culture in terms of their relevance to contemporary systematic theory.

4210. Rise of Sociological Theory. (3).

A survey of the development of sociological theory with emphasis on the period from Comte to the "Chicago School."

4211. Contemporary Sociological Theory. (3).

European contributions, American developments and recent trends in sociological theory. PREREQUISITE: Sociology 4210.

4320. Theories of Criminology. (3).

Major theories of criminology reviewed from various academic approaches to evaluate the meaning of criminal behavior and delinquency.

4410. Urban Society. (3).

A study of urban society, its basic historical and modern development, power structures, social institutions and relationships; the future of the city. Problems of urbanization, such as slums, urban sprawl and transportation. Processes of change in the urban environment. (*Note: Students who have received credit for Sociology 2410 will not be allowed credit for Sociology 4410.*)

4411. Urban Anthropology. (3).

(Same as Anthropology 4411.)

Anthropological studies of pre-industrial and industrial cities. Urbanization, movements of social transformation and other processes of adjustment to an urban milieu. Urban slums, ethnic enclaves and housing developments in cross-cultural perspective. Urban kinship and social organization. Urban community development. Urban research techniques. PREREQUISITE: Sociology 1111 or Anthropology 1200, or permission of instructor.

4412. Urban Research. (3).

(Same as Urban Studies 4412).

Extensive exploration of research methods that have proved useful in the study of urban social phenomena; the application, limitations, and advantages of various research approaches.

4522. Analysis of Juvenile Delinquency. (3).

Trends of juvenile delinquency; the development of case study techniques and diagnosis of juvenile delinquency; comparative analysis of various theoretical approaches. PREREQUISITE: Sociology 3521.

4610. Population. (3).

Population theories and policies; their definition and history. Trends in population growth; meth-

ods of population analysis, and trends in fertility and morality. Emphasis on fertility, morality, sex and age composition, and migration and their influences on population change.

4620. Human Ecology. (3).

Spatial structure and land use patterns of urban, rural, and fringe areas; city growth, its spatial and communicative extension into suburban and rural areas, and its impact on the economy, values, and social organization of communities.

4710. Social Psychology. (3).

A study of the social development of the individual and of the underlying sociological and psychological process of human behavior.

4720. Collective Behavior. (3).

Emergence of collective behavior, spontaneous collectivities, social movements, social consequences of restrictive collective behavior.

4801. Senior Seminar in Sociology. (3).

Seminar discussion of current theoretical issues and research in sociology. Open to senior sociology majors and to other advanced students by invitation.

4812. Race Relations. (3).

A study of ethnic organization and interrelations with specific emphasis on the status of the Negro in American society, and the process of integration. Emphasis on theoretical explanations of prejudice.

4830. 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 department chairman.

4842. Sociology of Occupations and Professions. (3).

Sociological analysis of the division of labor, occupational groupings, career patterns, and professional associations in modern American society; the meaning of work.

4851. Medical Sociology. (3).

The contributions of sociology to medicine; the sociology of illness, particularly mental illness; practitioners, patients, and medical settings, particularly the modern hospital; the organization and sociology of the distribution of medical care; the status and the methods of research in medical sociology.

Graduate Courses in Sociology: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

SOCIAL WELFARE

2911. Introduction to Social Welfare. (3).

History and philosophy of social welfare in the United States, purposes and obstacles to social improvement, functions of public and private social service programs, qualifications and opportunities for social work practice.

3901. Social Welfare Fields of Service. (3).

Survey of the field of social welfare; detailed study of agency records in family- and children-focused social work, hospital social work, public

welfare, psychiatric, and medical social work, social group work; introduction to methods; visits to clients along with practicing social workers. PREREQUISITE: Social Welfare 2911.

3902. Human Development and Social Interaction. (3).

A survey of human needs from birth through old age, with a focus on role functions and role relationships throughout life. Social and cultural variables and the impact of critical life experiences will be explored. PREREQUISITE: Social Welfare 2911.

3903. Models of Social Intervention, I. (3).

Theories and concepts in social work, including an introduction to case work, group work and community organization. Emphasis on the case work model and on the implications of intervention. PREREQUISITES: Social Welfare 2911 and 3902 and permission of Director, Division of Social Welfare.

3904. Models of Social Intervention, II. (3).

A continuation of Social Welfare 3903, emphasizing group work and organizational models. Emphasis on relationships between client and worker, interviewing skills, assessment and planning. PREREQUISITE: Social Welfare 3903.

4830. Social Welfare Field Work. (3).

Educationally focused, practice-oriented field work in a wide range of social and human serv-

ice agencies, both established and newly emerging, for individual, group, and community needs; 12-16 hours weekly. May be repeated for a maximum of six hours. PREREQUISITES: Social Welfare 3903 and permission of Director, Division of Social Welfare.

4930. Topics in Specialized Social Services. (3).

Selected topics in social needs and services; two to four areas will be examined related to student interest and emerging service needs. Directed by staff, with lectures from the campus and social service community. PREREQUISITE: Social Welfare majors with senior status, or permission of Director, Division of Social Welfare.

4931. Senior Seminar in Social Welfare. (3).

A seminar in social change, with particular reference to the social worker and the social agency, principles of social change, the sociology of social action, and an examination of social welfare delivery systems as bureaucracies. PREREQUISITE: Senior majors or permission of instructor.

4932. Social Group Work and Community Organization. (3).

Theory and application of group dynamics concepts as applied to groups, neighborhoods, communities; the individual in the group, group and community structures and functioning; roles of the social worker in these settings.

SPECIAL EDUCATION AND REHABILITATION

PROFESSOR WILSON DIETRICH, *Chairman*

Room 101A, The Special Education Building

The Department of Special Education and Rehabilitation offers a major and minor in Special Education and Rehabilitation; requirements for the major and minor are listed on page 91.

The prefix SPER is used by The College of Education for courses in Special Education and Rehabilitation.

