portion of the Graduate Record Examination must be submitted.

THE MASTER OF ARTS PROGRAM
A Bachelor's degree or its equivalent is required for admission. Normally an overall average of 3.0 is also required together with an average of 3.2 in the last two years of political science or social science. In addition, a composite score of at least 1100 on the verbal and quantitative parts of the GRE is normally required.

Students pursuing the Master of Arts degree may follow one of two options:

1. Thesis Option: (36 hours) Coursework, preparation of a thesis, and an oral examination on coursework and the thesis, is required. At least 12 of these hours must be in political science, with 6 in the field of methodology (Political Science 510 and 512). Six hours may be earned through thesis credit.
2. Non-Thesis Option: (38 hours) Coursework, plus a written comprehensive examination on all coursework is required. At least 12 of these hours must be in political science, with 6 in the field of methodology (Political Science 510 and 512), and 3 hours in the 600-level research seminar in the student's first field of interest.

THE MASTER OF PUBLIC ADMINISTRATION PROGRAM
The M.P.A. program is intended to prepare students for public service careers by acquainting them with management principles, analytical tools, and the ethical dilemmas they will face as public administrators. It consists of a total of 39 semester hours, including a core program, an elective specialization and a recommended internship.

Applicants for admission to the program must have a Bachelor's degree or its equivalent. Normally, an overall average of 3.0 and an average of 3.2 in the last two years of political science or social science courses is required. In addition, a composite score of at least 1100 on the verbal and quantitative parts of the GRE is normally required.

Students must demonstrate proficiency in the use of personal computers prior to the completion of 3 credit hours in the M.P.A. program. Students may fulfill this requirement by successful completion of a short course(s) offered by the UT Computing Center. The Coordinator of the M.P.A. program will provide a list of acceptable courses. Exceptions to this requirement will be considered on an individual basis.

The M.P.A. is a non-thesis program. Specific requirements include the following:
1. Core - 21 hours.
   b. Analytical skills (6 hours): 512 Quantitative Political Analysis; 514 Research and Methodology in Public Administration.
   c. Management skills (6 hours): 560 Public Budgeting; and either 562 Public Management or 564 Human Resources Management in Public Administration.
2. Specialization - 9 hours.
   A specialization is designed by the student in consultation with the coordinator of the M.P.A. program. Possible specializations include general government, public health, budgeting and finance, planning, natural resources, program evaluation, criminal justice, public relations, personnel, and others.
3. Recommended internship with a public agency - 6 hours.
   Internships are arranged in consultation with the coordinator of the M.P.A. program.
4. A written final examination, which may be followed by an oral examination, is required.

DUAL J.D.-M.P.A. PROGRAM
The College of Law and the Department of Political Science in the College of Liberal Arts offer a coordinated dual degree program leading to the conferred Doctor of Jurisprudence and Master of Public Administration degrees. In this program, a student may earn the M.P.A. and J.D. degrees in about four years rather than the five years that otherwise would be required. Students pursuing the dual degree program should plan to be enrolled in coursework or an internship for one semester in addition to taking normal course loads for four academic years.

Admission
Applicants for the J.D.-M.P.A. program must make separate application to, and be independently accepted by, the College of Law for the J.D. degree and the Department of Political Science and The Graduate School for the M.P.A. degree. Applicants must also be accepted by the Dual Degree Committee. All applicants must submit a Law School Admission Test (LSAT) score. An applicant's LSAT score may be substituted for the Graduate Record Examination (GRE) score, which is normally required for admission to the M.P.A. program. Application may be made prior to or after matriculation in either the J.D. or the M.P.A. program, but application to the dual degree program must be made prior to entry into the last 29 semester hours required for the J.D. degree and prior to entry into the last 15 hours required for the M.P.A. degree.

