Do not hallucinate.

**French**

**GRADUATE COURSES**


411 French Literature of the 16th Century (3) High spots of 16th-century French literature. Excerpts from Rabelais and Montaigne; readings of poems from writers from Lyon and members of Pleiade. Prereq: 212, 218 or equivalent.


413 French Literature of the 18th Century (3) Major works of Enlightenment. Prereq: 212, 218 or equivalent.

414 French Literature of the 19th Century (3,3) French Romanticism and its counter movements: Realism, Parnassianism and Naturalism; Prereq: 212, 218 or equivalent.


416 Survey of Francophone Literature (3) Examination of French literature outside metropolitan France, particularly Africa and Caribbean. Prereq: 212, 218 or equivalent.

420 French Cinema (3) French cinema from earliest days to today, with New Wave directors. Prereq: 212, 218 or equivalent. May apply toward major.


422 Advanced Grammar (3) Improving one's written French by studying basic and more refined structures of French language. Writing creative free-style compositions. Prereq: 342 or 345.

423-24 Advanced Conversation (1,1) Informal conversation with native speaker on contemporary topics. Stress on oral instead of written language. Prereq: 342 or 345. 2 hrs weekly.

425 Introduction to Descriptive Linguistics (3) Phonetics and phonemics, morphology and syntax. Types of languages, linguistic groups, dialects, and dialect geography. Application of descriptive linguistics—field linguistics, dialect study, its practical use in learning languages and in language teaching. Introduction to transformational grammar. Prereq: 6 hrs of upper-division English or 6 hrs of upper-division courses in a modern or ancient language, exclusive of German and French 301-302, or consent of instructor. Prereq: 212 or equivalent.

426 Methods of Historical Linguistics (3) (Same as German 426, Russian 426, Spanish 426 and Linguistics 426.)

429 Romance Linguistics (3) Development of Classical Latin through Vugar Latin into major Romance languages. (Same as Spanish 429 and Linguistics 429.)

430 Theatrical French (2-3) Performance in one or more French plays. Prereq: 212, 218 or equivalent and consent of instructor. May apply toward major.

431 Highlights of French Civilization (3) Survey of French civilization from the Gauls to World War II. Historical events, daily life, all forms of arts. Prereq: 212, 218 or equivalent.

432 Contemporary French Culture (3) French contemporary civilization and culture since World War II. Problems, trends, and organization of French society today. Prereq: 212, 218 or equivalent.

434 Literature of Quebec (3) Survey of literature of Quebec as well as French literature connected with North America. Readings include explorer and missionary works, such as Voyages of Champlain and Journals of Jesuits, and literature of contemporary Quebec. Prereq: Intermediate French or equivalent.

500 Thesis (1-15) P/NP only. E

501 Techniques in Literary Analysis (2) Required for M.A. program. Intensive course in exegesis of a text, a close stylistic analysis of a text representative of different eras and of different genres.

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during a given semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

512 Teaching a Foreign Language (3) Practical application of methods for teaching and evaluating basic language skills and foreign language skills, and cultural aspects through seminars, demonstrations, peer teaching, and observation of foreign language classes. Required of all M.A. and Ph.D students holding Graduate Teaching Assistantships, except those whose previous training or experience warrants their being excused by department.

515-16 Bibliography and Methods of Research (2,2) Survey of critical research tools and scholarly contributions in French literature and language. Practical exercises on compiling of scholarly data.

521-22 Old French (3,3) Medieval French language and literature through history and development of Old French. Close reading of major texts from medieval genres, hagiography, epic, romance, lyric poetry, drama.

531 French Literature of the Renaissance (3) Literature of the first half of 16th century, Rabelais and other prose writers, humanists, and poetry of Marot, Lyonnais group, and young Pleiade.

532 French Literature of the 16th Century II (3) Literature of second half of 16th century, mature works of Pleiade writers and such poets, as d'Avignon and Sponde, Montaigne; writers of scientific works and monumentalists; drama.

541 French Literature of the 17th Century I (3) French poems and prose works of 17th century.

542 French Literature of the 17th Century II (3) Classical French theatre of 17th century.

551-52 French Literature of the 18th Century: The Philosophes (3,3) Textual analysis of works of Voltaire, Diderot, Rousseau, and other major French 18th-century writers.

559 Problems in Linguistics: Romance Languages (3) Maximum 6 hrs with consent of department. (Same as Spanish 559 and Linguistics 559.)


571-72 Trends in Modern French Literature (3,3) In-depth study of some of most revolutionary, challenging poets, novelists, dramatists of 20th century.

581-82 The French Novel (3,3) French Novel from 17th through 20th centuries.

583 Problems in Stylistics (3) Survey of comparative English-French stylistics. Development and improvement of one's written French.

584 Literary Criticism: the Foundations of Romance Criticism (3) Survey of major critics utilized over centuries and applied to various types of literature.

591 Foreign Study (1-15) See page 31.

592 Off-Campus Study (1-15) See page 31.

593 Independent Study (1-15) See page 31. Letter grade only.

594-95 French Directed Readings (3,3)

600 Doctoral Research and Dissertation (3-15) P/NP only.E

621-22-23 Seminar in French Language (3,3,3) 621- Middle Ages, 622-16th Century; 623-17th Century. May be repeated with consent of department. Maximum 6 hrs each.

631-32-33 Seminar in French Literature (3,3,3) 631-18th Century; 632—19th Century; 633-20th Century. May be repeated with consent of department. Maximum 6 hrs each.

**Italian**

**Graduate Courses**

401 Dante and Medieval Culture (3) Introduction to significance of this great Italian writer. Prereq: 212 or consent of instructor.

402 Petrarch and Boccaccio (3) Prereq: 212 or consent of instructor.

403-04 Literature of the Rinascimento (3.3) From Pulp to Tasso, Quattrocento and Cinquecento. Prereq: 212 or consent of instructor.

405 Modern Italian Poetry (3) From Pascoli to Montale. Prereq: Italian 212 or consent of instructor.

406 The Modern Italian Novel (3) From Manzoni to Calvino. Prereq: 212 or consent of instructor.

409 Directed Readings (3)

421 Italian Literature and Cinema (3) Italian literature and cinema from 1930 to present focusing on literary works translated into English and adapted into film. Investigation of relationship between literature and cinema and achievement of greater understanding of Italian culture. Films in Italian with English subtitles. (Same as Cinema Studies 421.)

510-11 Readings in Italian Literature: Topics vary. May be repeated with consent of department.

512-13 Special Topics (3,3) Topics vary. May be repeated with consent of department.

591 Foreign Study (1-15) See page 31.

592 Off-Campus Study (1-15) See page 31.

593 Independent Study (1-15) See page 31.

**Portuguese**

**Graduate Courses**

431-32 Directed Readings in Brazilian and Portuguese Literature (3,3) May be repeated with consent of instructor.

591 Foreign Study (1-15) See page 31.

592 Off-Campus Study (1-15) See page 31.

593 Independent Study (1-15) See page 31.
Spanish

GRADUATE COURSES
421 Phonetics (3) Prereq: 212, or 218 or equivalent.
422 Advanced Grammar (3) Finer points of grammatical structures. Required of all majors. Native speakers must receive consent of instructor. Prereq: 212, or 218 or equivalent.
423-24 Advanced Conversation and Composition (3,3) Advanced conversational and written skills in Spanish for pre-professionals.
425 Introduction to Descriptive Linguistics (3) (Same as French 426, German 425, Russian 425, and Linguistics 425s.)
426 Methods of Historical Linguistics (3) (Same as German 426, French 426, Russian 426, and Linguistics 426.)
429 Romance Linguistics (3) (Same as French 429 and German 426, Russian 429 and Linguistics 429.)
431 Spanish Civilization (3) Major social, political, and cultural achievements of Spanish people from origins of their civilization until today. Prereq: 311, 312 or equivalent.
432 Cervantes (3) Selections from Don Quixote and study of shorter Novelas ejemplares. Prereq: 311, 312 or equivalent.
433 Masterpieces of Spanish Literature (3) Selections from both Golden Age and modern period of outstanding works. 425 and 436 Survey from 16th century to 19th century (Garci, Goicoechea, Malles, Goytisolo, Maturana.)
432-36 Survey of Spanish Literature (3,3) Survey of Spanish literature since 1436--Spanish literature since 1700. Prereq: 311, 312.
450 20th-Century Hispanic Theatre (3) Major 20th-century Spanish American dramatists. Prereq: 311, 312 or equivalent.
459 Capstone Colloquium in Spanish (3) Integrative experience. Broad range of issues and topics that affect much of Spanish-speaking world and also involve those who specialize in Hispanic studies. Prereq: 311, 312 or equivalent.
460 Capstone Tutorial in Spanish (1) Independent study supervised closely by faculty member. Prereq: 311, 312, 459 or equivalent.
471 Latin American Civilization (3) Latin America's diverse heritage and major social and political institutions. Prereq: 311, 312 or equivalent.
472 Masterpieces of Spanish American Literature (3) Close reading of selected works by major Spanish American writers, Dario, Paz, Borges, Fuentes and others. Genres and periods vary. Prereq: 311, 312 or equivalent.
473-74 Survey of Spanish American Literature (3,3) 473--Historical survey from Conquest to late 19th century. 474--Major literary movements, writers and works of 20th century. Prereq: 311, 312 or equivalent.
479 Social Protest Literature of Latin American (3) Analysis of literature as means of unmasking social ills within American society. Prereq: 311, 312 or equivalent.
482 Teaching a Foreign Language (3) Practical application of all that has been learned in previous classes of language. Prereq: of all M.A. and Ph.D. students holding Graduate Teaching Assistantships, except those whose previous training or experience warrants their being excused by department.
522 Advanced Communication Skills for Teachers and Other Professionals (3) Advancement of oral and written proficiency in Spanish through extensive use of authentic contemporary materials; class lectures and discussions; oral and written presentations and reports. Especially recommended for graduate students, teachers and other professionals seeking to maintain or enhance high level communicative competency.
531 Old Spanish (3) Old Spanish language and medieval Spanish literature through 13th century.
532 Medieval Spanish Literature (3) Spanish literature of 14th and 15th centuries.
533 Golden Age Prose (3) Wide range of prose fiction in Spain during 16th and 17th centuries: Moorish, picaresque, sentimental, pastoral and exemplary novels, and dialogues.
534 Don Quixote (3)
535 Golden Age Poetry (3) Garcilaso, Fray Luis de Leon, San Juan de la Cruz. Lope de Vega, Quevedo, and Gongora.
542 The Generation of '98 and Ortega (3) Unamuno, A. Machado, Azorin, Valle-Inclan, Benavente, Ortega y Gasset.
543 The 20th-Century Spanish Novel (3) Baroja, Azorin, Valle-Inclan, Perez de Ayala, Cela, Delibes, Goytisolo, Maturana, and at least one present-day novelist.
544 Modern Spanish Poetry (3) (From Becquer, Unamuno, A. Machado, Jimenez, Lorca, Guinon, Alexaindre, and a contemporary, Celaya.
547 Modern Spanish Drama (3) Major playwrights of 20th-century Spain.
550 Techniques of Literary Analysis and Research Methods (3) Theoretical and critical essays on various techniques of literary analysis, Exploration of bibliographical and research materials.
551 Special Topics in Spanish or Spanish American Literature (3) May be repeated. Maximum 8 hrs.
552 Directed Readings (3)
559 Problems in Linguistics: Romance Languages (3) (Same as French 553 and Linguistics 559.)
561 Spanish American Literature to 1880 (3) Selected works of important writers from colonial period and 19th century up to Modernism.
573 The Spanish American Novel: Chile and the River Plate Nations (3) Novels from Chile, Argentina, Uruguay and Paraguay. Modern world.
576 Contemporary Spanish American Poetry (3) Major poets in Spanish American from post-modernismo to present day.
577 Spanish American Drama (3) Major playwrights of 20th-century Spanish America.
579 The Spanish American Short Story (3) Short story by major writers in Spanish America from Romanticism to present day, theories and criticism of genre.
591 Foreign Study (1-15) See page 31.
592 Off-Campus Study (1-15) See page 31.
593 Independent Study (1-15) See page 31. Letter grade or S/NC.

600 Doctoral Research and Dissertation (3-15) P/NP only. E
621-22 Seminar in Spanish Literature (3,3) Topics vary, required of all students. May be repeated with consent of department. Maximum 9 hrs.
631-32 Seminar in Spanish American Literature (3,3) Topics vary, may be repeated with consent of department. Maximum 9 hrs.

Rural Practice

(College of Veterinary Medicine)

MAJOR

VETERINARY MEDICINE

DEGREE

VETERINARY MEDICINE

D. O. Goble, Interim Head

Professors:

Barron, H. T., D.V.M. -- Texas A&M
Grau, W. H., Jr., V.M.D. -- Pennsylvania
Hall, R. F., D.V.M. -- Illinois
Hepkes, F. M., D.V.M. -- Georgia
Shires, G. M., M.R.C.V.S. -- Pretoria

Associate Professors:

Blackford, J. T., D.V.M. -- Colorado State
Geiser, D. R., D.V.M. -- Illinois
Goble, D. O., D.V.M. -- Kansas State
Held, J. P., D.V.M. -- Berne
Henton, J. E., D.V.M. -- Michigan State
Kerr, L. A., D.V.M. -- Oklahoma State
Linnabary, R. D., D.V.M. -- Ohio State
Pohrbach, B. W., V.M.D. -- Johns Hopkins
Toal, R. L., D.V.M. -- Georgia

Assistant Professors:

Adair, H. S., D.V.M. -- Auburn
Andrews, F., D.V.M. -- Washington State
Lastrimer, F. G., D.V.M. -- Ohio State
Olcowy, T. W. J., D.V.M., Ph.D. -- Guelph
Welborn, M. G., D.V.M. -- Louisiana State

Residents:

Korenek, N. L., D.V.M. -- Louisiana State
Matthews, H. K., D.V.M. -- Ohio State
Sommardahl, C. S., D.V.M. -- Louisiana State
Tuckler, R. L., D.V.M. -- California (Davis)
Wan, P. Y., D.V.M. -- Georgia

Interns:

Moffatt, D. A., D.V.M. -- Prince Edward
Whitaker, T. B., D.V.M. -- Tuskegee

See Veterinary Medicine for Program Description.

GRADUATE COURSES

500 Thesis (1-15) P/NP only. E
501 Special Topics in Large Animal Medicine and Surgery (1-4) May be repeated. Maximum 6 hrs. E
502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E
600 Doctoral Research and Dissertation (3-15) P/NP only. E
Social Work
(College of Social Work)

MAJOR DEGREES
Social Work ........................................ M.S.S.W.,
M.S.S.W.-M.Div., M.S.S.W.-M.P.A., Ph.D.

Eunice Shatz, Dean

Professors:
Bloch, M. H. (Emeritus), M.S. Ohio State
Bonovich, Robert C. (Emeritus), D.S.W. Washington (St. Louis)
Fryer, Gideon W. (Emeritus), Ed.D. Columbia
Glisson, C. A., Ph.D. Washington (St. Louis)
Granger, Ben P., Ph.D. Brandeis
Hirayama, H., D.S.W. Pennsylvania
Kronick, Jane, Ph.D. Yale
McLaran, G. (Emeritus), M.S.S.W. Tennessee
Mullins, M. Kate, Ph.D. Chicago
Noe, Roger M., D.S.W. Tulane
Orten, J. D., D.S.W. Alabama
Rubenstein, H., Ph.D. Chicago
Shatz, Eunice, Ph.D. Brandeis
Wachter, Ann R. (Emeritus), M.S.S.W. Tennessee

Associate Professors:
Avery, R. S., Ph.D. Brandeis
Bell, W. J., D.S.W. Tulane
Cetingok, M., Ph.D. Washington (St. Louis)
Chapin, J. W., Ph.D. Peabody
Cruthirds, G. Thomas, D.S.W. Tulane
Fayer, C., Ph.D. Michigan
Jennings, J. Ph.D. Michigan
Moses, A. E., D.S.W. California
Spicuzza, Frank, M.S.S.W. Tennessee
Tate, Nellie P., Ph.D. Brandeis
Vaughn, H. H., Ed.D. Memphis State

Assistant Professors:
Campbell, P. M., D.S.W. Alabama
Collier, J. C., M.S.W. Tulane
Fiene, Judith, Ph.D. Tennessee

Field Practice Coordinators:
Betz, Phyllis (Knoxville), M.S.S.W. -Tennessee
Harris, Joyce (Nashville, M.S.S.W. -Tennessee
Pomerantz, Edward (Memphis), M.S.W. -Barr

THE MASTER'S PROGRAM

The Master of Science in Social Work program prepares social workers to provide professional leadership in: 1) the direct provision of social work services and 2) social welfare administration and planning. These objectives are met through a curriculum requiring of all students a professional foundation and a concentration in either social work treatment or social welfare administration and planning.

Admission Requirements

Application to the Master's program is based on the following requirements:
1. A Bachelor's degree from an accredited college or university with appropriate preparation in the social sciences. At least three-fourths of the applicant's undergraduate work should be in the social sciences, humanities, physical sciences, and other liberal arts subjects. Those with other academic backgrounds should request consultation regarding ways in which they might be admitted.
2. A grade-point average of 2.5 on a 4.0 scale, with preference given to applicants with 3.0 and above. Applicants with less than a 2.5 may be considered for provisional admission on the basis of supplemental evidence of ability to perform at a satisfactory level.
3. Personal qualifications acceptable for entrance into the professional practice of social work.

Preference is given to applicants with a B average in undergraduate work and substantial preparation in the social sciences. Applications should be filed no later than March 1 for the year in which admission is desired.

Advanced Standing

The University of Tennessee College of Social Work has an advanced standing program. Admission to advanced standing requires: (1) a B.S.W. from an accredited program, (2) an overall undergraduate GPA of 3.0 or greater, and (3) successful completion of all areas of an examination covering the five foundation areas.

Students admitted into advanced standing are required to complete a minimum of 30 hours of study in either of the college's concentrations - social work treatment or social welfare administration and planning. These students will follow the curriculum and meet all requirements of the concentration during three semesters of study in the program.

Specific information about the advanced standing program is available from the college. Application for admission to the advanced standing program is through the regular admission process.

Extended Study

Planned part-time programs are available in all three branches of the college. Admission requirements are the same as for full-time study. Coursework can be completed over a three- or four-year period. One year of the student's period of study must be on a full-time basis.

Financial Aid

Students may apply directly to the University's Financial Aid Office for assistance such as the National Direct Student Loan or the Work-Study Program. Other stipends are administered by the college and awarded on the basis of financial need. Applications for these funds must be made to the Branch of the College the student will attend. A student must first apply for University assistance, since College funds are considered supplementary to those of the University. Additional information about College stipends may be obtained from the College of Social Work.

General Requirements

1. A minimum of 54 semester credit hours including a) completion of foundation courses and field practice (15 hours), b) the course Social Work with Oppressed Populations (2 hours), and c) at least five courses (15 hours)

and three semesters of field practice (16 hours) in the social work treatment concentration or at least four courses (12 hours) and three semesters of field practice (16 hours) in the social welfare administration and planning concentration.
2. Students may select a thesis or non-thesis option. Those students pursuing the thesis option receive 6 credit hours for successful completion of a thesis.
3. Successful completion of a comprehensive exam or thesis defense.
4. An overall GPA of 3.0 or better on all graded courses and satisfactory performance in field.