2000. Introduction to Exceptional Children. (3).

(formerly 4000, 4151)

A survey course with an overview of the field of special education, including the historical perspective of the field. Emphasis is placed on the characteristics and education of children and youth in each area of exceptionality.

3002. Independent Study in Special Education. (3).

A course designed to allow the student the opportunity of self-directed study and/or research under supervision. PREREQUISITE: Consent of department.

3003. Observation and Participation in Special Education. (3).

Overview of public school, institutional, private school facilities available in Special Education. Short term observations and participation with opportunity for evaluation. PREREQUISITE: Consent of department.

3004. Special Problems in Instructing the Handicapped. (1-3).

Individual investigation into areas of Special Education and Rehabilitation curriculum and instruction. PREREQUISITE: Experience as a

teacher or satisfactory evidence of being qualified to benefit from such a course.

3201. Introduction to the Education of Children with Emotional Problems. (3).

(formerly 4201, 4141)

A course designed to explore historical developments and current practices in the identification and treatment of children with emotional problems. Emphasis is placed upon the educational phase of treatment, including the characteristics of children, role of the teacher, and curricula planning. PREREQUISITE: Consent of instructor.

3401. Introduction to Children with Learning Disabilities. (3).

An introductory course, including an overview of minimal brain dysfunction, theories concerning diagnosis, management and education of children with resulting learning disabilities, and the relationship of these concepts to academic failure. PREREQUISITE: SPER 2000.

3501. Nature of Mental Retardation. (3).

(formerly 4501, 4163)

To include etiology, definitions, and a comprehensive knowledge of the nature and needs of the mentally retarded. The multiplicity of implications of mental retardation as they relate to impairment in growth, maturation, and learning, and the impact of these deficits on the individual, on his family, and on society. PREREQUISITE: Consent of instructor.

3512. Materials and Methods of Teaching the Mentally Retarded. (3).*(formerly 5512, 4165)*

Knowledge and familiarity with instructional materials and methods applicable to the special educational needs of the mentally retarded at the primary and intermediate levels will be emphasized. Instructional materials will be developed and an academic inventory, as well as other evaluative instruments, will be used as a basis for the prescription of pedagogical procedures to be used with retarded individuals. PREREQUISITE: Consent of instructor.

3516. Programming for Trainable Mentally Retarded Children. (3).*(formerly 5516)*

This course covers diagnosis, classification, development of teaching materials, and techniques as well as working with community organizations in relation to public school, private school, community center or institutional program for trainable mentally retarded children. PREREQUISITE: Consent of instructor.

3521. Curriculum for the Educable Mentally Retarded. (3).*(formerly 4521)*

Emphasis on information and skills conducive to the development, organization, pedagogy, and evaluation of a curriculum for mentally retarded children and adults at all levels of instruction and ability. Basic goals, objectives, modifications, and evaluations of curricula will be stressed. Curriculum as a dynamic, sequential, flexible process will be emphasized. PREREQUISITES: SPER 2000; 3501.

3901. Introduction to Disabling Conditions and Their Helping Professions. (3).

An introductory course to acquaint students with the various physical, mental and socially disabling conditions and their effect on the lives of people. This course also explores the roles of the various helping professions in the rehabilitation of such conditions.

4001. Assessment of Exceptional Persons. (3).

Survey of tests and measurements used with exceptional persons, including psychological, social, and other assessment instruments used in the educational and vocational evaluation of exceptional persons.

4041. Supervised Clinical Training in Educational Therapy. (3).

Practical application of educational activities in the rehabilitation of patients with neuropsychia-

tric orthopedic, neurological cardiac, pulmonary, and other general disabilities.

***4541. Student Teaching in Special Education. (6).**

Orientation, observation, and teaching with handicapped children.

***4542. Student Teaching in Special Education. (3-6).**
(formerly 4881)

This course is offered for the student who has completed SPER 4541 and for whom additional teaching experience in special education is considered desirable.

****4801-20. Workshops in Special Education and Rehabilitation. (1-9).****4801. Workshop—Methods in Instruction. (1-3).**

A study into Special Education and Rehabilitation Programming for handicapped children. The course is designed to aid both in-service and prospective teachers in developing skills in diagnosis, evaluation, classroom and individualized studies. Attention is given to methodologies, instructional materials and behavioral management.

4902. Social and Psychological Adjustments to Disabling Conditions. (3).

A course designed to explore in depth the social and psychological ramifications of disabling conditions. Theories dealing with the adjustment to physical disabilities will be explored and extrapolated to mental and social disabilities.

4903. Helping and Human Relationships with Disabled Persons. (3).

This course will focus on the helping process, examining theories of human behavior and the helping process as it relates to working with disabled persons. The theories of Combs, Carkhuff and others will be examined in this course.

4941. Practicum in Rehabilitation. (3-6).

This course will provide the student with practical experiences in various rehabilitation settings. The student will be provided a first hand experience of the overall functions of such a rehabilitation setting. PREREQUISITE: SPER 3901 or Consent of instructor.

Graduate Courses in Special Education: see The Bulletin of The Graduate School.

**For detailed information concerning requirements for admission to the student teaching program, see page 77.*

***NOTE: Not more than 9 semester hours of credit can be applied toward a degree.*

SPEECH AND DRAMA

PROFESSOR JOHN H. SLOAN, *Chairman*

Room 143, Speech and Drama Building

The Department of Speech and Drama offers concentrations in general speech; rhetoric and communication arts; radio-television-film; and theatre and oral interpretation; the requirements for these majors are listed on page 66.

Students planning to pursue graduate education in speech pathology and/or audiology should be aware of the fact that they will need 18 semester hours in the basic areas that relate to communication. The fol-

lowing are examples of areas from which courses may be drawn: Human Anatomy and Physiology, and Developmental Psychology.

Students wishing further information about the graduate program in the Department of Audiology and Speech Pathology should contact the Department Chairman for advisement.

NOTE: Students may take speech and drama laboratory courses (viz., 3301, 3401, and 3501) as often as

advisers will allow. None of these courses may be repeated for the purpose of improving the grade originally given.