Curriculum
A dual degree candidate must satisfy the requirements for both the J.D. and the M.P.A. degrees, as well as the requirements for the dual program: The College of Law will award a maximum of 9 semester hours of credit toward the J.D. degree for successful completion of approved graduate level courses (500 or 600 level) offered in the Department of Political Science. The M.P.A. program will award a maximum of 9 semester hours of credit toward the M.P.A. degree for successful completion of approved courses offered in the College of Law. All courses for which credit is awarded must be approved by the J.D.-M.P.A. coordinators in the College of Law and the Department of Political Science. All candidates for the dual degree must successfully complete Administrative Law (Law 821) and are encouraged to take Local Government (Law 824). An internship is strongly recommended for students in the dual degree program, as it is for all M.P.A. candidates, but an internship is not required.

During the first two years in the dual program, students will spend one academic year completing the required first year of the College of Law curriculum and one academic year taking courses solely in the M.P.A. program. During those first two years, students may not take courses in the opposite area, except without the approval of the J.D.-M.P.A. coordinators in both academic units. In the third and fourth years, students are strongly encouraged to take both law and political science courses each semester.

Dual degree students who withdraw from the program before completion of the requirements for both degrees will not receive credit toward either the J.D. or the M.P.A. degree for courses taken in the other program except as such courses qualify for credit without regard to the dual program.

Awards of Grades
For grade recording purposes in the College of Law and the Department of Political Science, grades awarded in courses in the other unit will be converted to either Satisfactory or No Credit and will not contribute to the student's GPA or class standing. The College of Law will award a grade of Satisfactory for an approved M.P.A. course in which the student earns a grade of B or higher and a grade of No Credit for any lower grade. The Political Science Department will award a grade of Satisfactory for an approved law course in which the student earns a grade of 2.3 or higher and a grade of No Credit for any lower grade. The official academic record of the student maintained by the Registrar of the University shall show the actual grade assigned by the instructor without conversion.

THE DOCTORAL PROGRAM
The Ph.D. program prepares students for careers in college teaching, as well as careers in other occupations related to service in the public or private sectors. Applicants for admission to the program should normally have completed a Master's degree in political science or a related field with a 3.0 GPA (3.5 for international students) and have earned a composite score of at least 1100 on the verbal and quantitative parts of the Graduate Record Examination.

Students admitted to the program must complete 78 hours of course work beyond the Bachelor's degree, must successfully pass written and oral comprehensive examinations in three broad subfields of political science, and must pass a final oral examination on the dissertation.

In addition, students must satisfy a research tool requirement. This requirement may be satisfied either by demonstrating competency in one foreign language, or by completing 12 hours of coursework, numbered 500 or above, in empirical methodology.

In addition to the total hours required for the degree, the following requirements must also be met:
1. At least 63 hours must be in political science courses.
2. At least 48 hours in political science courses must be in courses numbered 500 or above.
3. Completion of Political Science 510 and 512
4. At least 6 hours must be earned in political science courses numbered above 600, exclusive of dissertation hours.
5. A total of 24 hours must be earned by writing the dissertation.

MINOR IN ENVIRONMENTAL POLICY
The department participates in a program designed to give Masters' and graduate students an opportunity to develop an interdisciplinary specialization in environmental policy. See Economics for program description.
GRADUATE COURSES

430 United States Constitutional Law: Sources of Power and Restraint (3) Analysis of judicial review, constitutional powers of President and Congress, federalism, sources of regulatory authority, and constitutional protection of political and economic rights.

431 U.S. Constitutional Law: Civil Rights and Liberties (3) Analysis of current issues in civil rights and liberties including: first amendment freedoms, equal protection, privacy and rights of accused.

442 Administrative Law (3) Legal dimensions of administrative power, policy instruments, and constitutional controls over administrators.

452 Black African Politics (3) Recent evolution and current political environment of Black African nations. (Same as Afro-American Studies 452.)

454 Government and Politics of China and Japan (3) Examination of the political setting, structure and political processes in China and Japan.

455 Latin American Government and Politics II (3) Selected topics on Latin American political dynamics, consideration of leading theoretical explanations. (Same as Latin American Studies 455.)

458 Government and Politics of the Soviet Union (3) Origins and development of Soviet political system, and study of selected policy areas.

461 Policy Making in Democracies (3) Comparative approach to theory and process of making public policies.

463 Contemporary Middle East Politics (3) Government and movements in Middle East, their characteristics, bases, and interrelationships.