The Professional Foundation Curriculum

The foundation curriculum is a 15-semester hour sequence of five basic areas required of all students before entering either of the concentration programs. As the initial phase of the educational program, the foundation curriculum contributes to the process of professional identification while presenting a comprehensive and broad knowledge base from which to operate in the future as practitioners, supervisors, administrators, and planners.

Upon completion of the foundation curriculum (at the beginning of the second semester), students select a concentration in either social work treatment or social welfare administration and planning.

Social Work Treatment: The social work treatment concentration provides the educational basis for practice with individuals, families, and groups in order to enhance their social functioning, ameliorate problems, and prevent social dysfunction. The concentration provides knowledge of theory and methodology basic to individual, family, and group methods applicable in the treatment of diverse client problems.

Social Welfare Administration and Planning: The social welfare administration and planning concentration provides the educational basis for leadership in the design, implementation, and administration of effective human service programs at local, regional, and state levels. This concentration emphasizes theory and skills related to administration and planning, and permits considerable flexibility in tailoring a program to fit the student's individual interests, capabilities, and career goals.

Field Practice

Field instruction is a critical component of the student's first- and second-year programs. Through cooperation with a wide range of social agencies and human service programs throughout Tennessee, the college is able to provide field placements in a variety of social work practice areas. The faculty works closely with the placement agencies and the field instructors to ensure that students have quality field practice experiences, meeting the objectives of the core curriculum and the concentration.

The college uses a concurrent class and field plan. Students are in field two days per week during the first year and three days per week in the second year.

First-year agency placements are selected to provide practice experiences related to the foundation curriculum content and beginning concentration. Within the placement, each student's experiences are planned and designed according to educational objectives.

Second-year placements are selected according to the student's area of concentration.
individual career interests, and educational needs. The student should coordinate with the field practice coordinator and the educational committee in selection of the second-year placement. The second-year field placement experience focuses on the integration of social work knowledge and skills, and emphasizes the acquisition and development of practice skills.

Students are responsible for meeting the requirements of their placement agencies in terms of office hours and workload coverage. This responsibility takes precedence over scheduled University breaks and may result in variations in holidays and office hours for the student.

Transfer Credits
Coursework equivalent to the first year of the Master's program, completed in another accredited graduate social work program, is usually accepted toward degree requirements. Applicants must meet the admission requirements of The Graduate School and the College of Social Work. Transfer courses must be approved as equivalent to required and/or elective courses taken for graduate credit and passed with a grade of B or better. An S (earned on an S/NC system) for the field practicum is also accepted. In addition, transfer courses must be part of an otherwise satisfactory graduate program (B average) and be approved by the dean. This coursework must be completed within the six-year period prior to the receipt of the degree.

A maximum of 6 semester credits from work earned in disciplines other than social work may be transferred as elective credits. The student's academic committee must approve the request and the transfer credit must meet Graduate School requirements.

Proficiency Examination
Students in the Master's program may earn a maximum of nine hours by proficiency examination, with the exception of field practice coursework. Students interested in proficiency examinations are referred to The Graduate School statement describing the procedure for applying for examination.

DUAL M.S.S.W./M.P.A. PROGRAM
The Department of Political Science and the College of Social Work offer a dual degree program leading to the conferral of both the Master of Science in Social Work and the Master of Public Administration degrees. In this program, the M.P.A. and M.S.S.W. degrees can be earned on a full-time basis in five consecutive terms rather than seven to eight terms.

Admission
Applicants for the M.S.S.W./M.P.A. program must apply to each of the colleges of Social Work and to the Department of Political Science. In addition, applications from dual degree students must be reviewed and approved by the dual degree committee that is responsible for overseeing the program. It is anticipated that some students may apply to the dual degree program before they matriculate in either the M.S.S.W. or the M.P.A. program. Students already enrolled in one program will also be permitted to apply, but must do so prior to the end of the first year of study.

Curriculum
Students in the dual degree program are required to take a set of core courses from each curriculum, but the program is designed to be flexible, providing students the opportunity to develop special areas of competence. For the dual degree program, a minimum of 65 hours is required (35 hours must be in social work and 30 hours must be in public administration). Admission to candidacy will be completed separately for each degree.

A comprehensive examination is required in each discipline for students receiving the dual degrees. A faculty committee from Public Administration and one from Social Work will write and grade the respective examination.

Dual degree students who withdraw from the program before completion of the requirements for both degrees will not receive credit toward either the M.P.A. or the M.S.S.W. degree for courses taken in the other program, except as such courses qualify for credit toward a degree independent of the dual degree program.

Financial Aid
Students may apply or financial aid to both the College of Social Work and the Department of Political Science. Normally, students will not receive funding from both programs concurrently.

DUAL M.S.S.W./M.DIV. PROGRAM
Vanderbilt University Divinity School and the College of Social Work, Nashville Branch, offer a dual degree program leading to the Master of Science in Social Work and the Master of Divinity degrees. Both degrees can be earned on a full-time basis in eight consecutive semesters rather than ten if completed separately.

Admission
Students interested in the dual degree must apply and be admitted to each university, giving notice on both applications of their interest in the joint program. Students already enrolled in one of the schools may apply to the joint degree program if they are in their first year of study. All dual degree applicants will be reviewed and approved by a dual degree committee that is responsible for overseeing the program.

Curriculum
Students take 72 semester hours at the Divinity School and 48 semester hours at the College of Social Work. In the first two years, students are required to take one full year of coursework (27 to 30 hours) at each school. In the third year, students are enrolled in both institutions and take twelve hours of coursework at the Divinity School and 16 hours (6 hours of class work and 12 hours of field practicum) at the College of Social Work. In the Spring semester of the third year, students take a comprehensive examination at the College of Social Work. The M.S.S.W. degree is awarded at the end of the third year. Students spend the entire fourth year at the Divinity School, completing requirements for the M.Div. degree.

Tuition and Financial Aid
Students pay to each institution the tuition charges and fees appropriate to their registration. Financial aid, if awarded, will be handled separately by each school and will apply only to credit being earned at the school providing the aid.

THE DOCTORAL PROGRAM
The College of Social Work offers the Doctor of Philosophy with a major in Social Work.

The focus of social work education at the doctoral level is to foster the development of an attitude of scientific inquiry, knowledge of the scientific method, ability to extend the knowledge base of social work practice, and effective participation in leadership roles in social work education, research, and practice.

The emphasis of the doctoral program is upon:

- The analysis of direct intervention and social administration and of the interrelationships among each of them and their social policy, organizational, and community contexts.
- Research-based knowledge to inform and guide social work practice, social policy, and social welfare program development.
- Master's social work/social welfare experience.
- An S (earned on an S/NC system) for the field practicum is also accepted.
- Dual degree students who withdraw from the program before completion of the requirements for both degrees will not receive credit toward either the M.P.A. or the M.S.S.W. degree for courses taken in the other program, except as such courses qualify for credit toward a degree independent of the dual degree program.

Admission Requirements
The Ph.D. program is designed for students who have completed a Master's degree in an accredited school of social work and have post-Master's social work practical experience. Applicants who do not meet these requirements but believe they have equivalent credentials should contact the Chair of Ph.D. program for further information regarding admissions criteria.

General Requirements
1. A minimum of 60 semester hours beyond the Master's degree including a) completion of 21 credits of required coursework, b) completion of 15 credits of advanced electives, at least 12 of which are taken outside the department, and c) completion of at least 24 credits of dissertation research.
2. Successful completion of qualifying and comprehensive examinations.
3. Completion and defense of the dissertation.

Curriculum
The curriculum of the Ph.D. program consists of foundation coursework, electives, and dissertation research. The foundation curriculum consists of 21 hours of coursework in the history and philosophy of social work, issues in direct service and administration and planning, areas of practice, and research methodology and statistics. Upon this foundation, students and their academic committees develop a plan of study consisting of coursework in Social Work and other departments of the University.

Typically, the foundation curriculum is completed and elective coursework began during the first year of study, the elective requirement is completed and dissertation research begun in the second year of study, and dissertation research is continued in the third year of study. While it is generally expected that the coursework will be completed on a full-time basis, dissertation research can be completed on a planned part-time basis.
Specific courses required are 601, 602, 612, 613, 640, and Statistics 531 and 532 or any two graduate level statistics courses approved by the Doctoral Program Chair.

Examinations
All doctoral students are required to pass a qualifying examination and a comprehensive examination. The qualifying examination covers the dissertation topic. In case of failure of either examination, the student may request a retake. The result of the second examination is final.

Financial Aid
Financial aid is available to qualified students in the form of fellowships, scholarships, and teaching and research assistantships. Graduate assistantships and other forms of assistance are awarded on the basis of merit and interest to applicants who are accepted into the Ph.D. program.

ACADEMIC COMMON MARKET
An agreement among southern states for sharing graduate programs allows legal residents of some states to enroll in certain programs at UT Knoxville in an in-state tuition basis. The M.S.S.W. and Ph.D. programs in Social Work are available to residents of the state of Arkansas; the Ph.D. to residents of Kentucky or West Virginia. Additional information may be obtained from the Residency Assistant in the Office of Graduate Admissions and Records.

GRADUATE COURSES
Graduate students majoring in fields other than social work are admitted to certain social work courses with the approval of the College of Social Work and the student's major professor.

500 Thesis (1-15) F/NP only, E
502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only, E
508 Practicum in Social Work Research (3-6) Supervised practice in application of research methods to social work. Prereq: 510 and consent of faculty conducting investigation. May be repeated. Maximum 6 hrs. S/NC only, E
509 Graduate Seminar in Public Health (1-5) Same as Public Health 509, Nutrition 509, Physical Education 509 and Nursing 595.
510 Social Work Research (3) Research methodology applied to problems in social welfare. Problem formulation; research design; ethics; instrument construction; data collection, analysis, and reporting; statistical procedures; research reporting; and evaluation and utilization of research. Prereq: Admission to college or consent of instructor. F
512 Social Work Practice (3) Basic theory, values, and methodology generic to social work practice at various levels. Materials presented from ecological perspective. Assessment, planning, communication, and evaluation skills. Classroom and skills laboratory experiences. Prereq: Admission to college or consent of instructor. F
514 Human Behavior and Social Environment (3) Theories pertaining to individual, family, small group, and community in context of functions, structure, roles, and processes. Systems conceptualized along functional-dysfunctional and normal-deviant continuum: stress, development and maturation. Open systems approach to understanding of biologic, psychological, sociologic, and social variables, implications of culture, race, ethnicity, and gender. Prereq: Admission to college or consent of instructor.
516 Social Welfare Policy and Services (3) Development of contemporary social policy at local, state, national, and international levels. Contribution of social work professionals to formal policy-setting processes. Prereq: Consent of instructor. S
521 Health and Community Services (3) Theories of complex organizations applied to social welfare service delivery settings. Prereq: Admission to college or consent of instructor. F
518 Social Work with Oppressed Populations (2) Social work's professional role in working with individuals and groups in American society whose oppression is based upon distinguishing characteristics: age, sex, economic class, religion, sexual preference, handicap, conditions, ethnicity and race. Prereq: Admission to college or consent of instructor. Sp
520 Social Work Treatment with Individuals and Families (3) Nature and process of practice with individuals and families in helping them resolve or cope with problems of living. Working with disadvantaged clients and enhancing client competence. Prereq: Foundation or consent of instructor. Sp
522 Social Work Treatment with Groups (3) Theories and practice of social work with small groups. Treatment groups, task groups. Prereq: Foundation or consent of instructor.
524 Psychopathology and Social Deviance (3) Theories of and recent research in etiology of psychic dysfunction and social variance. Categorical approach to psychopathology. Prereq: Foundation or consent of instructor.
526 Research for Assessment of Social Work Treatment (3) Application of research methods for assessment of social work treatment. Prereq: Foundation, 520 or 522, or consent of instructor. Sp
530 Seminar in Social Work Treatment (2-3) Topics in theory and practice of social work treatment with individuals, couples, families, and groups. Prereq: Foundation or consent of instructor. Required for group treatment: 522. May be repeated. Maximum 6 hrs.
531 Family Therapy in Social Work Practice (3) Major family therapy models, perspectives on family dynamics and interaction, and techniques of treatment and their application to family from diverse social and cultural backgrounds. Prereq: Foundation and 520, or consent of instructor.
532 Short-Term Treatment (3) Theory and practice of planned short term treatment, emergency treatment, and crisis intervention. Prereq: Foundation and 520, or consent of instructor.
533 Social Work Treatment with Couples (3) Theories regarding contemporary marriage styles, problem areas in relationships, and application of treatment methods and skills to problem resolution. Prereq: Foundation and 520, or consent of instructor.
534 Social Work Treatment with Children and Adolescents (3) Examination of various treatment modalities for assessing and treating children and adolescents. Prereq: 520 and 522, or consent of instructor.
540 Administration of Social Welfare Programs and Services (3) Analysis of organizations and provision of services to diverse Models of social welfare administration, their historical and philosophical perspectives, context for designing organizational structure and processes, planning and managing agency policies and programs, and management of service delivery systems. Prereq: Foundation or consent of instructor.
542 Financial Management and Resource Development in Social Welfare Administration (3) Administrative decision-making related to financial planning and resource development. Models of social welfare administration and organization knowledge and skills in accounting, budgeting and auditing, techniques in fundraising, grant writing, market- ing and other financial management and resource development techniques. Prereq: Foundation or consent of instructor.
544 Management Information Systems and Evaluative Research (3) Management information systems designed for social work organizations, application of computer technology, and methodology; and utilization for organizational decision-making and policy setting. Prereq: Foundation or consent of instructor.
546 Human Resources Development in Social Welfare Administration (3) Administrative and leadership skills required for management and development of human resources in social welfare agency, systems conceptualized along functional-dysfunctional and normal-deviant continuum: stress, development and maturation. Prereq: Foundation or consent of instructor.
550 Seminar in Social Welfare Administration and Planning (2-3) Areas and issues relating to methods and techniques of social welfare administration and planning. Prereq: Foundation or consent of instructor. May be repeated. Maximum 6 hrs.
551 Seminar in Social Welfare (2-3) Social welfare problem areas of agencies and supervision or planning or instruction of. May be repeated. Maximum 6 hrs.
552 Community Organization (3) Locality development, social planning and social action as practice models for development of resources to meet human needs. Prereq: Foundation or consent of instructor.
553 Social Planning (3) Theory, philosophy, implications for programs for planning social change in diverse fields of service. Prereq: Foundation or consent of instructor.
554 Social Policy Analysis (3) Techniques for assessing social, political, and economic implications of social policy proposals. Prereq: Foundation or consent of instructor.
560 Seminar in Human Behavior and Social Environment (2-3) Areas of current importance in understanding human behavior and social environment. Specific theories, research and issues. Prereq: Foundation or consent of instructor. May be repeated. Maximum 6 hrs.
561 Supervision and Consultation in Social Work (3) Roles, techniques, and practices of social work supervision and consultation. Prereq: Foundation or consent of instructor.
562 Social Work and Black Families (3) Historical and contemporary theories about black family systems. Development of frameworks to address and plan for families within service delivery systems. Prereq: Foundation or consent of instructor.
563 Social Aspects of Illness (3) Social, economic, and emotional problems arising from or related to illness and disability and their implications for social work. Prereq: Foundation or consent of instructor.
564 Substance Abuse (3) Survey and analysis of social, cultural, medical and psychological factors underlying, with prevention and treatment of alcoholism and other drug abuse; recent research and treatment innovations. Prereq: Foundation or consent of instructor.
565 Roles and Status of Women (3) Causes and consequences of women's social and economic roles and statuses in American society. Variations in women's experiences by race and ethnicity, class, age, and life cycle. Prereq: Foundation or consent of instruction.
566 Social Gerontology (3) Psychological, physiological and social aspects of aging. Major social policies and programs. Prereq: Foundation or consent of instructor.
570 Advanced Standing (12) Twelve-week program providing qualified students with intensive academic and field experience to enter final year of graduate study upon successful completion of term. S/NC only. Su
581 Field Practice (3) Instruction and supervision in social work practice. Prereq or coreq: 512. S/NC only. E
582 Field Practice (3) Instruction and supervision in social work practice, student's selected concentration in social work treatment or social welfare administration and planning. Prereq: Foundation. S/NC only. Sp
583 Field Practice (6) Instruction and supervision in social work treatment or social welfare administration and planning. Prereq: 581. S/NC only. Su
Sociology (College of Liberal Arts)

MAJOR DEGREES

Sociology ........................................ M.A., Ph.D.

Thomas C. Hood, Head

Professors:
Bernt, D. Michael, Ph.D. ............. Michigan State University
Black, John A., Ph.D. .................. Iowa State University
Clelland, Donald C., Ph.D. .......... Michigan State University
Hastings, Donald W., Ph.D. ......... Massachusetts Institute of Technology
Hood, Thomas C., Ph.D. ............ Duke University
Ploch, Donald R., Ph.D. ............ North Carolina State University
Shefter, Neal, Ph.D. ..................... Illinois State University
Wallace, Samuel E., Ph.D. .......... Minnesota State University

Associate Professors:
Benson, Michael L., Ph.D. ......... Illinois State University
Kurth, Suzanne B., Ph.D. ............. Illinois University (Chicago)
Perrin, Robert G., Ph.D. .......... British Columbia University

Assistant Professors:
Cable, Sherry, Ph.D. ................. Penn State University
Gaventa, John P., Ph.D. .......... Oxford University

The Sociology Department offers graduate study leading to the Master of Arts and the Doctor of Philosophy. The M.A. program includes a thesis and non-thesis option. The graduate program has concentrations in criminology, energy, environment, and resource policy; and political economy. The criminology concentration includes 505, 551, 653, and 655. The energy, environment and resource policy concentration includes 560, 563, 681, 682, 683, and 665. The political economy concentration includes 504, 540, 541, 643, 644, and 645. Both the Master's and the doctoral program allow for the construction of individualized programs of study. Detailed information may be obtained from the Director of Graduate Studies in Sociology. All incoming students will be advised by the Director of Graduate Studies.

ADMISSION REQUIREMENTS

1. Acceptable scores on the general Graduate Record Examination (GRE scores in sociology are required but not required).
2. Three letters of recommendation (forms may be obtained from the department).
3. Completion of the appropriate previous degree (baccaulaurate, preferably with a major in one of the social sciences for the M.A. program; Master's degree in one of the social sciences for the doctoral program).

THE MASTER'S PROGRAM

Thesis Option
A minimum of 30 hours beyond the baccalaureate degree, including 24 hours of coursework and 6 hours of Thesis 500, is required. Students must complete Sociology 521, 531, 535, and one foundation course (504, 505, or 560). At or near the end of all coursework, the student must take an oral examination on course materials and thesis. The examination will be administered by the student's committee.

Non-Thesis Option
A minimum of 30 hours of coursework is required, including Sociology 521, 531, 535, and one of the following: 504, 505, or 560. Sociology 534, 536, and 622 are recommended. Sociology courses at the 400 level may be taken with the approval of the student's committee. A student's plan of study should cover one of the following approaches: Plan 1, 6 hours in one of the department's concentrations and 6 hours in a second area, including areas outside the department, subject to the approval of the student's committee. Plan 2, 12 hours in a special area of study approved by the student's committee and the department's Graduate Program Committee. Students are encouraged to prepare a paper synthesizing existing research on the concentration(s). Students who incorporate supervised field experience in their programs are encouraged to prepare a report based on those experiences that demonstrates their understanding of research, theory, and report writing. All students must take final written and oral examinations that include questions on their general coursework in theory and methods and on their special areas of study.

Subject to approval by the student's committee, up to 12 hours may be taken in courses outside the department for either program.