THEATRE

1411. Basic Oral Interpretation. (3).

Development of the voice as an instrument of expression. Study of basic interpretative material.

1551. Introduction to Theatre. (3).

A consideration of all the dramatic elements of the theatre from the viewpoint of the audience, designed to enhance and improve the student's appreciation of theatrical performances.

2411. The Art of Oral Interpretation. (3).

A continuation of Speech 1411, with emphasis on the sense of rhythm, style, and technique necessary for speaking poetic literature. PREREQUISITE: Speech 1411.

2412. Advanced Oral Interpretation. (3).

A continuation of Speech 2411 with emphasis on the development of imaginative responses to various literary stimuli. PREREQUISITE: Speech 2411.

2501. Stage Movement I. (3).

An introduction to movement as a basic element of the actor's craft. This course focuses on the recognition, development, and understanding of natural physical actions and rhythms and their application to the stage.

2502. Stage Movement I. (3).

A continuation of Speech 2501 dealing with the actor's visual awareness of negative and positive space and time.

2511. Stagecraft I. (3).

A lecture-laboratory course covering basic elements of technical theatre.

2512. Stagecraft I. (3).

A lecture-laboratory course covering basic elements of stage lighting, painting, and costumes.

2531. Acting I. (3).

Introduction to the craft of acting. The development of the actor's individual instrument through basic technique.

2532. Acting I. (3).

A continuation of Speech 2531. Focusing on action and reaction in two-person scenes. PREREQUISITE: 2531.

2541. Stage Make-up. (2).

Fundamentals of straight and character make-up. The application of the principles governing line, color, and light and shade of make-up problems. Practical experience in make-up through various productions.

3401. Performance Laboratory. (1).

Preparation for and participation in theatre performance activities. One hour credit each semester for three hours of supervised laboratory work per week. (See note on page 369.)

3451. Interpreter's Theatre. (3).

Studies in the staging of materials not originally

written for the theatre. PREREQUISITE: Speech 3521.

3461. Oral Interpretation of Black Literature. (3).

Principles and practice relative to the oral interpretation of poems, speeches, and plays written by Black Americans. PREREQUISITE: Speech 1411.

3501. Production Laboratory. (1).

Preparation for and participation in theatre production activities. One hour credit each semester for three hours of supervised laboratory work per week. (See note on page 369.)

3502. Stage Movement II. (3).

Movement studies to develop the actor as a creator and user of props, sound, and space.

3503. Stage Movement II. (3).

A continuation of Speech 3502 emphasizing the translation of visual and non-visual images and metaphors into movement for the stage.

3511. Stagecraft II. (3).

A lecture-laboratory course covering the basic elements of scenery construction and technical drawing.

3512. Stagecraft II. (3).

A study of the techniques and principles involved in scenery painting, sound, rigging, and properties.

3521. Directing. (3).

A study of the basic organizational techniques of stage direction.

3522. Directing I. (3).

A continuation of Speech 3521 emphasizing the integration and organization of all components of play production.

3531. Acting II. (3).

The development of ensemble work within scenes. PREREQUISITE: Speech 2532.

3532. Acting II. (3).

The development of acting styles as influenced by the environments of historical periods.

3551. History of the Theatre. (3).

A history and survey of drama from Aeschylus to Turgenev.

3552. History of the Theatre. (3).

A history and survey of drama from Ibsen to Ionesco.

3561. Theatrical Design I. (3).

Designed to acquaint the student with new materials and methods of theatrical rendering of costumes and scene designs. Includes water color, acrylic, three dimensional models, and other media.

3562. Theatrical Design I. (3).

Study of scenic design principles and historical styles in theatre design. PREREQUISITE: Speech 3561.

4011. Performance and Production I. (3-9).

Supervised work in actual university, community or professional theatre productions on an in-

ternship basis. Credit varies with amount of time and responsibility involved. May be repeated for a maximum of 18 semester hours of credit.

4421. Interpretation of Poetry. (3).

Studies in the style and structure of poetry of specific types and periods, as related to the response and performance of the oral interpreter. PREREQUISITE: Speech 2411.

4431. Interpretation of Prose. (3).

Studies in the oral interpretation of prose fiction, with attention to various literary styles and structures. PREREQUISITE: Speech 2411.

4441. Interpretation of Drama. (3).

Oral performance of scenes from classical and modern drama.

4451. Interpretation of Shakespeare. (3).

Studies in the oral presentation of scenes from selected comedies, histories, and tragedies, with exploration of character and dramatic structure.

4501. Stage Movement III. (3).

A study of the different styles and concepts of movement in the context of the theatrical presentation.

4502. Stage Movement III. (3).

A continuation of Speech 4501 emphasizing the complete coordination of all aspects of previous movement classes into a theatrical presentation.

4511. Stage Lighting I. (3).

Study of elementary electricity and basic stage lighting techniques.

4512. Stage Lighting I. (3).

A continuation of Speech 4511. Advanced theatre lighting design and execution. PREREQUISITE: Speech 4511.

4531. Acting III. (3).

Acting problems with continued work in acting styles. Term length assignments to scenes designed to develop ensemble acting. PREREQUISITE: Speech 3532.

4532. Acting III. (3).

A continuation of Speech 4531.

4553. Directed Individual Studies in Theatre. (1-3).

Designed for the advanced student who wishes to do concentrated study in a specific area of theatre. May be repeated for a maximum of six credit hours. PREREQUISITE: Permission of the instructor.

4561. Stage Costuming I. (3).

Study of basic costuming techniques.

4562. Stage Costuming I. (3).

A continuation of Speech 4561. Survey of historic dress and the planning and rendering of costume designs. PREREQUISITE: Speech 3561.

4563. Theatrical Design II. (3).

A lecture-laboratory course covering the techniques of painting flat scenery for the stage. PREREQUISITE: Speech 3562.

4564. Theatrical Design II. (3).

Covers total production design—the coordination

of all aspects of costume, scenery, and lighting into the whole of the production. PREREQUISITE: Speech 4563.