470 International Law (3) Nature and development of international law and compliance. Function of international law in context of international conflict.

475 Ancient and Medieval Political Thought (3) Survey of major western political thinkers from Socrates to Machiavel to Marx.

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/NC only. E

510 Scope and Methods in Political Science (3) Procedures of analysis in political science.

512 Quantitative Political Analysis (3) Methods and techniques in quantitative political analysis: univariate and bivariate statistics.

513 Quantitative Political Analysis (3) Methods and techniques in quantitative political analysis: multivariate model building.

514 Research and Methodology in Public Administration (3) Basic assumptions and techniques of research in public administration; measurement, analysis, and reporting of data.

520 Political Theory (3) Survey of major ideas, thinkers and works of Western political theory.

522 American Political Thought (3) Systematic examination of the normative and empirical theories of leading American political thinkers from the colonial period to the present.

530 American Government and Politics (3) Survey of literature, approaches to research and analysis, critical examination of major works, and overviews of research in various subfields. May be repeated with consent of department. Maximum 9 hrs.

532 Presidency (3) Systematic examination of the structure, functions and powers of the American presidency as they have evolved from the founding to the present.

533 Congress (3) Formal, empirical and theoretical approaches to and models of the institutional workings of Congress and the behavior of legislators.

535 Mass Political Behavior (3) Theoretical and empirical analyses of public opinion, political socialization, political attitudes and behavior, especially voting behavior.

537 Political Parties and Interest Groups (3) Theoretical and empirical examination of the structure, functions and operations of political parties and interest groups.

539 State and Local Government and Politics (3) Theoretical and empirical analyses of government, politics, policymaking and public administration at the state and local levels.

540 Public Law (3) Selective examination of published research and current approaches in subfields of constitutional, judicial process, and judicial behavior. May be repeated with consent of department. Maximum 9 hrs.

546 Law and the Administrative Process (3) Constitutional position; decisional processes, regulation and management; limitations on governmental action; questions of structure, role, and administrative choice. May be repeated with consent of department. Maximum 9 hrs.

549 Public Policy Process (3) Theoretical, formal and empirical analysis of the roles, functions and decision making processes of public policymakers, including legislative, executive and judicial actors.

550 Public Administration (3) Overview of public administration theory and function.

552 Organization Theory (3) Appraisal of major theories of organization and their applicability to public sector.

553 Management of Information Systems (3) Theory, design, development, implementation and evaluation of information systems in public organizations. Database systems, computer hardware and software, and training for management information technology.

556 Policy Analysis (3) Strategies and techniques for identification and analysis of public problems and policy solutions. May be repeated with consent of department. Maximum 9 hrs.

559 The Politics of Administration (3) Examination of public administration in context of American political system, policy making and political roles of public administrators and agencies. May be repeated with consent of department. Maximum 9 hrs.

560 Public Budgeting and Finance (3) Technical and political aspects of planning, preparing and adopting government budgets. Management implications of revenue collection, debt management, treasury function, accounting, internal auditing, purchasing, risk management, post-auditing.

562 Public Management (3) Interpersonal and leadership skills, techniques and methods for planning, decision making, and implementation of management strategies in public sector. May be repeated with consent of department. Maximum 9 hrs.


566 Ethics, Values, and Morality in Public Administration (3) Moral-ethical value dilemmas confronting administrators in American political system.

569 Internship in Public Administration (3-9) Open to students participating in approved internship programs. May be repeated with consent of department. Maximum 9 hrs. S/NC only.

570 Comparative Government and Politics (3) Selected topics in modern governments. May be repeated with consent of department. Maximum 9 hrs.

572 The Politics of Development (3) Selected topics dealing with political issues of less developed countries. May be repeated with consent of department. Maximum 9 hrs.

574 Area Seminar in Comparative Government and Politics (3) Selected topics in area studies: African, Asian, Latin American, Middle East, Soviet Union and Eastern Europe or Western Europe. May be repeated with consent of department. Maximum 9 hrs.

580 International Politics (3) Survey of literature and major aspects of international politics. May be repeated with consent of department. Maximum 9 hrs.