THE DOCTORAL PROGRAM

Coursework
A twenty-four hours of coursework beyond the Master's degree are required (exclusive of S/C credits). Twelve hours of course credit in Sociology at the 600 level are required. Students who enter the program without the course required for the M.A. degree (521, 531, 535) or their equivalents must take them as remedial work which does not apply to their residence. Students must complete Sociology 622; 534, 563, 633, or 636; and 536 or another advanced course in statistics. Completion of 9 hours in each of two concentrations is encouraged. A student who cannot achieve his/her educational goals within the department's concentrations may construct an individualized course of study subject to the approval of the student's doctoral committee and the Graduate Program Committee. Sociology courses at the 600 level may not be taken without the consent of the student's advisor and the Graduate Program Committee. Course may be taken in related fields without petitioning the Graduate Program Committee for approval. The student's program may include a minor or cognate field.

Comprehensive Examinations
Written examinations in four areas are required (theory, research methodology, and two substantive areas). Doctoral students are eligible to take the theory and methodology examinations whenever offered. Substantive examinations may be taken upon completion of theory and methodology examinations. Detailed information on examinations and examination options (generalist, specialist, andcollateralist) may be obtained from the department.

Dissertation and Final Examination
A dissertation based on original research must be completed (24 hours). The candidate must pass an oral defense of the dissertation, including the theory and methodology related to the research, in accordance with the deadlines specified by The Graduate School.

ACADEMIC COMMON MARKET
An agreement among southern states for sharing graduate programs allows legal residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. The Ph.D. program in Sociology is available to residents of the state of South Carolina. Additional information may be obtained from the Graduate Admissions and Records Office.

GRADUATE COURSES

405 Sociology of Sport (3) Social meaning, organization, and process of sport. Prereq: 291 or consent of instructor. (Same as Physical Education 405.)
413 Formal Organization (3) Analysis of organizational models, typologies, and theories; hierarchies of authority; communication; interpersonal relations in work settings; organizational change.
414 Sociology of Health Care (3) Organization of health care facilities, staff-patient relationships, demographic characteristics, and prevalence of disease.
415 Sociology of Aging (3) How roles and statuses change with age in relation to major social institutions;
impact that rapidly increasing number of older people has on society.

446 The Modern World System (3) Critical examination of capitalist world-system as social system, its coherence, boundaries, regions, member groups, cleavages, and patterns of conflict. Analysis of who gets what, why, and how in global political economy.


455 Society and Law (3) How laws and legal policies are affected by social change, social impact of legal sanctions, relations between law and social justice.

459 Organizational and Corporate Crime (3) Analysis of crime and deviance committed by organizations. Case studies of corporate and organizational crime, organizational dynamics of crime, theories of corporate crime, and organized responses to this type of crime by governmental regulatory agencies.

462 Populations (3) Demographic factors and social structure; trends in fertility, mortality, population growth, migration, distribution, and composition; population policy.

464 Urban Ecology (3) Relation of humans to their urban environment: conservation and use of appropriate techniques. (Same as Urban Studies 464.)

471 Sociolinguistics (3) (Same as English 471 and Linguistics 471.)

480 Diffusion of Agricultural Technology (3) (Same as Rural Sociology 480.)

503 Thesis (1-15) P/NP only. E

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only.

504 Sociological Foundations of Political Economy (3) Survey of contemporary sociological theories of political economy, sources of political and economic power, etc.

505 Foundations of Criminology (3) Critical overview of contemporary developments in criminology, theories of crime causation and theories of responses to crime. Prerequisite: PreReq: 350 or equivalent.

507 Foundations of Social Psychology (3) Current and classical theoretical perspectives in social psychology.

510 Teaching Sociology (3) Art and craft of teaching sociology from curricular considerations through teaching as a profession. May be repeated. Maximum 6 hrs.

521 Sociological Theory I (3) Assessment of what sociological theory is; its major figures and their approaches to understanding society.

531 Research Methods in Sociology (3) Research design, measurement, sampling, quantitative and qualitative data collection techniques, data, reduction, and analysis.

534 Advanced Sociological Analysis (3) Underlying assumptions and logical procedures used by sociologists in formulating explanations; foundations of sociological research strategies and techniques.

535-536 Statistical Analysis in Sociology I, II (3,3) Should be taken in sequence. 535 - Symbolic logic, set theory, linear regression, non-parametric analysis, log-linear analysis, advanced regression. Prerequisite: Introduction to Statistics or consent of instructor.

540 Occupations (3) Occupations in relation to individuals and society, technology, economic stratification, and social organizations.

541 Collective Behavior, Social Movements, Social Change (3) Basic theory and research on conditions of social changes and patterns in human institutions and efforts of collectives to change existing society.

542 Sociological Aspects of Sports and Physical Education (3) (Same as Physical Education 542.)

543 Sociology of Development (3) Sociological theories and studies of development: modernization, colonialism, dependency; comparative impact of various developmental paths upon selected aspects of social structure and change.

551 Delinquency and the Social Structure (3) How study of delinquency and juvenile justice is affected by changing structures of childhood and adolescence, changing demographic and institutional influences, and changing views about responsibility and punishment.

560 Environmental Sociology (3) Systematic treatment of current research in environmental sociology. Social impact analysis and conflicts over environmental issues.

563 Demographic Techniques (3) Standard rates and measures of demographic variables, life table analysis, increment-decrement models, and survey techniques of population and organizational structure, job satisfaction, motivation, morale and interpersonal phenomena.

580 Advanced Rural Sociology (3) (Same as Rural Sociology 580.)

585 Seminar in Gerontology (1) (Same as Human Ecology 585, Educational and Counseling Psychology 585, Nursing 585, Psychology 585, Public Health 585, Physical Education 585, and Social Work 585.)

591 Foreign Study (1-15) See page 31.

592 Off-Campus Study (1-15) See page 31.

593 Independent Study (1-15) See page 31.

594 Social Theories of Sport (3) (Same as Physical Education 516.)

595 Special Topics in Rural Sociology (1-3) (Same as Rural Sociology 593.)

599 Readings (3) Selected topics. May be repeated. Maximum 6 hrs.

600 Doctoral Research and Dissertation (3-15) P/NP only. E

611 Complex Organization (3) Selected topics in formal organizations; cases and incident process analysis. Examines strategies for dealing with organizational change, authority hierarchies, communication patterns, technological and organizational structure, job satisfaction, motivation, morale and interpersonal phenomena.

622 Sociological Theory II (3) Distinct schools of sociological theory and contributions of their principal exponents.

629 Supplementary Readings in Sociological Theory (3) Individual guidance. Preparation for comprehensive examination. Prerequisite: Consent of instructor. S/NC only.

633 Survey Design and Analysis (3) Systematic exploration of survey problems through student participation in design and analysis of survey. Prerequisite: PreReq: 531 or consent of instructor. (Same as Child and Family Studies 633.)

636 Field Research (3) Research experience in selected field sites using techniques of interviewing, participation, observation, and other methods of field research. Prerequisite: PreReq: 531 or consent of instructor.

639 Supplementary Readings in Methodology (3) Individually arranged. Preparation for comprehensive examination. Prerequisite: Consent of department. S/NC only.

643 Class Analysis (3) Critical analysis of theories and research on class structure and conflict.

645 Political Sociology (3) Critical examination of theories of state and political processes.

646 Advanced Studies in Political Economy (3) Critical seminar. Prerequisite: PreReq: 504 or consent of instructor. May be repeated. Maximum 6 hrs.

653 Sociology of Law (3) Intensive examination of selected topics in sociology of law. Prerequisite: PreReq: 505 or consent of instructor.


661 Theory and Methods of Human Ecology (3) Historical and contemporary studies of interaction between humans and their environment. Prerequisite: Consent of instructor.

652 Urban and Regional Sociology (3) Historical and contemporary studies of South and Appalachian region with comparisons to other regions.

663 Advanced Studies in Population (3) Current theoretical issues and methodological advances in fertility, mortality, and migration in modern or historical demography. Prerequisite: PreReq: 563 or consent of instructor. May be repeated. Maximum 6 hrs.

665 Advanced Studies in Energy, Environment and Natural Resources Policy (3) Critical seminar covering particular line of research and theory with in area. Prerequisite: Consent of instructor. May be repeated. Maximum 6 hrs.

675 Advanced Studies in Social Psychology (3) Selected contemporary research issues related to social psychological theories. Prerequisite: PreReq: 541 or consent of instructor. May be repeated. Maximum 6 hrs.

695 Advanced Special Topics (3) Topic of specific interest or student-initiated courses that will not be regularly offered. Prerequisite: Consent of department. May be repeated. Maximum 6 hrs.

999 Tutorials in Advanced Topics (3) Individual instruction. Prerequisite: Consent of department. May be repeated. Maximum 6 hrs.

Special Programs

Spanish

See Romance Languages

Special Programs (College of Liberal Arts)

James R. Stokely Institute

Lynn Champion, Director

Enrollment in the following courses is restricted to participants in the James R. Stokely Institute, and requires the Program Director's approval. Tennessee elementary and secondary school teachers who are certified and have a minimum of five years teaching experience may apply to participate in the Institute. Selection of participants is based on academic ability, references, an application essay and an interview of final candidates.

GRADUATE COURSES

The Stokely Institute curriculum is comprised of three seminars which are offered once annually during summer term. The seminars are interdisciplinary in focus and are team-taught by faculty representing the humanities and fine arts, the natural sciences, and the social sciences. The content of the three seminars embraces the three major areas of inquiry in the liberal arts, with an emphasis on understanding the characteristic methods and goals of each mode of inquiry and the kind of knowledge each mode yields. The seminar participants are encouraged to think critically and to reflect on the intellectual and practical implications of their learning.

510 Humanities Perspectives in the Liberal Arts (2) Seminar on nature of inquiry in humanities. Emphasis on nature and special forms of human experience and its interpretation through study of formative texts and critical figures.

520 Natural Science Perspectives in the Liberal Arts (2) Seminar on nature of inquiry in physical and biological sciences. Emphasis on the history of science, critical figures in
THE MASTER'S PROGRAMS

Special Education

The department offers two tracks for the Master's degree in Special Education for all areas of concentration. Track 1 is for students who are already licensed to teach in special education or a related field or those who are seeking a Master's degree without teacher licensure. Track 2 is for students seeking initial licensure. Thesis and non-thesis options are available for both tracks.

An area of concentration may be selected from the following: early childhood special education, general special education, or education of the hearing impaired.

Track 1 students select coursework based on their area of concentration as described below. Some coursework may apply toward State of Tennessee endorsements (add-on certificates). The non-thesis option requires 36 hours, including a minimum of 18 in special education, and a final written and oral comprehensive examination. The thesis option requires 30 hours including 6 hours of Thesis 500.

Track 2 students select coursework based on a specified course of study required for teacher licensure and options for areas of specialization and/or cognates as described below. The non-thesis option requires 24 hours of internship year coursework and an additional 12 hours prescribed by the student's committee, for a total of 36 hours. The thesis option requires 6 additional hours of Thesis 500 for a total of 42 hours.

Students completing a program of study in the early childhood special education concentration area are qualified to be preschool teachers, home-based interventionists, educational consultants, and family service coordinators. The curriculum is interdepartmental in nature, with most of the coursework offered by the departments of Special Services Education and the Department of Child and Family Studies. Additional department offerings may be included through elective hours.

Students completing a program of study in the general special education concentration area are qualified to be teachers and/or consultants in a variety of special education programs providing services to people certified as mentally retarded, learning disabled, emotionally disturbed, gifted, physically disabled, multiply disabled, and socially or emotionally disturbed.

General special education majors, in conjunction with their committees, select one or more specializations for their program of study. Six to nine hours of coursework in the designated areas should be taken. Approved specializations include affective/motivational approaches, assessment/diagnosis, cognitive education, early childhood, gifted education, rehabilitation, and/or technology. Students also may select a cognate of three to six hours of coursework taken outside the department.

Students completing a program of study in the education of the hearing impaired concentration area are qualified to teach in public or residential schools for the hearing impaired. Graduates are eligible for both Council on Education of the Deaf (CED) certification and Tennessee state certification. Internships (student teaching) may be completed at the Tennessee School for the Deaf, in mainstream programs in the state or in programs for the hearing impaired in North Carolina, Kentucky, Georgia, Virginia and the District of Columbia.

Rehabilitation Counseling

The Rehabilitation Counseling program enables counselors to acquire competencies which facilitate the movement of a person with disabilities toward optimal functioning in the three broad areas of living, learning, and working. The rehabilitation counselor works primarily with adults who are being served in various public and private settings. Students should expect to spend four semesters, including summer, in classwork and internship. The program requires 54 semester hours. Both a thesis and non-thesis option are available.

ADDITIONAL PROGRAMS

Under the sponsorship of the Office of Special Education and Rehabilitation Services (R.S.A.), specialized institutes for the preparation of professionals to adapt their skills toward services to hearing impaired and deaf people are provided. A federally supported Educational Consortium provides staff development and technical assistance for post-secondary programs serving hearing impaired students in a 13-state southeastern region. Details concerning each program can be obtained by writing to the department head.

ACADEMIC COMMON MARKET

An agreement among southern states for sharing graduate programs allows residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. In the M.S. program in Special Education is available to residents of the states of Kentucky or West Virginia; the M.S. in Rehabilitation Counseling is available to residents of Louisiana. Additional information may be obtained from the Residency Assistant in the Office of Graduate Admissions and Records.

Special Education

GRADUATE COURSES

410 Pre-Internship Seminar (1) Orientation, objectives and policies of internship program. Must be completed term immediately preceding internship. Prereq: Admission to teacher education program. S/N only. Sp,Su

421 Field Experience in Modified Programs (3) Practicum in teaching in modified programs: planning, implementing and evaluating instruction. Prereq: Special Education Principles and Special Education Strategies, Admission to Teacher Education and Curriculum and Instruction 422, Coreq: 420, S/N only.

423 Communication Processes for the Hearing Impaired (3) Expressive and receptive vocabulary development in sign communication. Fingerspelling and educational applications of sign language.

424 Nature of Hearing Impairments (3) Basic principles of audiology: anatomy and physiology of hearing; nature and causes of hearing loss; methods and instrumentation for assessment of hearing level; interpretation of audiologic services to medical and other rehabilitative disciplines.

425 Introduction to the Psychology and Education of the Hearing Impaired (3) Primarily for those planning to teach hearing impaired. An overview of research related to psychology, social adjustment, communication methods, language development and education of hearing impaired. Survey of literature. Visits to programs.
430 Psychology and Education of Students with Moderate/Severe Disabilities (3) Nature and characteristics of persons with moderate/severe disabilities and educational strategies appropriate for those persons. Prereq: Special Education Principles and Special Education Strategies. Admission to Teacher Education and Curriculum and Instruction 422.

431 Field Experience in Comprehensive Programs (3) Experience for Special Education Principles and Special Education Strategies. Admission to Teacher Education and Curriculum and Instruction 422. Coreq: 430. S/NC on.

433 Clinical Practice in Speech-Language Pathology 1(1-4) (Same as Audiology and Speech Pathology 433.)

434 Clinical Practice in Speech-Language Pathology II 1(1-4) (Same as Audiology and Speech Pathology 434.)

440 Voice Disorders (3) (Same as Audiology and Speech Pathology 440.)

454 Education of the Gifted and Talented Children (3) Orientation to psychometric and behavioral studies of giftedness. Analysis of past and present school practices in reference to curriculum and program implementation. Sp

456 Speech and Language Basis of Learning Disabilities (3) Normal communication development; understanding of speech and language impairments in school-age children; integration of oral/ written language in the early childhood curriculum, especially for high incidence special education students.

470 Psychology of the Exceptional Child (3) Varieties of exceptional children; general characteristics and educational needs; implications of developmental variations for functioning as adults. Opportunity to expand study upon particular exceptionalism. Enrollment limited to non-special education majors.

471 Internship I: Special Education (3-15) Intensive experience designed to allow student to practice art and science of teaching exceptional children under supervision of experienced teachers. Prereq: 480.

473 Audiology II (3) (Same as Audiology and Speech Pathology 473.)

481 Policies, Procedures, and Practices in Special Education (3) Comprehensive review of Federal and State laws and regulations which direct implementation of special education programs in all public and private facilities and agencies. Multiple service delivery models. Sp

482 Speech and Language Services in the Schools (3) Organization and implementation of speech and language programs in schools. IEP process as it affects assessment, case-selection, and programming for students ages 4-21, parent and materials, group intervention and classroom consultation.

483 Clinical Practice in Communication Disorders in Schools (3) Supervised practice with children with communication disorders. Prereq: 433, 434 (60-100 clinical hours). 482.

484 Internship with Hearing Impaired Children (6) Supervised practicum with preschool, day school and residential students.

500 Thesis (1-15) P/NP only. E

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and for faculty time before degree is completed. May not be used toward degree requirement. May be repeated. S/NC or letter grade.


504 Clinical Experience in Teaching and Supervision of Exceptional Children (3-9) Placement in educational settings. May be repeated for credit. S/NC or letter grade.

506 Internships in Teaching in Special Education and Rehabilitation (3-15) Placement in professional settings in public schools or agencies under supervision of master practitioners. Enrollment limited to those in fifth-year program. S/NC only.

509 Vocational Guidance and Career Planning With Hearing Impaired (3) Utilization of psychological, educational, social and vocational, diagnostic materials and resources appropriate for hearing impaired persons to provide guidance in career decisions and individualized rehabilitation plan.

510 Advanced Educational and Clinical Procedures (3-6) Integration of advanced educational and clinical procedures. Knowledge for implementing instruction and for consulting with other persons in treatment of exceptional individuals. May be repeated. Maximum 6 hrs.

519 Speech Development of Hearing Impaired (4) Theories of speech development, approaches in training perception and production of speech, and aural habilitation.Practicum.

521 Language Development of Hearing Impaired I (3) Language problems of hearing impaired contrasted with scope and sequence of normal language development. Formal linguistic systems used to describe language development problems.


524 Linguistics in the Education of the Hearing Impaired I (3) Recent research and development in theoretical and applied linguistics. Prereq: 521, 522, 523, 529.

525 Manual Communication (3) American Sign Language (ASL) and culture of American deaf community. Acquisition of basic linguistic properties of ASL, cultural differences between hearing and deaf community, and vocabulary. Prereq: 524. Coreq: Prior sign language experience or consent of instructor.

526 Advanced Sign Language (3) Intermediate ASL stressing fluency of expressive and receptive communication with deaf people and structure and history of language. Prereq: 525 or equivalent.


529 Teaching Reading to the Hearing Impaired (3) Principles of methodology to teach the prereading hearing impaired student. Practice in preparation of developmentally appropriate reading materials. Methods which assist in integrating hearing impaired students in regular reading curricula and materials. Prereq: 521.

530 Orientation to Rehabilitation (3) History, philosophy, legal and economic bases, current issues, and practices in public and private rehabilitation programs. Qualifications of service providers. Assessment, plan development, and provision of services to people who have disabilities and vocational handicaps. Identification, mobilization, and utilization of rehabilitation resources.

532 Caseload Management in Rehabilitation (3) Techniques for implementation of specialized case loads in Federal-State vocational rehabilitation agencies, private rehabilitation companies, and public or private vocational rehabilitation services. Analysis of appropriate industrial, management models related to rehabilitation programs.

533 Job Analysis, Development, and Placement (3) Determining employment-readiness of people with disabilities, identifying appropriate jobs for selected clients, and assisting clients in seeking, obtaining, and retaining employment. Policies and procedures involved in management and operation of rehabilitation centers, marketing, and employer-serving techniques; legislation impacting job placement; supported work; and use of vocational services.