4566. Undergraduate Seminar in Black Theatre. (3).

Selected topics in contemporary black theatre. May be repeated up to six hours. PREREQUISITE: Permission of the instructor.

4571. Playwriting. (3).

A study of the theory and principles of writing plays for the stage. Practice in writing either the short or long play. May be repeated for a maximum of 9 semester hours of credit. PREREQUISITE: permission of the instructor.

4581. Dramatic Theory and Criticism. (3).

The major documents in dramatic theory and criticism from Aristotle to the present.

4591. Theatre Management. (3).

A study of basic boxoffice and publicity procedures for the theatre.

4921. Play Production for Secondary Schools. (3).

A survey of the problems of the play director in high school. The course considers: choosing the play, casting, directing, technical aspects of production; then relates these items to the student, the school, and the community.

RHETORIC AND COMMUNICATION ARTS

1211. Voice and Diction. (3).

Principles of effective voice usage. Emphasis on improving voice characteristics and diction.

1311. Public Speaking. (3).

Study of the principles of ethical and effective public speaking, with practice in the construction and delivery of original speeches in the presence of an audience.

1781. Introduction to Rhetoric and Communication Arts. (3).

Study of the principles and values underlying speech communication. Topics include: purposes of speech, forms of rhetoric, freedom of speech, communication processes and speech criticism. Not a performance course.

1782. Movies and Media in Modern Society. (3).

Consideration of the development of the technology, industry, and aesthetics of film, radio, and television in relation to twentieth-century American society. PREREQUISITE: Speech 1781 or permission of the instructor.

2321. Argumentation and Debate. (3).

The basic principles of argumentation with emphasis on developing practical skills in analysis, reasoning, evidence, and organization of the argumentative speech. The role of debating in contemporary society is stressed.

2322. Persuasion. (3).

Study and practice in meeting special demands of the persuasive speech situation. Advanced training in the use of arguments and the development of effective style. PREREQUISITE: Speech 1311 or permission of the instructor.

2331. Deliberative Processes in a Democratic Society. (3).

A study of decision-making in legislative and advisory groups, with particular attention to the development of parliamentary procedure and techniques of leadership in deliberative assemblies.

2361. Black Rhetoric. (3).

A study of the speeches and rhetoric of the black man's struggle in America. Emphasis on spokesmen such as Walker, Turner, Douglass, Washington, DuBois, Malcolm X, King, Carmichael, Baldwin, and Jones.

2781. Introduction to Rhetorical Theory. (3).

A survey of rhetorical theory defining the function and scope of rhetoric. Emphasis on the Platonic, Aristotelian, and Cartesian traditions.

2911. Speech for the Elementary Classroom Teacher. (3).

A course designed to improve the speech of teachers. Emphasis is on voice and diction, classroom speaking, and oral interpretation of literature.

3011. Speech Communication in Organizations. (3).

A study of information flow, communication systems, and communication break-down in contemporary organizations. Especially concerned with business, governmental, and institutional structures.

3013. Communication in Politics. (3).

Study of the types of political communication between politicians and constituencies with special emphasis on presidential rhetoric and campaign speaking and communication via mass media. Includes practice in construction of model political speeches.

3301. Speech Communication Laboratory. (1).

Independent and organized preparation for the study and practice of speech communication in non-classroom situations. Includes inter-collegiate forensic activities as well as community communication projects. One hour credit each semester for three hours of supervised work per week. (See note on page 369.)

3341. Discussion. (3).

Study and practice of the principles and techniques of discussion, dealing with current problems of wide interest and significance.

3371. Freedom and Responsibility of Speech. (3).

The development of freedom of speech as a Western value and the attendant problems of ethical practice, limitations, and responsibility.

3372. Rhetoric in the Contemporary Environment. (3).

Study of the speeches and rhetoric generated by major social and political issues since World War II. Analysis of the significance of rhetoric in developing and resolving the crises surrounding such issues. Consideration of the ethics of contemporary rhetoric. PREREQUISITE: Speech 1781 or permission of the instructor.

3373. The Rhetoric of Social Protest.

A study of the speeches, pamphlets, and rhetorical techniques of selected advocates of significant

social change. Special attention will be given to the symbols, language forms, enthymemes, and means of audience adaptation of the genre of the rhetoric of agitation, protest, and revolution as well as to the role of rhetorical discourse in social change. PREREQUISITE: Speech 1781 or permission of instructor.

4101. Contemporary Theories of Language. (3).

An examination of the influence of language upon behavior, the limitations of language as a communicative system, and the relationship between language and thought.

4341. Interpersonal and Small Group Communication. (3).

Advanced theory in the logical, psychological, and sociological investigation of issues in small groups. PREREQUISITE: Speech 3341.

4361. History and Criticism of British Public Address. (3).

A study and analysis of British speakers and speaking from the 16th century to the present time. Emphasis will be placed on the speech situation, audience, issues and speakers. Such men as Fox, Pitt, Sheridan, Burke, Disraeli, and Churchill will be considered. Repeatable to a maximum of six hours with permission of the instructor.

4362. History and Criticism of American Public Address. (3).

An analysis of political, religious and social speaking from colonial times to the present. Such men as Clay, Emerson, Lincoln, Webster, and the Roosevelts will be considered. Repeatable to a maximum of six hours with permission of the instructor.

4363. Anglo-American Public Address. (3).

A history and criticism of public argument in the British Empire, 1660-1784. Special emphasis on the emergence of Whig liberalism, The American Revolution, and the politics of the Empire.

4366. Undergraduate Seminar in Oral Communication. (3).

Stresses individual work, preparation of papers and reports, and extensive class discussion; topics vary from semester to semester. May be repeated up to six hours.

4371. Critical Analysis of Oral Communication. (3). (formerly Speech Criticism).

Problems in the theory and criticism of classical and modern rhetorical works; application of the principles of rhetoric to the critical evaluations of current public speaking practice.