591 Foreign Study (1-15) See College of Liberal Arts.

592 Off-Campus Study (1-15) See College of Liberal Arts.

593 Independent Study (1-15) See College of Liberal Arts.

595 Readings and Special Problems in Political Science (1-3) Prereq: Consent of instructor. May be repeated. Maximum 15 hrs.

600 Doctoral Research and Dissertation (3-15) P/NP only. May be repeated. Maximum 15 hrs.

610 Special Topics in Empirical Theory and Methodology (3) Advanced methods and procedures of analysis in political science. May be repeated with consent of department. Maximum 9 hrs.

615 Formal Political Analysis (3) Assumptions, methods and applications of formal political models, including game theory, rational choice theory, and public choice theory, and mathematical modeling. May be repeated with consent of instructor. Maximum 9 hrs.

628 Topics in Political Theory (3) Selected issues and problems in normative political theory. Specific content determined by instructor. May be repeated with consent of instructor. Maximum 9 hrs.

639 Special Topics in American Government and Politics (3) Advanced study of selected topics. May be repeated with consent of instructor. Maximum 9 hrs.

640 Special Topics in U.S. Constitutional Law (3) Systematic analysis of published research and judicial decision: development of constitutional law as major component of public policy. May be repeated with consent of department. Maximum 9 hrs.

642 The Politics of Criminal Justice (3) Selective review of contemporary problems of research and public policy formulation: criminal process; law enforcement administration; criminal court administration; and prison administration. May be repeated with consent of department. Maximum 9 hrs.

654 Contemporary Public Policies (3) Problems in one or more public policy areas from political and administrative perspectives. Topics selected by instructor. May be repeated with consent of department. Maximum 9 hrs.

660 Contemporary Perspectives on Public Administration (3) Development of theory in public administration: contemporary critiques and alternatives. May be repeated with consent of instructor. Maximum 9 hrs.

667 Comparative Public Administration (3) Comparison of policy-making structures and public policies in selected countries. May be repeated with consent of department. Maximum 9 hrs.

668 Special Topics in Public Administration (3) Analysis of selected issues and problems in public administration. May be repeated. Maximum 9 hrs.

670 Special Topics in Comparative Government and Politics (3) Research into selected topics. May be repeated with consent of department. Maximum 9 hrs.

682 Theory and Analysis of U.S. Foreign Policy Processes (3) Theoretical approaches to decision making in foreign policy area and analysis of policy-making process. May be repeated with consent of department. Maximum 9 hrs.

688 Special Topics in International Politics (3) Selected issues and problems in international politics. Specific content determined by instructor. May be repeated with consent of instructor. Maximum 9 hrs.
Professors:
Burghardt, Gordon M., Ph.D. ..................... Chicago
Burstein, Alvin G., Ph.D. ......................... Chicago
Cahnoun, William H., Ph.D. ..................... California
Cohen, Charles P., Ph.D. ......................... Kansas
Fine, Harold J. (Emeritus), Ph.D. .......... Syracuse
Handel, Stephen J., Ph.D. ...................... Johns Hopkins
Handler, Leonard, Ph.D. ......................... Michigan State
Johnson, Michael G., Ph.D. ..................... Johns Hopkins
Jones, Warren H., Ph.D. ......................... Oklahoma State
Lawler, James E., Ph.D. ......................... North Carolina
Lawler, Kathleen A. (Liaison), Ph.D. ...... Chicago
Loubser, John W., Ph.D. ......................... North Carolina
Lounsbury, John W., Ph.D. ..................... Michigan State
Malone, John C., Ph.D. ......................... Duke
Newton, Kenneth R. (Emeritus), Ph.D. .. Tennessee
Pollic, Howard R. (Distinguished Prof.), Ph.D. ...... Michigan
Samejima, Fumiko, Ph.D. ....................... Keio
Saudargaitis, Richard S., Ph.D. ......... Florida State
Shrader, Raymond R. (Emeritus), Ph.D. .. Missouri
Shrader, Raymond R. (Emeritus), Ph.D. .. Missouri
Sundstrom, Eric D., Ph.D. ..................... Utah
Travis, Cheryll B., Ph.D. ......................... California (Davis)
Verplank, William S. (Emeritus), Ph.D. .... Brown
Wahler, Robert G. (Liaison), Ph.D. .... Washington
Wiberley, J. Albert (Emeritus), Ph.D. ..... Syracuse