535 Vocational Evaluation: Statistical Methods (3) Process principles and techniques used to determine vocational assets and liabilities to people with disabilities. Functional analysis of biographical and interview data; selection and application of relevant psychometric instruments; integration of statistical data into diagnostic reports; application of computer-generated reporting systems.

537 Vocational Evaluation: Clinical Methods (3) Process, principles, and techniques used to assist individuals in determining and understanding their own work backgrounds and vocational aptitudes. Use of occupational exploration programs and work samples; application of situational tasks, job tryouts, and simulated work experiences in vocational evaluation. Clinical interpretation of data through formal staff conference, vocational counseling, and report writing.

539 Transition from School to Work (3) Development of programs and procedures to facilitate adjustment of exceptional persons to independent living. Evolving perspectives of work, attributes of effective programs, and interface between school-based programs and rehabilitation agencies.

541 Psychosocial Aspects of Exceptionalities (3) Psychosocial impact of exceptionality on person and family. Reaction to loss, coping with disability, and societal rehabilitation.

543 Medical Aspects of Disability (3) Etiology and clinical symptoms related to disabling conditions served by special education and rehabilitation personnel. Relevant measures for assessment of disabilities and handicaps. Skills necessary to communicate with lay and professional persons.

545 The Rehabilitation Interview (3) Interview as used in assessment and treatment of people who have disabilities and vocational handicaps.

547 Practicum in Rehabilitation (3) Supervised experience in area of rehabilitation; application of concepts, principles, and skills. Prereq: Consent of instructor.

549 Internship in Rehabilitation Counseling (12) Supervised practice in rehabilitation counseling. Full time clinical experience for second-year students (600 clock hrs required).

551 Issues and Theories in Cognitive Education for Disabled Learners (3) History of cognitive education theories; implications for disabled learners; effects of philosophy, attitudes, and expectations, perspectives on learning disabilities, characteristics of learners with cognitive deficiencies. Coreq: 552 or consent of instructor.

552 Instructional Systems in Cognitive Education for Disabled Learners (3) Informal and formal assessment approaches, data collection, instructional programming and decision-making related to nature and needs of disabled learners. Prereq or coreq: 551 or consent of instructor.

553 Assessment of Exceptional Students (3) Current issues related to assessment; advanced study of evaluation models for special education; dynamic and innovative assessment approaches; advanced study of application to educational programming: basic statistics and application in assessment.

554 Assessment in Early Childhood Special Education for Disabled Learners (3) Use of informal and formal assessment of handicapped infants and young children: screening, identification, diagnosis, placement and programming assessment issues. Prereq: 553 or consent of instructor.

555 Characteristics of Affective/Motivational Functioning in Children with Disabilities (3) Definition, differences, identification and treatment of affective and motivational development in disabled young- sters. Comparison to normal development and that of children labeled developmentally disabled. Focused on appropriate formal and informal assessments of handicapped infants and young children: screening, identification, diagnosis, placement and programming assessment issues. Prereq or coreq: 555 or consent of instructor.

556 Instructional Systems for Affective/Motivational Education for Children with Disabilities (3) Educational strategies and models of instruction; simulation, demonstration, and media. Teaching techniques, materials, and teacher/pupil/group interactions. Therapeutic forms of education through art, music, role play, puppetry, bird identification, and group interactions. Prereq or coreq: 556 or consent of instructor.

557 Neuromuscular and Health Disorders: Educational Implications (3) Neuromotor impairments, physical/cognitive disability, and communication disorders. Study of instructional techniques and adaptations.
561 Psychology of Mental Retardation (3) Psychological, social, legal, and ethical issues relative to mental retardation.

562 Instructional Systems for the Mentally Retarded (3) Specific developmental, behavioral, and social-technological curricula for exceptionalities and gifted and talented students. Prereq: 244 and consent of instructor.


566 Instructional Systems for the Gifted and Talented (3) Instructional methods and systems evaluated in terms of effectiveness in various educational environments. Prereq or coreq: 564 or consent of instructor.

568 Early Intervention for Handicapped Children (3) Exploration of characteristics and needs of young handicapped children. Program and curriculum development of early intervention system.

575 Creative Problem-Solving Strategies for Special Educators (3) Techniques for solving problems encountered by special educators in any setting.

579 Special Topics (1-3) Prereq: Admission to graduate program. May be repeated. Maximum 9 hrs. S/N/C or letter grade.

585 Seminar in Research Techniques in Special Education (3) Evaluation of appropriate research methodologies with handicapped populations. Prereq: 390 or consent of instructor.


590 Application of Microcomputer Technology in Special Education and Vocational Rehabilitation (3) Application of computer technology with all categories of exceptionalities and across all chronological and functioning age ranges. Microcomputer adaptive software, special switch access, authoring systems, telecommunication, and strategies for cognitive development.

591 Clinical Studies (4) Relationship between educational theory and applications during internship. Research project, development of portfolio, and capstone experience.

592 Assistive Technology in Special Education and Vocational Rehabilitation (3) Technology as applied to needs of school age and post-secondary age students/clients. Delivery of assistive technology services; software programs and assistive devices; delivery systems, interdisciplinary evaluation/planning, and funding issues.

593 Directed Independent Study (1-15) Tutorial in specialized area. Prereq: Consent of instructor. May be repeated. Maximum 15 hrs. S/N/C or letter grade.

596 Clinical Experience in Assessment and Instruction (3) Academic remediation applied in laboratory setting; tasks related to teaching: assessment, preparation of lessons, and delivery of instruction. Coreq: 553. S/N/C or letter grade.

596 Doctoral Research and Dissertation (3-15) P/NP only. May be repeated. Maximum 96 hrs. S/N/C or letter grade.

601 Seminar in Educational Theories in Special Education and Rehabilitation (3) Education theories: education and rehabilitation of exceptional persons. Theoretical applications in educational settings. Prereq: Admission to doctoral program or consent of instructor.

602 Seminar in Social Processes in Special Education and Rehabilitation (3) Social phenomena which influence impact of disability on person and on significant others. Implications for habilitation. Prereq: Admission to doctoral program or consent of instructor.

603 Seminar in Research Special Education and Rehabilitation (3) Development and implementation of research and independent research studies. Research proposals. Prereq. 9 hrs of research core and consent of instructor.

610 Internship in College Teaching and Supervision (3-9) Supervised practice in college teaching and supervision. Prereq: Admission to doctoral program or consent of instructor. May be repeated. Maximum 9 hrs. S/N/C only.

620 Internship in Research in Special Education and Rehabilitation (3-6) Placement with professional experience in theoretical and applied research. Prereq: 9 hrs in statistical and research methods. May be repeated. Maximum 12 hrs. S/N/C only.

630 Internship in Institutional Leadership in Special Education and Rehabilitation (3-9) Advanced level field experiences under supervision of practitioner. Prereq: Consent of instructor. May be repeated. Maximum 9 hrs. S/N/C only.

679 Special Topics (1-3) Prereq: Admission to doctoral program. May be repeated. Maximum 9 hrs. S/N/C or letter grade.

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**Speech Communication**

*College of Liberal Arts*

Faye D. Julian, Acting Head

Professors:

Julian, Faye D., Ph.D. Tennessee
Lester, Lorayne W., Ed.D. Tennessee
Yeomans, G. Allan (Emeritus), Ph.D.

Associate Professors:

Ambrester, M. L., Ph.D. Ohio State
Buckley, J. E., Ph.D. Northwestern
Cook, N. C., M.A. Alabama
Glenn, Robert W., Ph.D. Northwestern

Assistant Professor:

Ambler, R. S., Ph.D. Ohio State
Haas, John W., Ph.D. Kentucky

Graduate courses in Speech Communication provide opportunities for students in a variety of disciplines to investigate how oral language can affect changes in the knowledge, the understanding, the ideas, the attitudes, or the behavior of other human beings.

**GRADUATE COURSES**

420 Communication and Conflict (3) Communication as significant factor in development, management, and resolution of conflict at interpersonal, small group, organizational or societal levels.

430 Organizational Communication (3) Organizational setting and variables of communication process that affect quality of human interaction both within and outside the organizational setting.

450 History of Rhetorical Theory (3) Western rhetorical theory from Plato to present.

465 Studies in Rhetorical History and Criticism (3) May be repeated. Maximum 6 hrs.

470 Rhetoric of the Women's Rights Movement (3) Historical and critical study of public address in campaign for women's rights from 1830's to present. (Same as Women's Studies 466.)

470 Theories of Argumentation (3) Studies of conceptually based arguments from classical to contemporary theorists. Prereq: Consent of instructor.

500 Thesis (1-15) P/NP only. May be repeated. Maximum 6 hrs. (Same as Women's Studies 500.)

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. Maximum 6 hrs.

505 Fundamentals of Graduate Research in Speech Communication (3) Techniques of historical, descriptive, and experimental research.

510 Studies in Persuasion (3) Prereq: 310 or equivalent or consent of instructor.

530 Topics in Group and Interpersonal Communication (3) Prereq: 230, 235, 420, or consent of instructor. May be repeated. Maximum 6 hrs.

550 Communication Theory (3) Analysis of contemporary theories of human communication, similarities and differences of communication processes in intrapersonal, interpersonal, small group, organizational, and public communication. Prereq: 350 or equivalent or consent of instructor.

560 Studies in Rhetoric (3) Content varies. Prereq: 460 or consent of instructor. May be repeated with consent of department. Maximum 9 hrs.

570 Legal and Ethical Issues of Communication (3) Communication rights and responsibilities. Prereq: Consent of instructor.

575 Directed the Forensics Program (3) Philosophy and methods of directing competitive and extracurricular forensic activities in high schools and colleges: competitive and noncompetitive approaches to directing debate, oral interpretation and public speaking events.

589 Theory and Production Techniques of Oral Interpretation (3) Literary, psychological, communicative, and aesthetic approaches to collection, adaptation, and oral presentation of literature. Prereq: 380, 385, 480, or consent of instructor.

590 Directed Reading and Research (3) May be repeated. Maximum 6 hrs.

591 Foreign Study (1-15) See page 31.

592 Off-Campus Study (1-15) See page 31.

593 Independent Study (1-15) See page 31.

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**Statistics**

*College of Business Administration and Intercollegiate Program*

MAJORS

**DEGREES**

Statistics

M.S. Business Administration

MBA

David L. Sylvester, Head

Professors:

Downing, Darryl J. (Adjunct), Ph.D. Florida
McLean, Robert A., Ph.D. Purdue
Parr, William C., Ph.D. Southern Methodist
Phlipot, John W., Ph.D. VPI
Sanders, William L. (Adjunct), Ph.D.
Thigpen, Charles C., Ph.D. VPI

Associate Professors:

Guess, Frank M., Ph.D. Florida State
Leinaker, Mary C., Ph.D. Kentuck
Leon, Ramon V., Ph.D. Florida State
Mee, Robert W., Ph.D. Iowa State
McGuire, Stephen S. (Adjunct), Ph.D.

Ranney, Gipsie B., (Adjunct), Ph.D. NC State
Admission Requirements

General admission requirements for The Graduate School are stated beginning on page 13. Applicants for Statistics must submit results of the Graduate Record Examination (GRE) general portion, although GMAT exam scores may be substituted. Applicants for the statistics program must have completed at least two years of college-level mathematics, including the calculus of several variables and matrix algebra, and be proficient in a computer language. Applicants whose native language is other than English must submit results of the Test of English as a Foreign Language (TOEFL).

Curriculum

A minimum of 33 credit hours must be completed for the Master's degree. Required of all students are 6 hours in statistical methods, 6 hours in statistical theory, 1 hour in statistical computing, and 3 hours in either supervised consulting or internship. Students must complete a minimum of 21 hours in approved statistics courses, exclusive of consulting, internship, independent study, or thesis.

Thesis or Independent Study

The thesis option for the Master's degree requires the student to complete 6 hours for the thesis. Alternatively, the non-thesis option requires a minimum of 2 hours for an independent study project.

Comprehensive Examination

Students must pass a two-part written comprehensive examination covering 1) theory and 2) methods. Upon failing either part of the examination, the student may retake it. The result of the second examination is final. For students writing a thesis, this examination must be passed before the thesis is defended.

INTERCOLLEGIATE GRADUATE STATISTICS PROGRAM

The Intercollegiate Graduate Statistics Program is a formal University of Tennessee academic program established to recognize graduate students for completing the requirements of a major or minor in Statistics as part of their degrees. The program enables a student to obtain the M.S. in Statistics simultaneously with the Ph.D. or Ed.D. in another department. The program also enables a student to obtain a Statistics minor along with the M.S., Ph.D., or Ed.D. in another department. The program is administered by an executive committee with advisory input from the program faculty. The program is open to well-qualified graduate students in all departments which have an approved Statistics minor and/or joint major curriculum offered through the program.

Curriculum requirements for the Statistics minor include courses taught by the Statistics Department and/or other departments. The student's committee must include a faculty member of the Statistics Department at the rank of Assistant Professor or above. The student's formal examination procedure as established by the sponsoring department must include an appropriate section on statistics. Successful completion of the Statistics minor/major is recognized by appropriate documentation on the student's transcript. Students who do not complete all requirements for the Statistics major/minor will still receive academic credit for statistics courses they have successfully completed.

Degree Program

**Courses taken for the minor or the Master's degree in Statistics must be approved by the Program Executive Committee.**

**Courses taken for the minor or the Master's degree in Statistics may fulfill requirements for the doctoral degree.**

MINIMUM HOURS

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S. in Statistics, minor outside of Statistics</td>
<td>21</td>
</tr>
<tr>
<td>M.S. outside of Statistics, minor in Statistics</td>
<td>8</td>
</tr>
<tr>
<td>M.S. outside of Statistics</td>
<td></td>
</tr>
<tr>
<td>Usual separate degree requirements for Statistics</td>
<td></td>
</tr>
<tr>
<td>M.S. in Statistics</td>
<td>16</td>
</tr>
<tr>
<td>Doctorate outside of Statistics,**</td>
<td></td>
</tr>
<tr>
<td>M.S. in Statistics, dual degrees</td>
<td>24</td>
</tr>
<tr>
<td><strong>Courses taken for the minor or the Master's degree in Statistics may fulfill requirements for the doctoral degree.</strong></td>
<td></td>
</tr>
</tbody>
</table>

BUSINESS ADMINISTRATION CONCENTRATION

For complete listing of MBA program requirements, see Business Administration. 

MBA Concentration: Statistics.

Minimum course requirements are 571, 566, 572 with prerequisite of 556.
ACADEMIC STANDARDS

A graduate student in the College of Business Administration whose grade-point average falls below 3.0 will be placed on probation. A student on probation will be dropped from the program if his or her grade-point average is 3.0 or higher at the end of the probationary period. The probationary period is defined as the next semester's coursework as established by the degree program for full-time students and the next two semesters' coursework as established by the degree program for part-time students.

GRADUATE COURSES

411 Introduction to Statistical Computing (3) Use of computer operating system commands and packaged programs for statistical analysis and file management. Not available for credit for statistics majors. Prereq: 201 or 251.

461 Applied Regression Analysis (3) Linear regression and correlation, multiple regression, polynomial regression, selection of variables, use of dummy variables, analysis of residuals. Logistic regression and its applications. Use of standard computer packages. Major writing requirement. Prereq: 6 hrs of statistics or consent of instructor. Note: Not counted toward a graduate major or minor in statistics. F, S, P

462 Analysis of Variance and Experimental Design (3) Variance techniques for single and multifactor models. Post hoc procedures. Design considerations for completely randomized, randomized block, factorial, hierarchical and split-plot experiments. Major writing requirement. Prereq: Probability and Statistics for Scientists and Engineers. F or S

500 Thesis (1-15) P/NP only. E

501 Statistics for Management (3) Fundamentals of descriptive and inferential statistics. Introduction to probability models, statistical inference: statistical process control, correlations and regression, basic time series. Open only to M.B.A. students. Prereq: Consent of instructor. F, S

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or facilities of the College of Business. Student may be dropped toward degree requirements. May be repeated. S/NC only. E

531 Statistical Methods for the Social Sciences I (3) Probability distributions, sampling distributions, parametric and nonparametric estimation and hypothesis testing, simple linear regression and correlation. Credited not for both 531 and 537. Prereq: 1 yr college mathematics and 1 course in statistics.

532 Statistical Methods for the Social Sciences II (3) Multiple regression, use of dummy variables, general linear model, analysis of variance and covariance. Prereq 531.


538 Statistics for Research in the Behavioral and Biological Sciences II (3) General linear model as applied to multiple regression and analysis of variance. Diagnostic and influence techniques. One-way, factorial, blocked, and nested designs, preplanned versus post-hoc contrasts. Random factors and repeated measures. Prereq: 537.

561 Introduction to Computing for Data Management and Analyzing Datasets (3) Using an operating environment for beginning graduate students; use of operating system commands, system editor, utility programs and major statistics packages, e.g., SAS, for data entry and editing, file management, and statistical analysis in interactive and batch environments. IBM, CMS, and MVS. Use of micro-computers for data analysis. Coreq: 531, 537, or 571, or consent of instructor.


564 Theory of Statistical Inference (3) Introductory theory underlying common statistical procedures of hypothesis testing and estimation. Prereq 563.

566 Statistical Techniques in Industrial Processes (3) Applications of control charts and other statistical techniques in industrial setting. Attributes and variables control charts, process capability analysis, aspects of sampling, statistical tolerancing, estimation of variance components, problems of measurement, special industrial applications. Prereq: 571 or equivalent.


572 Applied Linear Models (3) Simple and multiple regression using matrix algebra and general linear model; polynomial regression, weighted least squares regression, variable selection techniques, multicollinearity, regression diagnostics; general linear model approach to analysis of data from designed experiments. Use of standard computer packages. Prereq: 571 and matrix algebra. Prereq: 531.

573 Design of Experiments (3) One-way ANOVA, multiple range tests, equal and unequal variances, transformations, factorial experiments, completely randomized, split-plot and nested designs, fractional factorials, sequential designs. Prereq: 571.

585 Principles of Statistical Process Management (3) Control charts and other statistical techniques applied to management of business processes. Prereq: Consent of department head.

587 Graduate Seminar (1) Directed readings and active participation in colloquium program of Department of Statistics and/or student's minor program. Prereq: Consent of statistics department director of graduate studies. May be repeated. Maximum 2 hrs. S/NC only.

592 Internship (1-6) Supervised off-campus experiences in the application of statistical techniques and methods in business, industry, or government. Written and oral report. Prereq: 4 courses in graduate-level statistics and statistics department director of graduate studies. May be repeated. Maximum 6 hrs. S/NC only.

593 Independent Study (2-6) Faculty directed readings and investigation of selected topics in probability or statistics. Written report and oral presentation. Prereq: 2 courses in statistics and consent of the statistics department director of graduate studies. May be repeated. Maximum 6 hrs. S/NC or letter grade.

595 Statistical Consulting Practicum (0-6) Supervised practice in statistical consulting under the direction of the professor. Credit, with prerequisites, toward a graduate minor in statistics. May be repeated. Maximum 6 hrs. S/NC or letter grade.

675 Categorical Data Analysis (3) Log-linear analysis of multidimensional contingency tables. Logistic regression. Theory, applications, and use of statistical software. Prereq: 1 yr graduate-level statistics. Regression analysis and analysis of variance and familiarity with CMS or VAX; or consent of instructor.