4372. History of Speech Education. (3).

An examination of speech educators, their theories, practices, and place in history of speech education from classical to modern times. PREREQUISITE: upper division standing and permission of the instructor.

4373. Seminar in Interracial Communication. (3).

A study of the special problems encountered in communication between blacks and whites. Readings, discussion, and field study on how prejudice, stereotypes, and self-concepts can affect communication. Exploration of rhetoric methods to minimize these problems. PREREQUISITE: 2361 or permission of instructor.

4374. Directed Studies in Communication Arts. (3).

Independent research in areas of special interest, including rhetoric, radio, television, and film. NOTE: Students who have received credit for Speech 4801 will not be allowed credit for Speech 4374. PREREQUISITE: Permission of area head.

4922. Directing the Forensics Program. (3).

Designed for the teacher charged with the responsibility of developing and directing inter-scholastic or intercollegiate competitive speech programs; the study of the historical background for such programs, organizing techniques, recruiting, tournament direction, and other related concerns.

RADIO-TELEVISION-FILM

3821. Advanced Radio Production. (3).

Advanced training in radio production with emphasis on the applications of sound in broadcasting. Production of live and recorded commercials, and documentary, drama, and special events programs. PREREQUISITE: Speech 3824.

3823. Radio-TV-Film Production Techniques and Aesthetics I. (4).

Basic production skills and theory: audio control, recording, still photography, studio and small-format TV production. Aesthetics of sound and the moving image. NOTE: Students who have received credit for Speech 3841 will not be allowed credit for Speech 3823. PREREQUISITE: Speech majors or permission of instructor. LECTURE/LAB: 3 hours lecture-demo-critique; 2 hours lab.

3824. Radio-TV-Film Production and Aesthetics II. (4).

Continuation of Speech 3823. Intermediate production skills and theory: audio mixing including film sound, motion picture photography and editing, graphics, TV production. Aesthetics of the moving image. Production of exercises. NOTE: Students who have received credit for Speech 4891 will not be allowed credit for Speech 3824. PREREQUISITES: Speech 3823 and either Speech 1781 or 1782. LECTURE/LAB: 3 hours lecture-demo-critique; 2 hours lab.

3831. Campus Radio Staff and Management. (1-2).

Announcing, production, and management work on the campus radio station. Repeatable to a maximum of 3 hours credit. PREREQUISITE: Speech 3823 or permission of instructor.

3881. Radio-TV-Film and Society. (3).

A study of the impact of broadcasting and film on society, and the reverse influence of society upon these media. PREREQUISITE: Journ. 1011.

4802. Internship. (1-3).

Field studies in communication. Supervised practical work with a government institution, film company, or TV station. Written analysis of experience required. PREREQUISITE: Permission of area head.

4810. Broadcast Regulation and Program Policy. (3).

The role of those agencies controlling broadcasting and the development of regulation and policies concerning operations and programming. PREREQUISITE: Speech 3823.

4811. 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 the design of program schedules. PREREQUISITES: Speech 1781, 1782.

4831. Radio and Television Sales and Advertising. (3).

The relation of radio and television advertising to the station, network, and station representative; the role of sponsors, agencies, and allied groups. PREREQUISITE: Speech 3823.

4842. Advanced Television Production. (3).

Advanced techniques of studio and small-format TV production including staging and direction of programs. PREREQUISITE: Speech 3824. NOTE: Students who have received credit for Speech 3842 will not be allowed credit for Speech 4842.

4851. Development of Contemporary Film. (3).

Study of theatrical film from 1925 to the present. Study and critique of selected films. NOTE: Students who have received credit for Speech 3892 will not be allowed credit for Speech 4851. PREREQUISITES: Speech 1781, Speech 1782, or permission of instructor.

4852. Origins of Film. (3).

Study of the origins and growth of the motion picture industry through the silent film era. Study and critique of selected films. NOTE: Students who have received credit for Speech 3891 will not be allowed credit for Speech 4852. PREREQUISITES: Speech 1781, Speech 1782, or permission of instructor.

4853. Documentary Form in Film. (3).

History and criticism of documentary, educational, and industrial films. Study of the non-fiction form. PREREQUISITES: Speech 1781, Speech 1782, or permission of instructor.

4854. Documentary Form in Broadcasting. (3).

History and criticism of non-fiction broadcasting and cablecasting. PREREQUISITE: Speech 1781, Speech 1782, or permission of instructor.

4857. History of American Broadcasting. (3).

A comprehensive study of the history of the broadcasting industry in the United States as it developed from 1895 to the present. Use of primary sources. PREREQUISITES: Speech 1781, 1782.

4871. Radio and Television Station Management. (3).

Theories of management; study and analysis of the special problems and situations confronting the manager of a broadcasting station, including personnel, operations, government regulations, programming, and sales. PREREQUISITE: Speech 4811 or permission of the instructor.

4892. Advanced Film Production. (3).

Techniques of sound film production, direction, and editing. Production of films. PREREQUISITE: Speech 3824.

Graduate courses in Speech and Drama: For course descriptions and further details of the graduate program, see The Bulletin of The Graduate School.

TECHNOLOGY

(See ENGINEERING TECHNOLOGY)

URBAN STUDIES

PROFESSOR GERALDINE TERRY, *Coordinator*

A description of the interdisciplinary program in Urban Studies appears on page 56. Requirements for the major and minor in Urban Studies are listed on page 67. Courses offered by the Departments of Anthropology, Economics, Geography, History, Political Science, and Sociology are included in this program, and the descriptions of these courses will be found under the appropriate departmental headings.

4001. Urban Studies Seminar. (3).

A seminar on urban problems and their causes. Students will carry out field research related to

one or more urban problems and present and discuss their findings. **PREREQUISITE:** One research methods course and permission of instructor.

4412. Urban Research. (3). (Same as Sociology 4412).

Extensive exploration of research methods that have proved useful in the study of urban social phenomena; the application, limitations, and advantages of various research approaches.