Associate Professors:
McIntyre, Anne, Ph.D. ......................... Yale
Morgan, Wesley G., Ph.D. ..................... Tennessee
Nash, Michael R., Ph.D. ....................... Ohio
Assistant Professors:
Baldwin, Debra R., Ph.D. ....................... Kent State
Hopson, Ronald E., Ph.D. ..................... Michigan State
Wells, Deborah, Ph.D. ......................... Massachusetts

THE MASTER'S PROGRAM
Graduate study leading to the M.A. degree in psychology is available with a concentration in experimental psychology. This program is appropriate for students who desire a Master's degree as part of their progress toward a doctorate or for those who wish to complement a degree in a different field.

Admission
Any student with a B.A. or B.S. may apply to the Department of Psychology for admission to the Master's program. All students must also submit scores from the Graduate Record Examination (general and subject).

Major Advisor and Committee
Initially, the Director of Experimental Psychology will advise the student. As soon as possible, the student must select an advisor and obtain his or her approval for registration. Subsequently, the advisor and student will select two additional faculty members to comprise the student's Master's committee. Final committee approval comes from the Graduate Dean, upon recommendation by the Department Head.

Program Requirements
All students must complete 30 semester hours of graduate level courses in psychology. These hours must include 504-505, or Statistics 537-538 or an equivalent sequence; 420; six semester hours of Thesis 500; and twelve hours of 500- or 600-level foundation courses. Students must earn a grade of B or better in all courses that are to count toward the 30-hour total.

THE DOCTORAL PROGRAM
A student with a B.A. or B.S. may apply to the Department of Psychology for admission to the doctoral program with a concentration in general psychology or clinical psychology. The doctoral program with a concentration in psychology or clinical psychology is offered through the Life Sciences Program. Doctoral study in industrial and organizational psychology is offered through the Intercollegiate Program in Industrial and Organizational Psychology, to which application is made through the Department of Management.

Departmental Requirements
All students in the doctoral program in psychology must obtain a score of at least 630 on the GRE in psychology by the end of the first year, and all students must pass the departmental general psychology examination (a comprehensive, two-day essay exam offered twice each year) by the end of the second year. In addition, each student must pass the doctoral comprehensive examination, complete an acceptable doctoral dissertation, and conduct a satisfactory oral defense of the dissertation. All doctoral students must complete a minimum of 78 hours of graduate-level courses, including courses required by their program; at least 6 hours in courses outside of psychology; and at least 24 hours of dissertation research (Psychology 600).

General Psychology
This program allows students to select from a variety of specializations oriented toward careers in research and teaching in psychology in academic, institutional, or industrial settings. The program is highly flexible and individualized and seeks to provide a professional apprenticeship. Specializations include behavioral medicine and health psychology, child and adolescent development, cognitive and symbolic processes, conditioning and learning, ethology, existential phenomenology, psychometrics, psychophysiology, social psychology, and others. Requirements of the program are as follows:

1. Statistics 537-38, or equivalent, and two additional courses numbered above 500 in research methodology, quantitative methods, statistics, or psychometrics.
2. Competence in general psychology, demonstrated by completing Psychology 513 (Foundations of Psychology) or Psychology 565 (History and Systems of Psychology) or equivalent, plus at least one course or sequence or equivalent from each of four categories in the following list. (This requirement may be met by passing approved written examinations.)
   a. Biological psychology: 461-69 Physiological Psychology and Laboratory; 526 Neuroanatomy; 527 Behavioral Neurology.
   d. Developmental psychology: 511 Developmental Psychology; 512 Life-span Development; 574 Child Psychopathology.
5. Research practicum (509) - research apprenticeship involving participation in the ongoing research of two different members of the faculty during the first two semesters in the program.
6. Pre-dissertation research project completed during the second year, involving the collection of original data or original analysis of existing data, reported in publishable form and acceptable to the doctoral supervisory committee.
7. At least 4 graduate seminars in psychology numbered above 600.