681 Special Topics in Probability (1-3) Presentation of specialized topics in probability and stochastic processes. May be repeated. Maximum 6 hrs.

683 Special Topics in Statistics (1-3) Presentation of specialized topics in statistics. May be repeated. Maximum 6 hrs.

Technological and Adult Education

(College of Education)

MAJORS

DEGREES

MAJORs

Degree

Technical and Adult Education

M.S.

Vocational-Technical Education

M.S.

S

S

Gerald D. Cheek, Head

Professors:

Cameron, W. A., Ph.D.

Ohio State

Campbell, C. P., Ed.D.

Maryland

Cheek, Gerald D., Ph.D.

Kansas State

Coakley, Carroll B., Ph.D.

Wisconsin

Craig, D. G., Ed.D.

Cornell

Haskell, R. W., Ph.D.

Purdue

Matthews, John I., Ph.D.

Arizona State

Peters, John M., Ed.D.

NC State

Reed, J. L. (Emeritus), M.S.

Oklahoma State

Wagoner, George A. (Emeritus), M.S.

Indiana

Wooden, R. J. (Emeritus), Ph.D.

Ohio State

Associate Professors:

Brewer, Ernest, Ed.D.

Tennessee

Brockett, Ralph, Ph.D.

Syracuse

Hanson, R. Ph.D.

Purdue

Kastrow, Carol, Ed.D.

Tennessee

Ledford, B. J., Ed.D.

Tennessee

Mann, E., Ed.D.

Penn State

Petty, G. C., Ph.D.

Missouri

Radditt, B. J., M.S.

West Virginia

Assistant Professors:

Pierce, R., Ph.D.

Ohio State

Powell, Terrence L., M.S.

Oklahoma

Reynolds, Eunice, Ed.D.

Tennessee

THE MASTER'S PROGRAM

The Department of Technical and Adult Education offers graduate programs leading to the Master of Science with a major in Technological and Adult Education. The program is available with concentrations in adult education, business and marketing education, industrial education, industrial training, and vocational-technical education. The thesis option requires the completion of 33 semester hours including 6 hours of thesis. The non-thesis option requires the completion of 36 hours of coursework.
programs. Staff development, curriculum improvement, and program updating techniques. Prereq: 455 or equivalent. F,Su

552 History and Philosophy of Industrial Education (3) Social, political, and economic events that impact development of industrial education. Philosophical problems: justification, values, principles and concepts of industrial education. Prereq: Consent of instructor. F,Su

553 Planning Technical Education Facilities (3) Preparation of educational specifications, site selection, and construction plans. Prereq: Consent of instructor to other professionals involved in process of planning technical-education facili- ties. Prereq: Consent of instructor. Sp,Su

554 Technical Program Planning (3) Instructional systems attending to analysis, design, development, implementation, and evaluation of trade, technical super- visor and related training. Prereq: Curriculum develop- ment course and consent of instructor. F,Su

555 Curriculum Planning for Industrial Education Programs (3) Developing performance-based, criterion-referenced instructional programs. Prereq: 374 or 554 or consent of instructor. Sp,Su

556 Staff Development Programs (3) Strategies for assessing, planning, and implementing programs for professional development of vocational-technical per- sonnel. Prereq: 551 or consent of instructor. Sp

557 Advanced Methods of Teaching Technical Subject (3) Innovative and effective application of innovative methods and teaching specialized skills and technical information. Diversifying and individualizing teaching techniques. Prereq: 373. Sp,Su

558 Seminar in Industrial Education (1-3) Current issues, innovations, problems associated with technical programs. Prereq: 12 hrs of graduate courses. May be repeated. Maximum 6 hrs. F,Su

559 Evaluation of Technical Training Programs (3) Internal and external evaluation of training programs to maintain quality control and/or to justify revisions. Prereq: 455 and consent of instructor. Sp,Su

571 Supervisory Skills for Improving Industrial Pro- ductivity (3) Philosophy of improving industrial produc- tivity through quality and introduction to basic tools of statistical process control. Deming philosophy, control charting and interpretation, process capability, tech- niques for training hourly workers in quality control, and measurement procedures for quality control. Prereq: Statistics course and consent of instructor. F,Su

572 Advanced Training Methods for Industrial Pro- ductivity (3) Techniques of training hourly workers in use of statistical process control tools. Techniques for involving hourly workers and supervisors in quality as- surance, inventory control, and productivity improve- ment groups. Prereq: 571. Sp,Su

600 Doctoral Research and Dissertation (3-15) P/NP only. E

601 Curriculum Planning in Technological and Adult Education (3) Curriculum theory, models, content, planning evaluation and implementation of specialized program areas. Prereq: 555 or equivalent. Sp,Su

602 Planning and Evaluation of Programs in Techni- cal and Adult Education (3) Techniques utilized in planning, developing, and evaluating instructional pro- grams. Prereq: 500-level planning course and consent of instructor. Sp,Su

604 Seminar in Technological and Adult Education (1) Required 2 consecutive semesters during doctoral residency. May be repeated. Maximum 3 hrs. S/NC only. E

605 Administration and Supervision of Techno- logical and Adult Education (3) Leadership, policy, organization, planning, personnel, student development services, employment, and budgeting relating to vocational technical and adult education at secondary, post-secondary, and higher education levels. Principles, problem solving, and management skills. Administrative theory course and consent of instructor. F,Su

610 Research Development in Technological and Adult Education (3) Proposal development, theoretical background, data collection, analysis, protocol of statis- tics, and evaluation of research in technological and adult education. Prereq: 6 hrs of advanced statistics courses and consent of instructor. Sp,Su.
publishable paper with outside review, or a thesis, 6 hours.

Based on interest and prior background, each student has a choice of the area(s) of emphasis within the field of interior design beyond the core curriculum. Emphases may include professional interior design, historic preservation, history of interior design, environment and behavior, or computer-aided design.

Each student is required to demonstrate competence in individual research in one of the following ways:

**Thesis Option:** Complete a thesis for 6 hours credit. An oral examination will occur upon completion of the program.

**Non-Thesis Option:** Complete a comprehensive design project with acceptable documentation or a publishable paper. To be eligible, the student must have completed 12 hours of graduate credit in interior design with at least a 3.0 GPA. Having met this criteria, the student must present a proposal to the supervisory committee that will include 6 hours of subsequent coursework. This proposal must outline the nature of the project and/or paper and explain the methodological approach. A comprehensive oral and written examination, administered by the committee, will occur upon completion of the program.

**Textiles, Retailing and Consumer Sciences**

The major in Textiles, Retailing and Consumer Sciences has concentrations in Retail and Consumer Sciences and in Textile Science. Requirements are listed below.

A comprehensive oral examination, administered by the thesis committee, will be given upon completion of the thesis research. A non-thesis option is not available.

**Retail and Consumer Sciences**

**Major (Required courses: 510, 511, 550, 582, 590)**

- 19 hours
- Cognate Area
- 6 hours
- Statistics
- 3 hours
- Thesis
- 6 hours
- TOTAL
- 34 hours

**Textile Science**

- RCS 552 3 hours
- Research Methods 3 hours
- TS 590 1 hour
- Textile Science courses 12 hours
- Cognate Area 6 hours
- Statistics 3 hours
- Thesis 6 hours
- TOTAL 34 hours

Note: Students must take a minimum of 9 hours at the 600-level in the College of Human Ecology, exclusive of dissertation. Transfer students with a Master's degree from another institution are required to complete at least 42 hours (including dissertation hours) from UTK.

**ACADEMIC STANDARDS**

1. Evaluation of student progress will normally occur prior to enrollment for thesis hours (or the non-thesis option) and during the second semester of full time enrollment in the program. The review of the student will be undertaken by the faculty with consideration given to factors such as: GPA (minimum 3.0), portfolio evaluation, and demonstrated research capability.

2. If progress or performance is deemed insufficient, the faculty may recommend probation with specific goals set for a specified time or termination.

**ACADEMIC COMMON MARKET**

An agreement among southern states for sharing graduate programs allows legal residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. The M.S. program in Interior Design is available to residents of the states of Kentucky, Louisiana, or Virginia. The M.S. program with a concentration in retail and consumer sciences is available to residents of the state of Mississippi. Additional information may be obtained from the Residency Assistant in the Office of Graduate Admissions and Records. For the Ph.D., see Human Ecology.

**Interior Design**

**GRADUATE COURSES**

- 410 Environment as Code (3) Advanced theoretical issues in considering environment as medium of human communication. Prereq: 200, 400 or consent of instructor.
- 500 Thesis (1-15) P/NP only. E
- 502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/N only. E
- 510 Needs Assessment and Design Programming (3) Use of systematic design methodology and design research methods as part of design problem-solving experience. Lecture and studio. May be repeated. Maximum 6 hrs. Prereq: Admission to graduate program.
- 520 Integrative Interior Design Studio (3) Identification, integration and synthesis of multidisciplinary data input. Advanced programming techniques and design evaluation. Lecture and studio. Prereq: 510, 564, or consent of instructor.
- 531 Research Methods in Historic Preservation (3) Methodology for historic preservation problems in interior design. Prereq: Architecture 403 or consent of instructor.
- 542 Special Topics: History of American Interior Design (3) Philosophical and stylistic movements, America of seventeenth, eighteenth, or nineteenth centuries. Topics vary. Prereq: 475 or consent of instructor. May be repeated. Maximum 9 hrs. F
- 552 Seminar in Interior Design (3) Twentieth-century design concepts, persons, motivation; and creative components leading to visual innovation. Prereq: 470 or consent of instructor.
- 555 Micro-computer Research Applications in Interior Design (3) Advanced micro-computer concepts and applications for research in interior design. Project design and management, optimization of design criteria, programming, schematic design, computer-aided design, advanced spreadsheet and database analysis, and desktop presentation. Prereq: Consent of instructor.
- 564 Environmental Factors in Interior Design (3) Human factors and associated research techniques and design methodologies related to interior architectural environments. Design requirements from anatomy, physiology, anthropometry and social and behavioral sciences. Prereq: 6 hrs behavioral science and 6 hrs natural science, or consent of instructor. Sp
- 570 Facilities Planning (3) Considerations in programming, design, management and operation of specialized facilities: hotels and restaurants, work environments, day care facilities, retailing-consumer interface and environments for elderly.
- 580 Directed Study in Interior Design (1-3) Independent advanced research in selected areas from field of interior design. Prereq: Consent of instructor. May be repeated. Maximum 9 hrs. E
- 581 Directed Study in Historic Preservation (1-3) Independent advanced research in historic preservation relevant for interior design. Prereq: Consent of instructor. May be repeated. Maximum 9 hrs. E
- 582 Directed Study in Historic Design (1-3) Independent advanced research in area of historic stylistic movements in interior design. Prereq: Consent of instructor. May be repeated. Maximum 9 hrs. E
- 584 Directed Study in Environmental Design (1-3) Independent advanced research in environmental design analysis. Prereq: 574 or consent of instructor. May be repeated. Maximum 9 hrs.
- 585 Directed Study in Facilities Planning (1-3) Independent advanced research in facilities management. Prereq: Consent of instructor. May be repeated. Maximum 9 hrs.
- 590 Research Seminar (1-2) S/N only. E
- 600 Dissertation (3-15) P/NP only. E
- 510 Issues in Interior Design (1) Readings, reports, and discussion concerning research and related issues in interior design: history of interior design, his-
tropic preservation, environment and behavior. Registrations on the first of the month are accepted for courses with room, and advanced registration is required for the spring semester. May be repeated. Maximum 9 hrs.


630 Advanced Directed Study in Interior Design (3) Individual study in aspect of interior design culminating in scholarly paper. May be repeated. Maximum 6 hrs.

GRADUATE COURSES

500 Thesis (1-15) P/NP only, E

502 Registration for Use of Facilities (3-15) Required for students not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

510 Retail Strategy and Decision Making (3) Strategy, strategic management and strategic process in retail sector. Analytical decision-making skills in retailing, retail industry structure. International differences in retail systems. Prereq: Retail Management or equivalent. SP

511 International Trade and Retail Analysis (3) International trade and marketing concepts with implications for retail, services, and consumer. Theoretical and applied analysis. International retailing. Current issues. SP

540 Socio-Psychological Aspects of Apparel (3) Apparel and human behavior in social situations. Prereq: 6 hrs or equivalent from sociology and psychology. SP


552 Economics of Textile Complex (3) Economics consideration of U.S. textile complex. Quantitative approaches to industry structure, production, marketing, distribution and institutions within both global and domestic settings. Current and future international issues and implications. Prereq: Calculus III or equivalent, micro economics. FA

562 Research Methods (3) Fundamentals of science method, advancement of science methodology and method of research. Issues and concepts of basic and applied research. Prereq: Statistics 531 or equivalent. SP

590 Research Seminar (1) Research topics in retail and consumer sciences. May be repeated. S/NC only. F,SP

593 Directed Study (1-3) Individual problems in retailing and consumer sciences. Prereq: 9 hrs retailing and consumer sciences graduate coursework. May be repeated. Maximum 9 hrs.

595 Advanced Topics in Textiles and Apparel (1-3) Lecture, group discussion on specialized topics: apparel production management, functional design, hand-capped/elderly, historic costume, historic textiles, international issues, non-wovens, thermals. Prereq: 9 hrs textiles/apparel graduate coursework. May be repeated. Maximum 9 hrs.

600 Dissertation (3-15) P/NP only, E

625 Strategic Managerial Retailing (3) Decision-making orientation that integrates strategic framework components with preparation and analysis of specific retail case situations. Prereq: 510.

641 Retail Consumer Behavior (3) Theories and concepts from social science in relation to ultimate consumer's behavior. Prereq: 6 hrs of sociology and/or psychology or consent of instructor. SP

651 The Consumer and Public Policy (3) Public policy issues within consumer environments. Analysis of past and present policies within economic, social, legal and property frameworks. Implications of consumer issues and policy alternatives. Literature and research focus. Prereq: 550 or consent of instructor.

655 Advanced Topics in Retail and Consumer Sciences (1) Lecture, group discussion: individual research on advanced topics and research areas of current significance to retail and consumer sciences. Prereq: 9 grad eate hours in consumer sciences. May be repeated. Maximum 9 hrs.

658 Advanced Topics in Retail and Consumer Sciences (1) Lecture, group discussion: individual research on advanced topics and research areas of current significance to retail and consumer sciences. Prereq: 9 graduate hours in consumer sciences. May be repeated. Maximum 9 hrs.


595 Advanced Topics in Textiles and Apparel (1-3) Lecture, group discussion on specialized topics: apparel production management, functional design, hand-capped/elderly, historic costume, historic textiles, international issues, non-wovens, thermals. Prereq: 9 hrs textiles/apparel graduate coursework. May be repeated. Maximum 9 hrs.

600 Dissertation (3-15) P/NP only, E

625 Physical Chemistry of Fibers (3) Physical chemistry of fibers and fiber forming polymers; surface chemistry and thermal properties. Prereq: 522, Differential Equations, or equivalent.

626 Physics of Fiber Structures (3) Morphology of polymeric structures; thermal and processing history on mechanical, electrical and chemical properties of fibers. Prereq: 522. Physics: Electricity and Magnetism and Differential Equations or equivalent.

695 Advanced Topics in Textiles and Apparel (3) Lecture, group discussion, individual research on advanced topics and research areas of current significance: future direction, professional issues, theoretical approaches. Prereq: 9 hrs textiles/apparel graduate coursework. May be repeated. Maximum 9 hrs.

Theatre (College of Liberal Arts)

MAJOR

THEATRE

DEGREE

Tom Cooke, Head

Professors:

Cooke, Tom, Ph.D. .................. Florida State 
Cothran, R. M. .................. Wisconsin 
Custer, M., M.F.A .................. Miami (Ohio) 
Fields, R. C., M.A .................. Ohio State 
Garvie, Peter, M.A .................. Cambridge 
Harris, A. J., Ed.D .................. Tennessee 
Mashburn, Robert R., Ph.D. .......... Florida State 
Soper, Paul L. (Emeritus), Ph.D. ........ Cornell

Assistant Professors:

Black, W., M.F.A .................. Illinois 
DaCuier, L. J., M.F.A .................. Tulane 
Schmitt, P., Ph.D. .................. Wisconsin 

Adjunct Faculty:

Arnould, P., M.A .................. Catholic 
Parris-Bailey, L., B.F.A .................. Howard

The Department of Theatre offers the Master of Fine Arts degree in Theatre with area concentrations in acting, directing, playwriting, dramaturgy, scene design, costume design, lighting design and theatre technology. Not all areas of concentration accept applicants every year.

Applicants must have completed undergraduate degree approximately equivalent in requirements to those specified for degrees conferred by The University of Tennessee, Knoxville.

The Graduate Record Examination, three letters of recommendation and interviews with appropriate faculty are required of all applicants. Applicants for admission to M.F.A. design/technical theatre and playwriting/dramaturgy programs must submit samples of their work. Auditions are required of M.F.A. degree acting and directing applicants.
For detailed information about the graduate program, contact the Director of Graduate Studies, Department of Theatre.

THE MASTER OF FINE ARTS PROGRAM

At least 60 semester hours, 40 of which must be at the 500 level or above, are required for the degree of Master of Fine Arts with a major in Theatre, which is normally to be completed in three consecutive years of full-time residence. Theatre 501 is required the first semester of required work. Additional required are Theatre 401, 310-311, and at least 3 hours in dramatic theory and criticism. 310-11 may be waived by proficiency examination. Students passing this examination must complete 3 hours in advanced theatre history and 3 hours in dramatic theory/criticism.

Students in the M.F.A. degree program are evaluated annually by juried performance or portfolio submission. Continuance in the program is with the approval of the faculty committee for the M.F.A. degree program. Satisfactory completion of the comprehensive exam is prerequisite to entry into the third year. Projects in Interview (Theatre 599, 6 hours) and oral defense must be completed satisfactorily before the degree is conferred. In addition to the core requirements listed above, each area of concentration has specific requirements.

Design/Technical Production

Required courses are at least 12 hours of 580 Design and Technical Production Seminar, and at least 3 hours in the projects courses. Theatre 401 Principles of Design is required the first year of residence. Theatre 430 Play Directing is required of scene design students lacking an appropriate undergraduate foundation in directing.

Acting

Theatre 520-21-22-23-24-25 Master Class are required, along with one course in directing and two hours each in voice and dance.

Directing

Required courses are 430 Directing, 520-21 Master Class for first year acting candidates and 9 hours of 536 Projects in Directing.

Playwriting

Required are 470-71 Playwriting, at least 12 hours of 573 Playwriting Seminar, and at least 3 hours of 585 Production Workshops.

Dramaturgy

An additional two courses in dramatic theory and criticism are required as are Theatre 570 Dramaturgy: Theory and Practice, at least 6 hours of 565 Production Workshops, 430 Play Directing, 3 hours of 536 Projects in Directing, and 12 hours of 573 Seminar and Projects. In addition, students must select an arts and humanities specializations comprising at least one year of language study plus 6 hours in the selected area.

REQUIREMENTS FOR SECOND MASTER'S DEGREE

Students admitted to the MFA program who have already earned a Master's or a doctoral degree may apply up to 12 credit hours from the previous graduate program to the MFA degree with approval of the student's committee, the Dean of the College of Liberal Arts, and the Dean of The Graduate School.

Any such credits applied from a previous graduate program would be from courses that are directly relevant to the student's MFA curriculum and must have been earned within the time limit (6 years) established for completion of the MFA degree.

GRADUATE COURSES

401 Principles of Theatrical Design (3) Fundamental principles of design; visual and structural relationships. Projects assigned to develop understanding and perception.