9

Faculty and Staff

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- ELIZABETH J. WEBSTER (1970), *Professor*
B.F.A., 1950, Ohio University; M.A., 1951, University of Alabama; Ph.D., 1961, Columbia University.
- ALAN J. WESTON (1970), *Professor, Chairman, Director of the Memphis Speech and Hearing Center*
B.A., 1963, M.A., University of Alabama; Ph.D., 1969, University of Kansas.

BIOLOGY

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CAROL BALZEN (1973), *Instructor*

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B.S., 1958, M.S., 1959, Ph.D., 1962, Mississippi State University.

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CHEMISTRY

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HERBERT GRAVES ALLBRITTEN (1963),

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- DONALD RAY BRADY (1973), *Assistant Professor*
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- JAMES E. BULGER (1973), *Assistant Professor*
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- DON PEARSON CLAYPOOL (1956), *Professor*
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- HOWARD GRADEN KIRKSEY (1965), *Associate Professor*
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- ALLAN ROGER LARRABEE (1972), *Associate Professor*
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- IRMA GREER MARKS (1944), *Assistant Professor*
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- ROBERT HERMAN MARSHALL (1960), *Professor*
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- FRANK A. MOMANY (1973), *Associate Professor*
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- RICHARD F. SPRECHER (1974), *Associate Professor*
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CIVIL ENGINEERING

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CRIMINAL JUSTICE

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Retired Chief, Memphis Police Department.

CURRICULUM AND INSTRUCTION

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- SOPHIA CLARK BROTHERTON (1965), *Assistant Professor of Elementary Education*
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- BARBARA GAGEL BURCH (1968), *Professor of Secondary Education*
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- RONALD W. CLEMINSON (1970), *Associate Professor of Elementary Education*
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- PATRICIA BOYNE COATS (1969), *Associate Professor of Elementary Education*
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- JOSEPH FARRIS CRABTREE, II (1965), *Professor of Secondary Education*
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- MINNIE McRAE CUTLIFF (1958), *Assistant Professor of Elementary Education*
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- DUANE M. GIANNANGELO (1972), *Assistant Professor of Elementary Education*
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- LARRY REX GRAY (1974), *Assistant Professor of Secondary Education*
B.A., 1967, M.A., 1968, Michigan State University.
- ALBERT FORD HAYNES, JR. (1954), *Professor of Secondary Education*
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- JOHN R. HIRSCHMANN (1955), *Associate Professor of Secondary Education*
B.S., 1953, Memphis State University; M.A., 1958, George Peabody College; Ed.S., 1969, Michigan State University.
- PAUL LINUS JONES (1970), *Associate Professor of Secondary Education*
B.S., 1961, Northwestern State College; M.S., 1964, Ed.D., 1970, Oklahoma State University.
- ROBERT A. KAISER (1969), *Associate Professor of Elementary Education*
B.S., 1957, Allegheny College; M.Ed., 1961, Ed.D., 1967, University of Pittsburgh.
- HARRY B. MILLER (1969), *Professor of Elementary Education*
B.S., 1951, State College of California, Pa.; M.Ed., 1955, Ed.D., 1962, University of Pittsburgh.
- NELLE ELIZABETH MOORE (1956), *Assistant Professor of Elementary Education*
B.A. 1930, Lambuth College; M.A., 1946, Duke University.
- JUNE ROSE MORRIS (1968), *Assistant Professor of Secondary Education*
B.A., 1952, Baylor University; M.Ed., 1957, Ed.D., 1972, University of Mississippi.
- ELBERT F. NOTHERN (1958), *Professor of Secondary Education*
B.S.E., 1947, University of Arkansas; Ed.M., 1949, Harvard University; Ed.D., 1953, University of Arkansas.
- ELLEN C. PEETE (1973), *Instructor of Elementary Education*
B.S., 1965, Memphis State University; M.Ed., 1968, Memphis State University.
- MERRILL MOSELEY POWELL (1966), *Associate Professor of Secondary Education*
B.A., 1946, University of Richmond; M.A., 1963, Ed.D., 1966, University of Alabama.
- THOMAS ARTHUR RAKES (1972), *Assistant Professor of Elementary Education*
B.S., 1968, Milligan College; M.A., 1969, East Tennessee State University; Ed.D., 1972, University of Tennessee.
- MARGARET MYERS RAUHOF (1964), *Assistant Professor of Elementary Education*
A.B., 1935, Lynchburg College; M.A., 1951, Columbia University.
- BILLY GENE REYNOLDS (1969), *Assistant Professor of Secondary Education*
B.S., 1959, University of Tennessee at Martin; M.S., 1963, Ed.D., 1969, University of Tennessee.
- JAMES ALFRED ROBERSON (1969), *Associate Professor of Secondary Education*
B.A., 1935, Abilene Christian College; M.A., 1951, University of Texas; Ed.D., 1957, Texas Technological University.
- DENNIE L. SMITH (1971), *Associate Professor of Elementary Education*
B.D., 1956, M.A., 1966, Marshall University; Ed.D., 1969, Auburn, University.
- YVONNE T. SMITH (1966), *Assistant Professor of Elementary Education*
B.S., 1961, M.Ed., 1966, Memphis State University; Ed.S., 1972, University of Tennessee.
- CHARLES LAMAR THOMPSON (1963), *Professor of Secondary Education*
B.A., 1956, M.Ed., 1958, Mississippi College; Ed.D., 1963, University of Southern Mississippi.
- SYLVIA L. TORBET (1963), *Associate Professor of Secondary Education*
B.S., 1953, M.Ed., 1955, Louisiana State University; Ed.S., 1963, Ed.D., 1968, George Peabody College.
- A. BERT WEBB (1972), *Assistant Professor of Secondary Education*
B.S., Ed., 1962, M.Ed., 1966, Auburn University; Ed.D., 1971, University of Tennessee.

MARY WITT (1965), *Professor of Elementary Education*
B.S., 1938, Memphis State University; M.A., 1942, Ed.D., 1954, George Peabody College.

ROSESTELLE WOOLNER (1970), *Professor of Elementary Education*
B.S., 1958, M.A., 1960, Memphis State University; Ed.D., 1966, University of Tennessee.

DISTRIBUTIVE EDUCATION

MR. EDWIN C. PEARSON, M.S., *Chairman*

MARY S. ANDERTON (1971), *Instructor in Distributive Education and Home Economics*
B.S., 1959 University of Tennessee; M.S., 1970, Memphis State University.

WANDA H. HARTMAN (1972), *Instructor*
A.A., 1962, Northeast Mississippi Jr. College; B.S., 1964, M.S., 1967, Mississippi State College for Women.

C. EDWIN PEARSON (1966), *Professor, Chairman*
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ECONOMICS

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ARTHUR BAYER (1971), *Associate Professor*
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ROGER K. CHISHOLM (1971), *Professor*
B.S., 1959, University of Illinois; M.S., 1960, Iowa State University; Ph.D., 1967, University of Chicago.

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COLDWELL DANIEL, III (1970), *Professor*
B.A., 1949, Tulane University; M.B.A., 1950, Indiana University; Ph.D., 1958, University of Virginia.

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HERBERT JOHN MARKLE (1951), *Professor, Dean of The College of Business Administration*
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FESTUS JUSTIN VISER (1965), *Professor*
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DONALD ROGER WELLS (1967), *Associate Professor*
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EDUCATIONAL ADMINISTRATION AND SUPERVISION

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DALE F. BALTUS (1972), *Assistant Professor*
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FREDERICK KEITH BELLOTT (1968), *Professor, Director, Bureau of Educational Research and Services*
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PAUL K. PREUS (1971), *Professor*
B.A., 1937, Luther College; B.E., 1939, University of Puget Sound; M.Ed., 1960, Central Washington State College; Ph.D., 1970, University of Texas.

DEVOY A. RYAN (1967), *Professor; Associate Dean of The College of Education*
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ELECTRICAL ENGINEERING

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CHARLES F. MORRIS, JR. (1970), *Assistant Professor*
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ENGINEERING TECHNOLOGY

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ENGLISH

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- PETER BANNON (1947), *Professor*
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Tentative Calendar

TENTATIVE CALENDAR FOR 1976-1977

This calendar is tentative, and students should check the 1976-77 BULLETIN for possible changes or additions.

FALL SEMESTER 1976

AUGUST 26, THURSDAY

Meeting of the new members of the University faculty, University Center Ballroom, 9 a.m.

AUGUST 27, FRIDAY

Meeting of the entire University faculty, University Center Ballroom, 9 a.m., followed by meeting of the University faculty by colleges and departments.

AUGUST 28, SATURDAY

Registration—The Graduate School

AUGUST 30, MONDAY through
SEPTEMBER 1, WEDNESDAY

Registration Week—For detailed dates and times, see the *Bulletin* (Schedule of Classes) for the Fall Semester, 1976.

SEPTEMBER 2, THURSDAY

Classes meet as scheduled.

SEPTEMBER 6, MONDAY

Holiday—Labor Day

SEPTEMBER 9, THURSDAY

Last day for adding courses.

SEPTEMBER 28, TUESDAY

Last day for removing summer session "Incomplete" grades.

OCTOBER 1, FRIDAY

Holiday—West Tennessee Education Association

OCTOBER 28, THURSDAY

Mid-semester deficiency reports due in the Records Office.

NOVEMBER 16, TUESDAY

Last day for dropping courses.

NOVEMBER 16, TUESDAY

Last day to withdraw from the University.

NOVEMBER 24, WEDNESDAY

Last day for making application to the dean of the appropriate undergraduate college for degrees to be conferred May, 1977.

NOVEMBER 25, THURSDAY, through

NOVEMBER 28, SUNDAY

Thanksgiving Recess

DECEMBER 9, THURSDAY

Study Day

DECEMBER 10, FRIDAY

Final Examinations begin.

DECEMBER 18, SATURDAY

Commencement

SPRING SEMESTER 1977

JANUARY 8, SATURDAY

Registration—The Graduate School

JANUARY 10, MONDAY, through
JANUARY 12, WEDNESDAY

Registration Week—For detailed dates and times, see the *Bulletin* (Schedule of Classes) for the Spring Semester, 1977.

JANUARY 13, THURSDAY

Classes meet as scheduled.

JANUARY 19, WEDNESDAY

Last day for adding courses.

FEBRUARY 1, TUESDAY

Last day for removing Fall Semester "Incomplete" grades.

MARCH 6, SUNDAY, through
MARCH 13, SUNDAY

Spring Holidays

MARCH 16, WEDNESDAY

Mid-term deficiency reports due in the Records Office.

APRIL 7, THURSDAY

Last day for dropping courses.

APRIL 7, THURSDAY

Last day to withdraw from the University.

APRIL 13, WEDNESDAY

Last day to make application to the dean of the appropriate undergraduate college for degrees to be conferred August, 1977.

APRIL 28, THURSDAY

Study Day

APRIL 29, FRIDAY

Final Examinations begin.

MAY 7, SATURDAY

Commencement

PRE-SUMMER SESSION 1977

MAY 9, MONDAY

Registration

MAY 10, TUESDAY

Classes meet as scheduled.

MAY 10, TUESDAY

Last day for late registration.

MAY 24, TUESDAY

Last day to withdraw.

MAY 27, FRIDAY

Final examinations.

SUMMER SESSIONS 1977

First Summer Term

MAY 30, MONDAY, through
MAY 31, TUESDAY

Registration—For detailed dates and times, see the *Bulletin* (Schedule of Classes) for the Summer Session, 1977.

JUNE 1, WEDNESDAY

Classes meet as scheduled.

JUNE 3, FRIDAY

Last day for adding first term courses.

JUNE 21, TUESDAY

Last day for removing Spring Semester "Incomplete" grades.

JUNE 30, THURSDAY

Last day for dropping first term courses.

JUNE 30, THURSDAY

Last day to withdraw from the University (first summer term).