409 Stage Make-up (2) Problems in make-up design and application; character analysis, physiology and chauvinism. Prereq: 100

410 Dramatic Theory and Criticism (3) Theatre aesthetics from Aristotle to present.

420 Special Studies in Acting (3) Content varies. Exercises in selected concentrated areas such as stylies, techniques, approaches, e.g., Shakespeare, movement, humor. Prereq: Advanced Acting and consent of instructor. May be repeated. Maximum 9 hrs.

425 Applied Phonetics (3) Development of skills in transcription and reproduction of principal varieties of English Language in North America and Great Britain and selected non-English dialects in North America. Prereq: Consent of instructor.


445 Advanced Costume Construction (3) Advanced studies in construction technique, tailoring, vacuum forming, plastic molding, and cobbling. Prereq: 345 or consent of instructor.

446 Costume Patternmaking (3) Draping patterns for period costumes. Corsetry and study of historic patterns. 1500-1800. Prereq: 345 or consent of instructor.

450 Advanced Scenery Technology I (3) Study and practice of theatre woodworking; production participation required. Prereq: 250. Graduate credit to theatre M.F.A. students only.

451 Advanced Scenery Technology II (3) Study and practice of metalworking and plastic for theatrical productions; production participation required. Prereq: 250. Graduate credit to theatre M.F.A. students only.

452 Advanced Scenery Technology III (3) Study and practice of set design interpretation and execution. May be repeated. Maximum 6 hrs.

454 Scenery Painting (2) Introduction to materials, techniques, and principles of craft. Gaining skill and understanding through studio experience. Prereq: Consent of instructor.


462 Special Effects in Lighting and Sound (4) Projects in special effects, creative application of technology. Projects in lighting and sound coordination. Opera, dance, and theatre, and dance. Prereq: 380 or consent of instructor.

463 Sound Design (3) Sound design for performing arts. Review of equipment and acoustical factors that affect sound production. Sound design plots from selected plays. Final projects mixed, edited, and cued for production.

465 Introduction to Lighting Design for Non-Designers (3) Theory and practice of stage lighting design; relationship between designers and non-practitioners: directors, actors, choreographers, architects, etc.

470-71 Playwriting (3,3) Advanced instruction in writing of plays. Prereq: Consent of instructor.

491 Foreign Study (1-15) See page 31.

492 Off-Campus Study (1-15) See page 31.


500 Thesis (1-15) P/NP only. E

501 Introduction to Graduate Research in Theatre (3) Research tools and methods for theatre artist and scholar.

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

510 Studies in Theatre History (3) Intensive study of selected topics in theatre history. May be repeated. Maximum 9 hrs.


536 Projects in Play Directing (3) Practical work in play direction involving various lengths and kinds of scripts. May be repeated. Maximum 9 hrs.

539 Play Production in the Secondary Schools (3) Principles and methods for directing high school dramatic programs.

542 The Social History of Costume (3) Study and analysis of costume as related to society's manners and mores, architecture and furniture.


545 Millinery for the Stage (2) Pattern making and construction techniques for hats from antiquity to present. Prereq: Consent of instructor.

546 Advanced Costume Patternmaking (3) Advanced studies in patterning period costume. Development of historic patterns through flat pattern method. Prereq: 446.

549 Projects in Costumes Technology (1-3) Individualized studies in costume technology in theatre production. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.


553 Projects in Scenic Design (1-3) Conceptual and completion of major projects, both theoretical and actual, in scene design. May be repeated. Maximum 9 hrs.

554 Studies in Scenic Design (3) Advanced scene design techniques and approaches to design for complex dramas and varied dramatic forms. May be repeated. Maximum 6 hrs.

560 Projects in Lighting Design (1-3) Conceptual and completion of major projects, both theoretical and actual, in lighting design. May be repeated. Maximum 9 hrs.

562 Special Problems in Lighting Design (3) Advanced problems in lighting design and theory, problems in Broadway production and touring. Prereq: 462 or consent of instructor.

563 Projects in Sound Design (1-8) Production assignment as sound designer on approved play and/or relevant projects in full production. Prereq: Consent of instructor.

570 Dramaturgy: Theory and Practice (3) Methods and materials. Prereq: Consent of instructor.
Transportation

See Marketing, Logistics and Transportation

Urban Practice

(College of Veterinary Medicine)

MAJOR

DEGREE

Veterinary Medicine ............................................. D.V.M.

D. J. Krahwinkel, Head

Professors:

Brace, J., D.V.M. .............................................. California (Davis)
Bright, R. M., D.V.M. ............................................ Ohio State
Dorn, A. S., D.V.M. ............................................. Illinois
Krahwinkel, D. J., D.V.M. .................................... Auburn
Legendre, A. M., D.V.M. ....................................... Auburn

Associate Professors:

DeNovo, R. C., Jr., D.V.M. ..................................... Illinois
Gompf, R. E., D.V.M. .......................................... Ohio State
Paddleford, R. R., D.V.M. ..................................... Missouri
Seiler, R. R., D.V.M. ........................................... Texas A&M
Schmeitzel, L. P., D.V.M. ..................................... Auburn
Sims, M. H., Ph.D. ................................................ Auburn
Wiegel, J. P., D.V.M. ........................................... Colorado State

Assistant Professors:

Adams, W. H., D.V.M. .......................................... Florida
Bright, J. M., D.V.M. ............................................ Purdue
Daniel, G. B., D.V.M. ........................................... Auburn
Harvey, R. C., D.V.M. .......................................... Tennessee
Jenkins, C. C., D.V.M. .......................................... Tuskegee
Klebanow, R. R., D.V.M. ..................................... Florida
Laratta, L. J., D.V.M. .......................................... Michigan State
Pardo, A. D., D.V.M. ........................................... California (Davis)
Ward, D. A., D.V.M. ........................................... Tennessee

Research Professor:

Overholt, B. F., M.D. .......................................... Tennessee

Veterinary Medicine

(College of Veterinary Medicine)

MAJOR

DEGREE

Veterinary Medicine ............................................. D.V.M.

Comparative and Experimental Medicine .................. M.S., Ph.D.

THE PROFESSIONAL PROGRAM

Admission Requirements

To qualify for admission to the professional program of the College of Veterinary Medicine, a candidate must have completed at least the minimum pre-veterinary requirements listed below. These may be completed at any accredited college or university that offers courses equivalent to those at The University of Tennessee, Knoxville, and must be completed by the end of spring term of the year in which the student intends to enroll. Biochemistry requirements must have been satisfactorily completed within five years of the time the student wishes to enter the program.

Subject Area Semester Hours

English .......................................................... 6

Humanities and Social Sciences* ............................ 18

Physics .......................................................... 8

General Chemistry ........................................... 8

Organic Chemistry ............................................ 8

Biochemistry** .................................................. 4

General Biology ................................................ 8

Genetics .......................................................... 3

Cellular Biology*** ............................................. 3

TOTAL ............................................................ 66

* May include, for example, courses in English literature, speech, music, art, philosophy, religion, language, history, economics, anthropology, political science, psychology, sociology and geography.

** Exclusive of laboratory.

*** It is expected that this requirement will be fulfilled by a course in cellular or molecular biology. An appropriate microbiology course may be approved if cellular or molecular biology is not offered.

Admission Procedures

Admission of new students is for the fall semester, with first priority given to residents of Tennessee.

Forms and instructions for making application for admission may be obtained, after September 1 each year, from Office of College Admissions, Registration Services, 201 Student Services Building, The University of Tennessee, Knoxville, TN 37996-0200.

Applications must be completed and mailed in time to reach the UT Knoxville Director of Admissions by January 15 each year. All supporting documents, official transcripts, Veterinary College Admission Test (VCAT) results from a test taken with 24 months of the January 15 application deadline date, and letters of reference must arrive not later than 30 days after the application deadline date. NON-TENNESSEE APPLICANTS MUST HAVE A MINIMUM CUMULATIVE GRADE-POINT AVERAGE OF 3.2 ON A 4.0 SCALE.

Applications are accepted only from U.S. citizens or permanent residents of the U.S.

D.V.M. Curriculum

The curriculum of the College of Veterinary Medicine is a nine-semester, four-year program. Each class begins in August and graduates four years later in May. The first three years follow the traditional fall and spring semesters with the summer break following years one and two. The final year of the professional curriculum begins immediately following semester six and is a continuous clinical training schedule extending over one calendar year.

The first year consists mostly of pre-clinical subjects such as anatomy, physiology, histology, and microbiology. Also included in this first year are subjects such as physical diagnosis and anesthesia. Considerable integration of subject matter is incorporated during this year.

The second and third years include the study of diseases, their causes, diagnosis, treatment and prevention and are team-taught on an organ system basis.

The final year (three semesters) is devoted to intensive training in the solving of animal disease problems, including extensive clinical experience in the Veterinary Teaching Hospital. Each student will rotate through a series of clinical blocks.
An innovative feature of this curriculum is the designation of semester six as one in which the individual student may select his or her courses of study. This format allows selected students who have specific educational goals (such as advanced or dual degree programs) to enroll in all or, some or none of the regularly scheduled courses during that semester. Students are required to complete at least 16 credit hours and these hours will be credited toward the D.V.M. degree. This semester of elective study offers a unique educational alternative for select students in the CVM and is intended to enhance professional growth, concentration and career opportunities.

In addition to education in the science and art of veterinary medicine, students receive instruction in paramedical subjects such as animal behavior, medical communication, professional ethics, jurisprudence, economics, and practice management.

The curriculum requires successful completion of 154 semester credits.

THE GRADUATE PROGRAM

The College also administers a graduate program involving all departments and leading to the Master of Science and the Doctor of Philosophy. Because of the interdisciplinary departmental administration of the College of Veterinary Medicine, the faculty has opportunities in the graduate programs of other instructional units, including Animal Science (nutrition, physiology, genetics and animal management), Microbiology (bacteriology, virology and immunology), Ecology (environmental toxicology), Public Health, and Comparative and Experimental Medicine. (Refer to other sections of this catalog for a full description of these programs.) The majority of the graduate students and graduate faculty of the College of Veterinary Medicine are involved in the Comparative and Experimental Medicine program. This program provides a wide spectrum of interdisciplinary training that prepares graduates for teaching and/or research careers in the health sciences.

ACADEMIC COMMON MARKET

An agreement among southern states for sharing graduate programs allows legal residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. The M.S. and Ph.D. programs in Comparative and Experimental Medicine are available to residents of the state of Kentucky. Additional information may be obtained from the Residency Assistant in the Office of Graduate Admissions and Records.

PROFESSIONAL COURSES

811-12 Microbiology I (5.4) Pathogenesis of bacterial, fungal and viral diseases. Study relating microbial structure, metabolism and genetics to patterns of disease; includes epidemiology and antimicrobials, antigens and antibodies. Immunology, study of mechanisms of immunity, immune diagnosis, diagnostic immunology, and role of immunity response.

817 Special Problems in Microbiology (1-8) Extramural and specially designed study for students interested in select topics in bacteriology, mycology, virology and immunology.

821-22 Anatomy I (4.4) Gross and applied anatomy: neural structures of common domestic animals: dog, cat, horse, cow. Dissection of embalmed specimens, prosections, slide study, and living animals.

823-24 Physiology I (4.4) Introduction to concepts and problems in physiology which form basis for clinical applications and for formal training in pharmacology, medicine, pathology, and surgery. Cellular, neural, cardiovascular, respiratory, endocrine, digestive, endocrine, and reproductive physiology.

825-26 Histology/Organography (3.3) Histology and organography of animal body systems, structural and functional interrelationships. Embryonic development from fertilization through organogenesis. Correlated with 823-24.

827 Special Problems in Animal Science (1-8) Extermural and specially designed study for students interested in select topics in anatomy, histology, and physiology.

830 Art of Veterinary Medicine I (1) Paramedical subjects important to veterinary medicine: practice management, interpersonal relations, communications, jurisprudence, ethics, careers, animal behavior and veterinary history. May be repeated. S/NC only.

831 Physical Diagnosis (1) Basic care, feeding, restraint, and handling domestic animals. Introduction to physical examination and diagnostic techniques used by veterinarian.

832 Anesthesiology (2) Principles of anesthesiology: pharmacology of anesthetic agents, and introduction to anesthetic techniques in veterinary medicine.

833 Epidemiology/Public Health (4) Principles of epidemiology and public health. Host-agent relationships, public health aspects of veterinary medicine, and role of veterinarians in public health.

834 Hematopoietic System (3) Pathophysiology, special pathology, and clinical management of diseases of the hematopoietic and lymphoid organs and tissues. Principles, methods of laboratory evaluation of diseases of other organ systems.

835 Medical Interaction (2) Multidisciplinary laboratories and lectures of physiologic, pharmacologic and surgical concepts. Applied techniques in animal handling to facilitate anesthesia, surgery, post-surgical recovery and wound healing. Demonstration of physiologic and pharmacologic principles and introduction to instrument action to measure physiological processes and drug effects.

836 Toxicology (2) Principles of toxicology, molecular mechanisms, pathologic processes and clinical features of animal diseases caused by common toxic agents.

840 Integumentary System (3) Pathophysiology, special pathology, medicine and surgery of diseases of integumentary system. Laboratory examination, pathology, diagnosis and treatment.

841 Reproductive System (4) Pathophysiology, special pathology, medicine and surgery of diseases of male and female reproductive systems and mammary glands.

842 Alimentary System (5) Pathophysiology, special pathology, medicine and surgery of diseases of alimentary system.

843 Musculoskeletal Systems I (3) Pathophysiology, special pathology, medicine and surgery of diseases of muscular and skeletal systems. Basic principles, pathologic changes and radiographic interpretation.

844 Musculoskeletal System II (3) Pathophysiology, special pathology, medicine and surgery of diseases of muscular and skeletal systems. Advanced principles, radiographic interpretation and surgical procedures.

845 Principles of Medical Science (2) Physiologic and pathologic principles underlying mechanisms of disease. Selected examples of human and animal diseases; recent scientific advances in biomedical sciences.

846 Multispecies Medicine (4) Anatomy, pathophysiologic, medicine, and surgery of avian species, laboratory and zoo animals and reptiles. Species and diseases seen by practicing veterinarian. Current topics on foreign animal diseases.

847 Current Topics in Veterinary Medicine (1) Elective subjects in veterinary medicine: basic sciences, clinical specialties and issues related to veterinary practice.

848 Art of Veterinary Medicine II (1) Paramedical subjects important to veterinary practice: practice management, interpersonal relations, communication, jurisprudence, ethics, careers, animal behavior and veterinary history. May be repeated. S/NC only.

849 General Elective in Clinics (2) Special rotation with clinical training in urban practice, rural practice, environmental practice and pathology. S/NC or letter grade.

850 Introduction to Clinics (1) Clinical veterinary practice with introduction to clinical problems, Problem-solving and integration of basic sciences with clinical applications. Problem-oriented veterinary medical record.

851 Urinary System (3) Pathophysiology, special pathology, medicine and surgery of diseases of urinary system. Urinary system in health and disease.

852 Cardiovascular System (2) Pathophysiology, special pathology, medicine and surgery of diseases of cardiovascular system. Anatomic, physiologic and pharmacologic principles which provide basis for treatment.


854 Respiratory System (3) Pathophysiology, special pathology, medicine and surgery of diseases of respiratory system. Upper and lower respiratory system: infections and noninfectious diseases.

855 Radiology (3) Basic, advanced and special techniques in radiology with interpretation and use of radiologic data. Special techniques in diagnosis and treatment of animal diseases.

856 Special Senses (2) Pathophysiology, special pathology, medicine and surgery of diseases of visual and auditory systems.

857 Nervous System (3) Pathophysiology, special pathology, medicine and surgery of diseases of nervous system: clinical neurology and neuropathology.

858 Clinical Rotation in Specialties (2) Clinical training in specialty services: anesthesiology, ophthalmology or dermatology. Direct responsibility for diagnosis, patient care, and treatment of clinical cases in both urban and rural practice.

859 Clinical Clerkship (2) Advanced clinical training in urban practice, rural practice, environmental practice, and pathology. S/NC or letter grade.

861 Pharmacology (4) Principles of pharmacokinetics and pharmacodynamic properties of veterinary drugs: mode of action, pharmacologic effects, chemical and physical properties, metabolism, toxicities, important idiosyncrasies and clinical application.

865 Clinical Rotation in Environmental Practice (2) Clinical training in urban practice, rural practice, veterinary medicine, epistemology, public health, and other related disciplines.

867 Special Problems in Environmental Practice (1-8) Extramural and specially designed study for students interested in select topics in morphologic pathology, clinical pathology, veterinary medicine, animal pathology, and other related disciplines.

871 General Pathology (4) Principles of pathobiology: causes of disease, disturbances of cell growth, inflammation, and neoplasia.

873 Parasitology (3) Principles of parasitology: protozoology, helminthology, and entomology and relationship to diseases in animals.

875 Clinical Rotations in Pathobiology (2) Clinical training and demonstrations in laboratory diagnosis: post-mortem examination and clinical pathologic, parasitologic and microbiologic techniques.

876 Clinical Rotations in Pathobiology II (2) Clinical training and demonstrations in laboratory diagnosis: post-mortem examination and clinical pathologic, parasitologic and microbiologic techniques.

877 Special Problems in Pathobiology (1-8) Extramural and specially designed study for students interested in select topics in pathobiologic pathology. Clinical pathologic, clinical microbiology and parasitology.

881 Clinical Rotations in Urban Practice I (4) Clinical training in urban practice, rural practice, veterinary medicine, and diseases for companion animals. Direct responsibility for diagnosis, care, and treatment of clinical patients.
682 Clinical Rotations in Urban Practice II (4) Clinical training in medicine, surgery and specialty disciplines for companion animals. Direct responsibility for diagnosis, care, and treatment of clinical patients.

683 Clinical Rotations in Urban Practice III (4) Clinical training in medicine, surgery and specialty disciplines for companion animals. Direct responsibility for diagnosis, care, and treatment of clinical patients.

684 Clinical Rotations in Urban Practice IV (4) Clinical training in medicine, surgery and specialty disciplines for companion animals. Direct responsibility for diagnosis, care, and treatment of clinical patients.

685 Clinical Rotation in Radiology I (2) Clinical training in radiographic techniques and interpretation of radiographs as part of diagnostic process.

687 Special Problems in Urban Practice I (1-8) Extra- mural and specially designed study for students interested in select topics in medicine, surgery, anesthesiology, radiology and medical specialties of small (companion) animals.

691 Clinical Rotations in Rural Practice I (4) Clinical training in medicine, surgery, specialty disciplines and herd health of food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

692 Clinical Rotations in Rural Practice II (4) Clinical training in medicine, surgery, specialty disciplines and herd health of food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

693 Clinical Rotations in Rural Practice III (4) Clinical training in medicine, surgery, specialty disciplines and herd health of food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

694 Clinical Rotations in Rural Practice IV (4) Clinical training in medicine, surgery, specialty disciplines and herd health of food animals and horses. Direct responsibility for diagnosis, care and treatment of clinical patients.

695 Clinic Rotation in Radiology II (2) Clinical training in radiographic techniques and interpretation of radiographs as part of diagnostic process.

697 Special Problems in Rural Practice I (1-8) Extra- mural and specially designed study for students interested in select topics in medicine, surgery, herd health, reproduction, radiology and medical specialties of large animals.