JULY 4, MONDAY

Holiday—Independence Day

JULY 7, THURSDAY

Final examinations begin for the first summer term.

Second Summer Term

JULY 11, MONDAY

Course Adjustment Day

JULY 12, TUESDAY

Classes meet as scheduled.

JULY 14, THURSDAY

Last day to add second term courses.

JULY 27, WEDNESDAY

Last day for making application to the dean of the appropriate undergraduate college for degrees to be conferred December 1977.

AUGUST 5, FRIDAY

Last day for dropping second term courses.

AUGUST 5, FRIDAY

Last day to withdraw from the University (second summer term).

AUGUST 12, FRIDAY

Final examinations.

AUGUST 13, SATURDAY

Commencement

Extended Summer Term

MAY 30, MONDAY, through

MAY 31, TUESDAY

Registration—For detailed dates and times, see the *Bulletin* (Schedule of Classes) for the Summer Session, 1977.

JUNE 1, WEDNESDAY

Classes meet as scheduled.

JUNE 3, FRIDAY

Last day to add extended term courses.

JUNE 21, TUESDAY

Last day for removing Spring Semester "Incomplete" grades.

JULY 4, MONDAY

Holiday—Independence Day

JULY 7, THURSDAY, through

JULY 8, FRIDAY

Mid-Term Break

JULY 11, MONDAY

Study Day

JULY 21, THURSDAY

Last day to drop extended term courses.

JULY 21, THURSDAY

Last day to withdraw from the University (extended term courses).

JULY 27, WEDNESDAY

Last day for making application to the dean of the appropriate undergraduate college for degrees to be conferred December 1977.

AUGUST 12, FRIDAY

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AUGUST 13, SATURDAY

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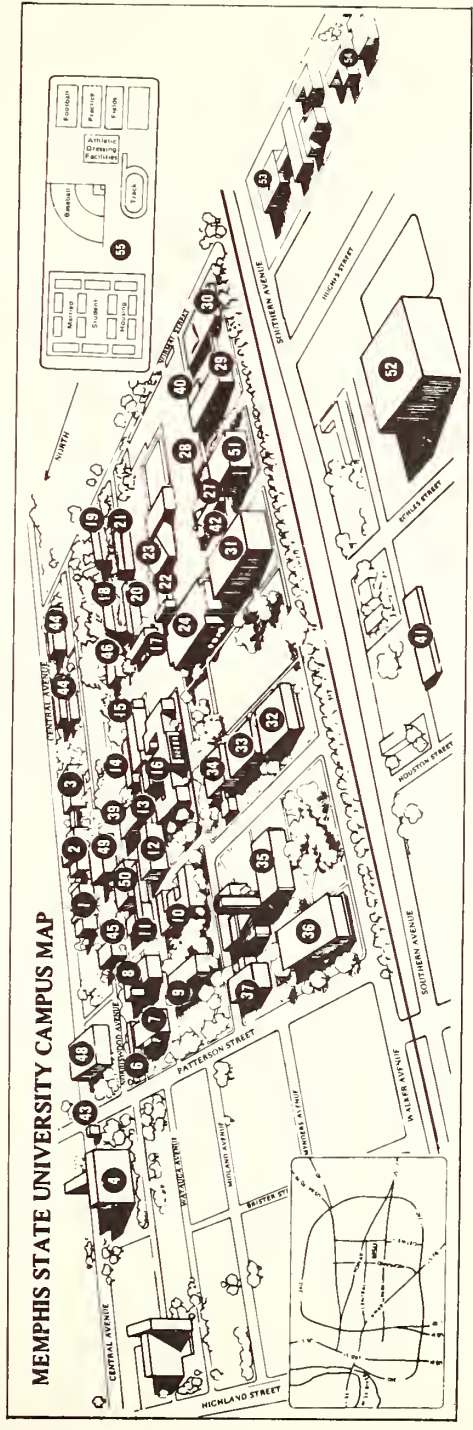
- 16. Administration Building — AD
- 42. Art Annex — AA
- 11. Art Building — AB
- 40. Athletic Office
- 35. Brister Library — BL
- 19. Browning Hall
- 13. Cafeteria
- 30. Campus School — CS
- 4. Richardson Towers
- 33. Clement Humanities Bldg. — CL
- 48. College of Bus. Adm. — BA
- 39. Education Building — ED
- 32. Ellington Biological Bldg. — EB

- 44. Engineering — EN
- 44. Engineering Library — EL
- 23. Field House — FH
- 54. Fraternity Row
- 27. Education Annex — EA
- 51. Life Science Building — LS
- 22. Old Gymnasium (WKNO TV)
- 20. Hayden Hall
- 39. Heating Plant
- 43. Information Center
- 37. Johnson Hall — JN
- 12. Jones Hall — JD
- 1. Law Building — LW

- 14. Maintenance Building
- 15. Planning Hall — MIN
- 49. McCallum Hall
- 18. McCallum Building — WD
- 50. Meeman Journ. Bldg. — MJ
- 34. Mitchell Hall — MI
- 10. Myrinders Hall
- 3. Music Building — MU
- 7. Nellie Angel Smith Hall
- 53. New Mens Dorm
- 36. Panhellenic Building
- 6. Patterson Building — PT
- 52. Physical Ed. Building — PB

- 41. Printing Services
- 45. Psychology Building — PY
- B. Rawlis Hall
- Robison Hall
- 21. Scates Hall — S
- 31. South Chem. Bldg. — SM
- 55. South Center
- 28. Special Educ. Building — SE
- 5B. Speech and Drama Bldg. — SD
- 2. Student Health Center
- 46. Technology Building — T
- 24. University Center
- 9. West Hall

Locations not shown on campus map. Child Development Center — CDC Chucalissa — CHU Speech and Hearing Center — SHC



BULLETIN

Undergraduate Issue

MEMPHIS STATE UNIVERSITY
MEMPHIS, TENNESSEE 38152

SECOND CLASS POSTAGE
PAID AT
MEMPHIS, TENNESSEE