GRADUATE COURSES


536 Toxicology (2) Principles of toxicity, molecular mechanisms, pathologic processes and clinical features of animal diseases caused by common toxic agents. Prereq: Consent of instructor. F

537 Multispecie Medicine (4) Anatomy, pathophysiology, medicine and surgery of birds, reptiles and laboratory and zoo mammals. Common species and diseases. Prereq: Consent of instructor. Sp

545 Principles of Medical Science (2) Physiologic and pathologic principles underlying mechanisms of disease. Selected examples of human and animal diseases; recent scientific advances in biomedical sciences. Prereq: Consent of instructor. Sp

Zoology (College of Liberal Arts)

MAJOR DEGREES

Zoology M.S., Ph.D.

Arthur C. Echternacht, Head

Professors:

Bagby, R. M., Ph.D. Illinois
Bunting, Dewey L., Ph.D. Oklahoma State
Carlson, J. G. (Emeritus) (Distinguished Prof.), Ph.D. Minnesota
Chen, T. T., Ph.D. Florida
Echternacht, Arthur C., Ph.D. Kansas
Eitner, D. A., Ph.D. Minnesota
Handel, Mary Ann, Ph.D. Kansas State
Hochman, B. (Emeritus), Ph.D. California
Jeon, K. W., Ph.D. London
Joy, D. C. (Distinguished Scientist), Ph.D. Oxford (UK)
Kennedy, J. R., Ph.D. Iowa
Liles, J. N., Ph.D. Ohio State
MacCabe, J. A., Ph.D. California (Davis)
McCrae, G. F., Ph.D. Cornell
Pimm, S. L., Ph.D. New Mexico State
Riechert, Susan E., Ph.D. Wisconsin
Roth, L. Evans, Ph.D. Chicago
Shivers, C. A., Ph.D. Michigan State
Vaughan, G. A., Ph.D. Duke
Weich, H. G. (Emeritus), Ph.D. Florida
Whitson, G. L., Ph.D. Iowa
Associate Professors:

Burnham, K. D. (Emeritus), Ph.D. Iowa
Fox, David J., Ph.D. Johns Hopkins
Greenberg, Neil, Ph.D. Rutgers
McKee, B. D., Ph.D. Michigan State
Pan, M. L., Ph.D. Pennsylvania
Research Associate Professor:

Ashley, T. Ph.D. Florida State
Tindall, R. Ph.D. Penn State
Assistant Professors:

Boake, C. R. B., Ph.D. Cornell
Drake, J. A., Ph.D. Purdue
Ganguly, R., Ph.D. Nebraska
Gittlerman, J. L., Ph.D. Sussex
Hall, J. C., Ph.D. Illinois

The Department of Zoology offers the Master of Science and Doctor of Philosophy with concentrations in aquatic biology, ecology, cell and molecular biology, physiology, genetics, and reproductive and developmental biology.

REQUIREMENTS FOR ADMISSION

Applicants for graduate study are expected to have a background no less extensive than that required of undergraduate majors in this department. This includes a knowledge of the basic principles of cell biology, genetics, and ecology. Other requirements for admission are:

1. one year of general zoology or biology
2. 18 semester hours of upper division zoology or biology
3. two years of chemistry including one year of general inorganic chemistry
4. one year of mathematics including calculus
5. one year of physics
6. Grade point average of 3.0 out of 4.0

Otherwise superior students, deficient in one or more of the above requirements, may be admitted at the discretion of the department's Graduate Affairs Committee.

THE MASTER'S PROGRAM

Special requirements in Zoology are as follows:

1. completion of course requirements as determined by the candidate's faculty committee, including a course in biostatistics;
2. achievement of a 3.0 or better GPA in all courses taken for graduate credit;
3. completion of a thesis.

THE DOCTORAL PROGRAM

Special requirements in Zoology are as follows:

1. courses as determined by the candidate's faculty committee, including a course in biostatistics;
2. an oral and comprehensive written examination in zoology and allied fields in which the candidate has had training;
3. a reading knowledge of at least one foreign language in which there exists a sizeable amount of literature relevant to the major field of study. The student has the option of demonstrating a reading knowledge of this foreign language by (a) passing the official reading examination given by the language department or (b) earning a grade of at least a B in the second semester of a special language reading course for graduate students. This foreign language requirement must be fulfilled before a student can take the comprehensive examination.

ACADEMIC COMMON MARKET

An agreement among southern states for sharing graduate programs allows legal residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. The Ph.D. program in Zoology is available to residents of the states of Georgia or South Carolina. Additional information may be obtained from the Residency Assistant in the Office of Graduate Admissions and Records.

GRADUATE COURSES

403 General Genetics Laboratory (2) Experiments designed to illustrate basic principles of inheritance: primary organism-Drosophila. Prereq: Biology 220. 2 labs.

404 Cytological Technique (2) Practical experience with various techniques: microscopy, embedding and sectioning, chromosome preparations, autoradiography, in situ hybridization, histochemistry, and immunofluorescence. Prereq: Biology 210. 2 labs.

405-06-11-12 Minicourse in Zoology (2,2,2,2) Select advanced topics in zoology, concentrated in time and subject matter. Consult departmental listing for topics offered. Prereq: As announced. May be repeated. Maximum 4 hrs may apply toward zoology major.

410 Advanced Cell Biology (3) Molecular and supramolecular structure and functions of eukaryotic cells: regulatory mechanisms, physiology, behavior and cellular interactions. Prereq: Biology 210. 2 hrs and 1 lab.

420 Cell and Tissue Structure and Function (4) Study of animal cells and tissues at light and electron microscope levels. Prereq: Biology 210. 2 hrs and 2 labs.

430 Immunology (3) (Same as Microbiology 430.)

439 Immunology Laboratory (1) (Same as Microbiology 439.)


449 Laboratory in Physiology (2) Prereq or coreq: 440 or 445.

450 Comparative Animal Behavior (3) Principles and methods of ethology; behavioral, developmental, physiological and evolutionary aspects. (Same as Psychology 450.)

459 Comparative Animal Behavior Laboratory (3) Introduction to observational and experimental research in ethology. Coreq: 450. (Same as Psychology 459.)

460 Evolution (3) Modern concepts of animal evolution. Prereq: Biology 220.

465 Human Genetics (3) Genetic and molecular principles and problems of human inheritance. Prereq: Biology 220.

470 Aquatic Ecology (3) Introduction to physical-chemical nature of inland waters with description of biotic communities and their interrelationships. Prereq: Chemistry 120-30 and Biology 230. 2 hrs and 1 lab.

472 Arachnology (3) Biology of spiders, mites, scorpions and relatives. Prereq: 380 or 380. 2 hrs and 1 lab.

473 Herpetology (3) Biology of amphibians and reptiles, ecology and adaptive radiation. Prereq: Biology 230. 2 hrs and 1 lab.


475 Ornithology (3) Behavior, ecology, populations, evolution and field identification of birds. Prereq: Biology 230. 2 hrs and 1 lab.

476 Mammalogy (3) Evolution, classification, biogeography, ecology, behavior and functional anatomy of mammals. Prereq: Biology 230 or equivalent. 2 hrs and 1 lab.

480 Physiology of Exercise (3) (Same as Physical Education 480.)

490 Comparative Endocrinology (3) Comparative analysis of physiology and morphology of endocrine glands in vertebrates and invertebrates, their role and interaction in maintenance of organism and species. Prereq: 440 or equivalent.

500 Thesis (1-15) P/NP only. E

501 Graduate Research Participation (3) Advanced research techniques studied under supervision of staff research director. Open to all graduate students in good standing. Prereq: Consent of department and research director. S/NC only.

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/NC only. E

503 Zoology Seminar (1) Advanced topics in zoology. Senior zoology majors encouraged. Required of all first- and second-year graduate students. May be repeated. Maximum 4 hrs. S/NC only.

504 Special Topics (1-2) Selected directed readings or special course in topics of current interest. Consult departmental listing for offerings. May be repeated with consent of instructor. Maximum 6 hrs. S/NC only.

506 Research Methods (1-3) Instruction in methods and techniques of research. Consult departmental listing for offerings. May be repeated with consent of instructor. Maximum 9 hrs.

507 Animal Cell Culture (2) Techniques for culture of animal cells, tissues and organs. 1 hr and 1 lab.

508 Methods of Taxonomy (2) Specialization, taxonomic decisions, approaches to systematics and rules of nomenclature. Prereq: Consent of instructor.

513 Advanced Developmental Biology (3) Molecular and genetic aspects of differentiation and morphogenesis; current literature. Recommended prereq: Life Sciences 511-12.

516 Colloquium in Ethology (1) (Same as Psychology 516.)
FACILITIES FOR RESEARCH AND SERVICE
FACILITIES FOR RESEARCH AND SERVICE
Facilities for Research and Service

Bureau of Educational Research and Service

(College of Education)

Timothy J. Pettibone, Director

Four major types of activities—research, development, educational services, and publications—are channeled through the Bureau of Educational Research and Service (BERS), located in 212 CEB. The research activities relate to the development of research proposals, conducting and/or assisting in research, and assisting others in development of research proposals in the College of Education. Developmental activities relate to change efforts in curricular content and instrumental methodology. Educational services include a wide list of activities such as in-service educational programs, consultant services, and technical assistance and administrative training programs. Official publications of the College of Education are developed through the Bureau. A limited number of graduate student assistantships are available.

Center for Business and Economic Research

(College of Business Administration)

David A. Hake, Director

The staff of the Center for Business and Economic Research engages in studies of the business and economic environment in Tennessee, the southeast, and the nation. The Center, located at 100 Glocker, serves the business community, state government, individuals, and The University through dissemination of various kinds of economic and socioeconomic information; supports the faculty of the College in seeking funding for research projects; and, through its Computer Resources Group, provides support for integration of technology in the College of Business Administration. Staff members conduct research in regional economics, public finance, and areas related to socioeconomic problems in the region. The Center publishes the results of research in monograph form so that significant developments in the various business disciplines and economics can achieve widespread exposure. In addition, the Center staff does contract research on business and economic problems for governmental organizations and private industry. The Center publishes the *Tennessee Statistical Abstract* and the *Survey of Business*. The Center is a member of the Association for University Business and Economic Research.

Center for International Education

(Office of Associate Vice Chancellor/Student Affairs)

James Gehlhar, Director

The Center for International Education (CIE), 201 Alumni Hall, telephone 974-3177, promotes and supports all aspects of international education and international exchange at UT Knoxville, both for American students and faculty and for students and faculty from other countries. The administration of official linkage agreements between UT Knoxville and institutions of higher education in other countries is coordinated by CIE.

American students: CIE provides information and advice about study-abroad options open to UT Knoxville students, including the exchange programs it administers between UT Knoxville and universities in thirty countries on six continents. CIE coordinates campus administration of such international grants and scholarships for students as the Fulbright, Rhodes, and Marshall programs, and provides information about other sources of funding for overseas study and research, including the Rotary Foundation, St. Andrews, and German Academic Exchange Service (DAAD) grants. Within its library on study, work and travel abroad, CIE has information about student summer job programs in seven countries.

International students and scholars: CIE provides information and assistance in matters relating to United States visa regulations, to UT Knoxville requirements for international students, and to UT Knoxville academic policies and registration procedures. It publishes The Link, a newsletter for UT Knoxville's international community, and administers the insurance policy required of all international students at the University. International student advisors are available to discuss academic and personal concerns. Orientation programs conducted at the beginning of each term facilitate adjustment to the campus and community, as does the international student orientation camp prior to the fall term.

The International House, 1515 Cumberland Avenue, is CIE's on-campus social, recreational, and programming center that serves as a meeting place for international and U.S. students, faculty and staff.

International students seeking admission to UT Knoxville should write directly to the Office of Graduate Admissions and Records.

Center for Measurement and Control Engineering

(College of Engineering)

E. C. (Bud) Muly, Director

The Measurement and Control Engineering Center, 101 Perkins Hall, is sponsored by the College of Engineering, the Instrumentation and Controls Division of Oak Ridge National Laboratory, and the National Science Foundation. The Center's program combines education, research, and technology transfer. Graduate assistantships are available for qualified students. The research is funded by major U.S. industrial companies and focuses on theoretical and practical developments in measurement and control, concentrating on areas that will significantly improve the productivity, reliability, and safety of industrial systems and processes.
Center sponsored research is carried out in the fields of process control, pattern recognition, process diagnostics, and sensor development. Research in process control concentrates in the areas of process analysis, process modeling, control system design, and real-time expert systems. Pattern recognition research deals with the development of techniques for the automatic detection of flaws in both continuous and piece-part produced products. Process diagnostics research involves the application of signal validation and sensor fault monitoring techniques to modern process control systems. Finally, fiber optic sensor systems development is underway for monitoring and control of chemical processes.

Centers of Excellence

The Centers of Excellence grew out of Tennessee's Better Schools Program, an initiative to upgrade state-aided education at all levels. State officials and legislators wanted to give a few outstanding academic programs in state-aided colleges and universities a special push toward prominence, well beyond regular annual increases for all programs.

In 1984, the General Assembly appropriated and the governor approved $10 million for the first Centers of Excellence throughout the state. The public colleges and universities submitted their proposals for Centers of Excellence to the Tennessee Higher Education Commission, which made the final determinations. Funding has been extended each successive year, and now five of the University's ten Centers of Excellence are sponsored by UT Knoxville.

Concurrently, the University has received state funding, which it must match dollar for dollar, for Chairs of Excellence. These Chairs are $1 million endowed professorships in areas of significance to the University and to the individual, foundation, or corporation providing the matching gift money.

The combination of the Centers of Excellence and Chairs of Excellence adds a dimension to The University of Tennessee that is not easily equaled by other institutions. UT's reputation as the premier university in the state and as a regional and national leader in instruction, research, and public service is enhanced as a result of the infusion of these special funds.

For information concerning the individual centers sponsored by UT, contact:

Center for Laser Applications
Dr. Dennis Keeler, Director
UT Space Institute
Tullahoma, TN 37388-8897
(615) 974-7262

Center for Livestock Diseases and Human Health
Dr. G. M. H. Shires, Director
College of Veterinary Medicine
UT Knoxville
Knoxville, TN 37996
(615) 974-7262

Center for Materials Processing
Dr. Joseph C. Danko, Director
101 Perkins Hall
UT Knoxville
Knoxville, TN 37996
(615) 974-7608

Science Alliance
Dr. Lee Riedinger, Director
101 South College
UT Knoxville
Knoxville, TN 37996
(615) 974-6765

Waste Management Research and Education Institute
Dr. E. William Colglazier, Jr.
327 South Stadium Hall
UT Knoxville
Knoxville, TN 37996-0710
(615) 974-4251

Child Development Laboratories
(College of Human Ecology)
Carol E. Catron, Director
The Child Development Laboratories, operated by the Child and Family Studies department within the College of Human Ecology since 1927, currently offer child care programs for young children ages six weeks to five years. The Child Development Laboratories serve three purposes: to promote observation, participation, and research activities of the department and other university faculty and students to prepare undergraduate and graduate child development professionals for working effectively with young children; to provide a model early childhood education program for children, families and early childhood professionals.

The programs are equipped with a teleimetry laboratory that features unique videotaping capabilities in all classrooms, small group research rooms, and observation booths that facilitate teacher training and research. A variety of research projects, such as the development of creativity in young children, parental listening behaviors, children's political socialization, mainstreaming, and peer interactions, involves students and faculty in the college and many departments on campus. Graduate Assistant researchers in the Laboratories participate in teaching, assessment, administrative, supervisory and research activities while working with children and families under the guidance of faculty and staff. The Child Development Laboratories are accredited by the National Academy of Early Childhood Programs, a division of the National Association for the Education of Young Children.

Communications Research Center
(College of Communications)
Michael Singletary, Director
The Communications Research Center, 426 Communications Building, is an adjunct to the communications graduate program. Objectives of the Center are: (1) to conduct original research in mass and public communication; (2) to disseminate research-generated information; and (3) to provide research services to faculty and students, professional communicators, and others interested in improving the quality of human communications.

Computing Center
Gordon Sherman, Director

Faculty Associates:
Art: Susan E. Metros; Computer Science: David W. Straight; Engineering: Osama Soliman; Physics: William E. Bliss; Statistics: John Philpot.

The University of Tennessee Computing Center (UTCC) provides computing facilities and services for the University's teaching, research, public service, and administrative activities. UTCC offices and principal computing facilities are located on the first two floors of Stokely Management Center (SMC) and on the third floor of Dunford Hall.

The Computer Access for Education (CAFE) program provides every UT Knoxville student the opportunity for computing experience through an individual UTCC account. Student accounts for use in coursework are requested by the department through which the course is offered. Faculty and staff members can request a UTCC account by completing a request for computing services. Forms are available from the receptionist at 200 SMC. Each UTCC account is assigned a consultant who is available to answer questions about UTCC resources and to assist in accessing the UTCC library of computer programs.

Noncredit short courses covering levels of computing from personal computing to supercomputing are taught throughout the year. Topics include programming languages, job control language, vector processing, the use of graphics, word processing, and the statistical and mathematical programs available at UTCC. Many courses are available on videotape in Audiovisual Services in the John C. Hodges Library. Short courses are announced in the UTCC Newsletter, the Campus Capsule section of the UT Daily Beacon, and Tennessee This Week. During the break following each academic term, UTCC consultants conduct a four-day seminar for faculty, staff, and graduate students on the use of either the IBM or DEC VAXcluster computing system.

UTCC maintains online and printed documents describing the availability and use of system hardware and software. The IBM User's Guide, the DEC VAXcluster User's Guide, and the National Academy of Early Childhood Programs are available at the UT Book & Supply Store. The monthly UTCC Newsletter announces changes to systems, equipment, and procedures and contains other items of interest to users.

The UTCC computing network connects mainframe computers, workstations, microcomputers, and video terminals through Ethernet; fiber optic cable, or one of more than 1200 direct or dialup lines. Hardware and software from Racial-Milgo Information Systems maintain the terminal port selection and multiplexing system which is connected to a similar system at the Oak Ridge National Laboratory. Ethernet and fiber optics connect many buildings on the Knoxville campus in a multivendor, heterogeneous network that provides rapid access to data in remote locations and supports several protocols including TCP/IP, DECnet, and LAT.

Mainframe computers operated by UTCC include an IBM 3090-300E with three vector processors, an IBM 3081-D, two DEC VAX 8800 processors, one DEC VAXvector 6000-440, and one DEC VAX 6000-440 processor in
Continuing Education and Public Service

Sam C. Bills, Acting Dean
The Division of Continuing Education, Knoxville, is the administrative unit of UT Knoxville that extends academic courses, educational services, and other programs to the non-traditional student. While most people who participate in the programs are adults, persons of all ages and academic levels enroll in the credit and non-credit offerings of the Division.

Programs and courses are based upon student needs and desires, whether for self-motivated learning; for leisure and recreational programs; or for professional promotion, certification, licensure, re licensure, or mid-career changes. The Division provides these educational opportunities through program coordination and development of the five departments: the University Evening School, Non-Credit Programs, Department of Conferences, Department of Independent Study, and English Language Institute.

UNIVERSITY EVENING SCHOOL

Sam C. Bills, Director
The University Evening School, in conjunction with academic colleges and departments, administers credit programs for those students attending classes on and off campus in a variety of nontraditional formats. Support services are provided to assist students in their educational pursuits.

On-Campus Evening Program

Classes are offered during late afternoon and evening hours for those students who work or have other commitments during the day. Some departments within the Colleges of Business Administration, Education, and Engineering offer all courses required for an advanced degree during the evening. The College of Business Administration offers all courses required for the MBA degree with a concentration in Management and Venture Analysis. For other majors, consult the appropriate academic department.

Mini-Term

The University Evening School offers a Mini-Term during May. Students may enroll in one concentration credit course during the Mini-Term period.

Courses and instructors listed for the Mini-Term are carefully selected to reflect a broad academic base of individualized offerings suited to an intensive program of study. Courses cover material and information included in regular semester offerings.

Off Campus Programs

The Evening School makes arrangements for departments to conduct undergraduate and graduate courses in many locations away from the Knoxville campus. The courses are scheduled in response to requests and identifiable needs of adult part-time students who live some distance from the UT Knoxville location. All course offerings and instructors are approved by the appropriate academic departments, and the credit awarded is resident credit.

The College of Education offers the following graduate degree programs: Doctor of Education with a major in Educational Administration and Supervision (Chattanooga); Specialist in Education with a major in Educational Administration and Supervision (Chattanooga); Master of Science with a major in Technological and Adult Education (Statewide).

The Evening School administers an off-campus center at Oak Ridge where courses leading to advanced degrees in science and engineering are offered (see listing under Off-Campus Graduate Centers).

Workshops

Credit workshops are coordinated through various academic departments of the University and give students the opportunity to participate in short periods of intensive study.

Workshops offer flexibility of timing, location, and content. Summer workshops are particularly popular with teachers and school administrators. Although most workshops are held on the UT Knoxville campus, geography is not a limiting factor.

Student Services

A comprehensive program of services including academic and career counseling, personal counseling, and financial aid information is provided by the University Evening School for both on- and off-campus students.

Registration

Registration by mail is offered as a convenience to former Evening School students. Secondary registration at both on- and off-campus locations is also available. For information, contact the UT Evening School, 451 Communications Bldg, University of Tennessee, Knoxville, TN 37996-0341, or telephone (615) 974-5361 or 1-800-334-1724.

NON-CREDIT PROGRAMS

Gayle D. Cooper, Director
The Department of Non-Credit Programs provides a comprehensive array of courses and seminars designed and planned to serve the needs or demands of individuals in Knoxville and surrounding communities, as well as those of business and industry throughout Tennessee. Most courses are offered on a quarterly basis in the evening on the University campus and at selected off-campus locations. Courses are taught by University faculty when possible and by individuals from the community who have gained a reputation for certain competencies or technical skills. Business seminars are offered to the public in the major cities of Tennessee. These can also be delivered "on-site" for business or industrial clients, with instructional services tailored to the needs of each individual group.

Courses offered by the department range from developing personal skills, such as communications, computer literacy, and...
management development, to human interest courses, such as gardening, exercise and fitness. There are also courses which meet certain requirements of the state or other agencies for certification in given fields, such as real estate, aviation, CEBS (Certified Employee Benefit Specialist) and CCIA (Certified Credit Administrator). The department co-sponsors the Smoky Mountain Field School with the Great Smoky Mountains National Park.

Continuing Education Units (CEU's) are awarded to students satisfactorily completing courses and seminars offered by the department. A permanent record of CEU's is maintained. A transcript of all CEU's earned at The University of Tennessee, Knoxville, may be obtained upon written request.

Non-Credit information may be obtained at the Hess Building, 600 Henley Street, Suite 105, Telephone (615) 974-0150.

DEPARTMENT OF CONFERENCES

The UT Knoxville Department of Independent Study, 420 Communications Bldg, The University of Tennessee, Knoxville, TN 37996. Telephone (615) 974-5134.

ENGLISH LANGUAGE INSTITUTE

Dale A. Myers, Director

The English Language Institute (ELI) is a non-credit language-study program of The University of Tennessee, Knoxville. It is designed to assist students in their pursuit of career goals or educational objectives in the U.S.

The ELI offers intensive courses for the improvement of student skills in the English language. International students, visitors, and professionals have successfully learned English through study in the ELI.

The courses emphasize the development of communicative ability in listening, speaking, reading, and writing. Faculty members are trained in teaching English to speakers of other languages with differing national backgrounds and varying proficiency in English.

Classification and placement is based on pronunciation, test-taking strategies, U.S. culture orientation, and university study skills.

Additional information may be obtained at 907 Mountcastle St., (615) 974-3404.

ELDERLY AND DISABLED PERSONS

Legislation gives Tennessee citizens who are 60 years of age or older, or those who are totally disabled, the opportunity to attend credit and non-credit courses at the University at no charge on an audit, space available basis. Legal verification of either of these conditions is required for enrollment. Students who are 65 or over, or who are totally disabled, and who desire to receive UT credit for their courses, may pay a reduced charge of $7 per credit hour up to a maximum of $75 for a full-time load. Registration for day and evening classes is handled by the Evening School, 451 Communications and University Extension Building on the UT, Knoxville campus (615) 974-5361 or 1-800-334-1724.

Energy, Environment, and Resources Center

(Office of Associate Vice Chancellor)

E. William Colglazier, Jr., Director

The Energy, Environment, and Resources Center, 329 South Stadium Hall, was created in 1973 to encourage interdisciplinary research directed at solutions to problems related to energy and the environment. The Center involves faculty and students in research and public service projects, manages research and development projects that involve several disciplines, and assists government and industry in specific problems related to energy, environmental, resource, and technology policy issues. The Center has a close working relationship with researchers at the Oak Ridge National Laboratory and the Tennessee Valley Authority. Sponsors include federal and state agencies, industry, and foundations.

Current research includes hazardous and radioactive waste management, information systems, environmental assessment, applications of biotechnology, global environmental problems, risk assessment, and ethical and value issues in technology policy. The Center operates the Waste Management Research and Education Institute, a state-funded Center of Excellence. Current grants and contracts of both centers are approximately eight million dollars per year.

Institute of Agriculture

D. M. (Peter) Gossett, Vice President

The Institute of Agriculture traces its history to 1869 when the University was designated as Tennessee's Federal Land-Grant Institution. Under terms of the Federal Land-Grant Act, the University was enabled to offer instruction in agriculture and the mechanic arts for the first time. Since 1869, agricultural programs at the University have been expanded to include research for the development of new knowledge and extension for dissemination of such knowledge to rural people. Thus the Institute of Agriculture has come to include the work of four main divisions: Agricultural Experiment Station, Agricultural Extension Service, College of Agricultural Sciences and Natural Resources, and College of Veterinary Medicine.

AGRICULTURAL EXPERIMENT STATION

Don O. Richardson, Dean

John I. Sewell, Associate Dean

Thomas H. Knittl, Associate Dean

The Agricultural Experiment Station was established by The University's Board of Trustees on June 8, 1862, five years before the passage of the Hatch Experiment Station Act by the U.S. Congress. The University was one of the first five institutions in the U.S. to establish an Agricultural Experiment Station. Since its beginning, the Station has given first attention to investigations of concern to the agriculture of Tennessee.

The objectives of the Tennessee Agricultural Experiment Station are the creation and utilization of new knowledge through research. Fundamental research is directed toward: (a) Understanding the basic science of the processes of plant and animal production through conversion into usable products and services; (b) Understanding the resource and market forces which affect the production, transfer, processing, and utilization of agricultural commodities and the resulting impact on the economic well-being of the agricultural sector, rural areas, and the State of Tennessee; (c) Understanding the interaction of agricultural production and land uses on natural resources and the environment as they relate to long-term productivity and the quality of rural life; (d) Understanding the impacts of food and fiber resources and the chemicals used in their production on people's well-being and the quality of life. Applied research utilizes these understandings to provide effective production and marketing systems and to foster the development of a physical and economic environment that provides for the needs of rural, farm, and urban citizens.

The investigations of the Station follow a systematic method of gaining and applying knowledge efficiently to the physical, biological, and economic phases of producing, processing, and distributing farm and forest products; to the social and economic aspects of rural living; and
to consumer health and nutrition. Both farm and urban populations gain from the accomplishments of the Agricultural Experiment Station. Examples of some of these accomplishments are new and improved varieties of crops, new and better methods of controlling crop and livestock pests, more efficient production of crops and pasture through improved fertilization and mechanization, and more efficient feeding and management of livestock.

The program is designed and administered through ten subject matter departments located at Knoxville. A majority of the faculty have teaching responsibilities in addition to their research. To assist in the research program, the Station supports over 120 graduate students. To serve Tennessee’s diverse agriculture, branch stations are operated at Crossville, Grand Junction, Greeneville, Jackson, Knoxville, Lewisburg, Martin, Milan, Oak Ridge (forestry), Springfield and Spring Hill. Professional and technical staff are in residence at these locations.

AGRICULTURAL EXTENSION SERVICE
Billy G. Hicks, Dean
Mildred F. Clarke, Associate Dean
D. Ray Humberd, Assistant Dean

The Agricultural Extension Service was established in 1914. Its purpose is to extend through various educational means agricultural and home economics information to farm families and others in the state who do not have the opportunity to enroll in resident courses of instruction at colleges.

The educational program is carried on through offices in each of the 95 counties of the state. Educational emphasis includes work in four major program areas: agriculture and natural resources, community resource development, home economics, and education of young people through 4-H Clubs. County Extension staff members working directly with local people are supported in the various information fields by a specialist staff, members of which are stationed either in Knoxville, Nashville, or Jackson.

The Agricultural Extension Service operates administratively as one of four units of the Institute of Agriculture. For administration, the state is divided into five districts with supervisors located in their respective districts. District headquarters are maintained in Knoxville, Chattanooga, Cookeville, Nashville, and Jackson.

The Agricultural Extension Service operates as a three-way partnership among county, state, and federal governments. The University of Tennessee represents state and federal government and a County Agricultural Extension Committee represents county government in this partnership.

Libraries, The University of Tennessee, Knoxville
Paula Kaufman, Dean

The University of Tennessee, Knoxville Libraries own approximately 1.7 million volumes, more than 3.5 million manuscripts, 1.8 million microforms, 27,000 audio and video recordings, plus United States and United Nations documents. The UT Knoxville Libraries currently subscribe to more than 18,000 periodicals and other serial titles. The Libraries’ membership in the Association of Research Libraries reflects the University’s emphasis on graduate instruction and research and the support of large, comprehensive collections of library materials on a permanent basis.

Library holdings in Knoxville are housed in the new 350,000 square foot facility, the John C. Hodges Library, and its branch libraries: Agriculture-Veterinary Medicine Library, Map Library, Music Library, Special Collections Library, and the University Archives. The Hodges Library has comfortable study space for 3,500 students, 308 graduate student carrels, and 136 faculty studies.

The Special Collections Library in the James D. Hoskins Building is a repository of regional and local materials, Tennesseana, and other specialties, including legislative papers and mementoes of many Tennessee political figures. Special Collections materials are of particular interest to scholars in the fields of history, political science, social sciences, biological sciences, and the arts.

Library research holdings are augmented by Reference and Information Services and by Interlibrary Loan. Reference and Information Services provides research assistance and access to commercially available databases. In the reference room, users may also search a number of CD-ROM databases at no charge. Interlibrary Loan borrows monographs and obtains copies of other material from libraries around the world. Library holdings are accessible via a sophisticated online catalog which can be searched both in the library and from home and office computers.

The Law Library on the Knoxville campus and the libraries located on the campuses in Chattanooga, Martin, Memphis, and Tullahoma are individually administered. Each library at The University of Tennessee is accessible to all students and faculty in the system.

Management Development Center

The Center has prided itself on the development of long-term relationships with organizations that provide a living laboratory to test and validate the new knowledge of the Center that is disseminated in a variety of forms. Executive and Management Education Programs are one form of dissemination. A staff of 26 designs, develops, and markets fifty yearly offerings for 1,500 participants. The Center emphasizes consistent, high-quality programs with small class sizes, outstanding faculty, a highly participatory style of instruction, and an applied orientation. The focus is on longer term, more developmentally oriented programs of one to four weeks in length such as the four-week University of Tennessee Executive Program and one-week Senior Executive Institute for Productivity Through Quality.

Off-Campus Graduate Centers

KINGSPORT UNIVERSITY CENTER
UT Knoxville offers graduate programs in science and engineering at both the Master’s and doctoral levels. The program is operated within the policies formulated by the Graduate School of UT Knoxville and is coordinated with the graduate and undergraduate offerings of East Tennessee State University.

Students who enroll in this program must be admitted to The Graduate School of UT Knoxville.

OAK RIDGE RESIDENT GRADUATE PROGRAM

UT Knoxville offers graduate study programs at Oak Ridge leading to Master’s degrees in Business Administration with a concentration in management, and in Statistics. The Master’s and doctoral degrees are available in engineering, mathematics, and physical sciences. Courses are given in late afternoons and evenings with research facilities provided by and used in cooperation with the Oak Ridge Associated Universities (ORAU).

This program is supported under a sub-contract with ORAU with principal support coming from the Martin Marietta Corporation. UT is one of the forty-three colleges and universities which sponsor ORAU, a nonprofit education and research management corporation.

Information and applications may be obtained from the Kingsport University Center, The University of Tennessee, University Boulevard, Kingsport, Tennessee 37660.

NASHVILLE GRADUATE ENGINEERING PROGRAM

Opportunities for graduate study leading to the Master of Science in Industrial Engineering and other disciplines, as the need and resources permit, are offered by UT Knoxville.

Students who enroll in these programs must be admitted to The Graduate School of UT Knoxville. Information and appropriate forms may be obtained from Jerry Westbrook, Director, Nashville Graduate Engineering Program, Tenth and Charlotte, Nashville, Tennessee 37203.
CHATTANOOGA GRADUATE EDUCATION PROGRAM

UT Knoxville offers a graduate program in education leading to the Specialist in Education and the Doctor of Education degrees with majors in Educational Administration and Supervision and Vocational-Technical Education. Students who enroll in this program must be admitted to The Graduate School of UT Knoxville.

Information and appropriate forms may be obtained from the Director, c/o Dean, College of Education, UTC, Chattanooga, Tennessee 37403.

THE UNIVERSITY OF TENNESSEE-OAK RIDGE GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

The University provides programs leading to the M.S. and Ph.D. degrees in various areas of biomedical sciences. Graduate students have the opportunity to study and do research in conjunction with the Biology Division of the Oak Ridge National Laboratory.

For complete information concerning the program, see Biomedical Sciences under Fields of Instruction.

COLLEGE OF SOCIAL WORK

The Psychological Clinic supports graduate training in clinical psychology. Psychological diagnosis and psychotherapy are offered on an outpatient basis, with medical consultants, to the general public as well as to University students, upon referral by a physician.

Textiles and Nonwovens Development Center

Larry C. Wadsworth, Director

The Textiles and Nonwovens Development Center (TANDEC) was officially dedicated in October 1990. TANDEC was made possible through a grant from Exxon Chemical Company. Nonwovens products loom large in a number of markets and TANDEC looms large in both basic research and nonwoven product development. Nonwovens research programs at UT Knoxville include structure-property-process relationships in melt blowing polyolefins, polyesters, nylon, elastomeric polymer, engineering thermoplastics and recycled plastics; mechanism of melt blown web formation; modeling of the melt blowing and spunbonding processes; development of outline optical measurements for control of the critical properties of melt blown webs; electrical measurement of fiber alignment and bonding in nonwoven webs; thermal bonding and characterization of cotton/synthetic fiber nonwovens; computational analysis of heat transfer behavior in thermal calendaring; study of protective apparel for agricultural, industrial and medical uses; and finishing of nonwovens. In addition to the basic research, technology transfer has been accomplished during the past several years by assisting companies in applied projects, primarily in the melt blowing area. The primary missions of TANDEC are to conduct nonwoven and textile grant research programs and to develop new product applications. The TANDEC facilities further allow production of nonwovens on a limited basis for participating companies while equipment is not being used for research activities. The nonwovens laboratory hosts numerous guests from industry and academic, and the facilities are planned to meet their needs, while safeguarding research confidentiality.

Transportation Center

(Office of Associate Vice Chancellor)

Stephen H. Richards, Director

The Transportation Center was created in 1970 to foster and facilitate interdisciplinary research and public service in the field of transportation at The University of Tennessee. It began operation in 1970 and since then has contributed greatly to the overall research program of The University.

The Center, 357 South Stadium Hall, is a University-level organization administratively positioned within the Office of the Associate Vice Chancellor for Research at UT Knoxville. The Center’s staff is presently organized into eight research divisions: Energy and Environment; Systems Analysis and Data Management; Policy and Services; Rail and Water Safety and Operations; Structures and Construction; Highway Engineering; and Training and Technology Transfer.

The Center has three goals. The first is to conduct a program of research in transportation that is recognized for its excellence, comprehensiveness, innovation, productivity, and national leadership. The second is to develop and sustain the technical expertise for high quality transportation research by the faculty and students within the various departments and colleges of UT. The third goal is to serve the transportation research, service, and training needs of state and local government, business, and industry in Tennessee, the southeast region, and the nation.

The University of Tennessee Space Institute

Wesley L. Harris, Vice President

The Space Institute is a graduate education and research institution located on a 365 acre lakeshore campus in Middle Tennessee. UTSI was established in 1964 and has evolved into an internationally recognized institution for graduate study and research in engineering, physics, mathematics, and computer science. The accredited academic programs and educational policies of the Space Institute have their origins in appropriate departments of The University of Tennessee, Knoxville. The more than 45 faculty members of the Institute carry out these accredited academic programs through classroom teaching, informal seminars, active research, and directing the research of their students in an environment of creative work and advanced study. Programs are available to students devoting full-time or part-time effort toward M.S. and Ph.D. degrees, those interested in continuing education for updating and broadening knowledge, and those who wish to pursue post-doctoral research.

Graduate degree programs are available in the areas of Astronautics, Experimental and Applied Aerodynamics, Fluid Mechanics, Advanced Space Propulsion, Knowledge Engineering, Energy Conversion Processes, Thermal Sciences, Coal Combustion, Magnetohydrodynamics, Plasma Physics, Space Systems, Remote Sensing, Propulsion, Computational Fluid Dynamics, and other aspects of atmospheric and space flight.

The Institute has an established Center of Excellence in Laser Applications and offers graduate studies and research opportunities in laser diagnostics, laser materials interactions, pico-second processes, and coherent and non-linear optics. The Institute was established in part to increase the research and engineering resources of Tennessee through education and practice in relevant scientific and technical areas and in part to interface University faculty and student research with the Air Force Arnold Engineering Development Center. The faculty, research activities, and facilities of the Institute, and those available at Arnold Center through appropriate contractual arrangements, provide students an unusual opportunity for significant research in these areas and in part to interface University faculty and student research with the Air Force Arnold Engineering Development Center. The faculty, research activities, and facilities of the Institute, and those available at Arnold Center through appropriate contractual arrangements, provide students an unusual opportunity for significant research in these areas. Students who enroll at UTSI are admitted to The Graduate School, The University of Tennessee, Knoxville. Graduate Research Assistantships are available for qualified students. Further information may be obtained from the Dean for Academic Affairs, The University of Tennessee Space Institute, Tullahoma, Tennessee 37388.

Water Resources Research Center

(Office of Associate Vice Chancellor)

Bruce A. Tschantz, Acting Director

The Water Resources Research Center, 422 South Stadium Hall, is a federally designated institute for the conduct of water research for the state. The purposes of the Center are: (1) to assist and support all the academic institutions of the state, public and private, in pursuing water...
resources research which addresses a wide range of problems of interest to the state, region, and nation; (2) to provide for information dissemination and technology transfer services to state and local government bodies, academic institutions, professional groups, environmental organizations, and others, including the general public, who have an interest in water resources matters; (3) to promote education in fields relating to water resources and to encourage the entry of promising students into careers in these fields.
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