Clinical Psychology
This program is designed to lay the groundwork for a career as a clinical psychologist capable of working in both academic and applied settings. The program emphasizes the theoretical foundations of psychology as well as supervised experience oriented toward the development of practical skills. The program embodies the scientist-practitioner model of clinical psychology. Requirements are as follows:

1. Apprenticeship with one faculty member during the first year, one day each week.
2. Pre-dissertation research project completed before forming a doctoral supervisory committee, reported in written form acceptable to the student's faculty advisor and the director of clinical training.
3. Supervised clinical placement two days (16 hours) each week during the second, third, and fourth years.
4. Satisfactory completion of listed courses (or equivalents) in the following nine categories:
   a. Foundations of Psychology (513);
   b. Measurement and Testing (445);
   c. Personality Theory and Research (570-71);
   d. Lifespan Development (512);
   e. Statistics and research methods (504 Empirical Methods in Psychology plus either 505 Research Design or 557 Applied Psychological Measurement);
   f. Psychopathology (572, 573, 574);
   g. Psychological Assessment (504-595, 596);
   h. Psychotherapy (670, 671, 673, 675);
   i. Ethical, Legal, and Professional Issues (635).
5. Satisfactory completion of at least 3 additional graduate-level courses in non-clinical topics in psychology.
6. Satisfactory completion of a one-year clinical internship at a site approved by the program.

MINOR IN GERONTOLOGY
Graduate students in the Department of Psychology may pursue a specialized minor in gerontology. This interdisciplinary/interdisciplinary minor gives the student an opportunity for combining the knowledge about aging in American society with his/her major concentration. Please refer to Human Ecology for specific requirements.
Religious Studies

(College of Liberal Arts)

Charles H. Reynolds, Head

Professors:
Dungan, David L., Th.D. ............... Harvard
Jeffferman, Thomas (Adjunct), Ph.D. Cambridge
Humphreys, W. Lee, Ph.D. ............. Union
Linge, David E., Ph.D. ................. Vanderbilt
Lusby, F. Stanley (Emeritus).
M. Div. ....................................... Colgate Rochester
Norman, Ralph V., Jr., Ph.D. .......... Yale
Reynolds, Charles H., Ph.D. .......... Harvard

Associate Professors:
Fitzgerald, James L., Ph.D. .......... Chicago
Gwynne, Rosalind W., Ph.D. .......... Washington
Hackett, Rosalind I. J., Ph.D. ....... Aberdeen
Hodges, John O., Ph.D. ............... Chicago
Levengoff, Miriam L., Ph.D. .......... Harvard

Assistant Professors:
Hulsether, Mark, Ph.D. ............... Minnesota
Schmidt, G.arda, Ph.D. ............... Pittsburgh
Tober, Linda (Adjunct), Ph.D. ......... Vanderbilt

A Master’s degree in Philosophy with a concentration in religious studies is available. (Details of this program are described under Philosophy.) Graduate courses in religious studies provide opportunity for students in a variety of disciplines to pursue work in religious studies as a graduate concentration.

GRADUATE COURSES

411 Modern Religious Philosophies (3) Religious implications of major Western thinkers and movements from Nicolas of Cusa to nineteenth-century German Idealists. (Same as Philosophy 411.)

412 Classical Indian Systems of Philosophy: Moksha Tradition (3) Investigation of selected writings and philosophical problems of traditions of Samkhya, Yoga, Vedanta, Buddhism, or Jainism. Prereq: 374 or 376 or consent of instructor. (Same as Philosophy 412.)

416 Jesus and Paul Compared (3) Central ideas and concepts of each person compared with equivalent concepts in the other. Advanced study of Gospels and Epistles of Paul, involving extensive independent research.

425 Seminar in Western Religions (3) Selected figures, themes, movements, and problems. Content varies. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.

430 Seminar in American Religion (3) Selected figures, themes, movements, and problems. Content varies. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.

435 Seminar in Asian Religion (3) Selected figures, themes, movements, and problems. Content varies. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.

440 Seminar in Comparative Religion (3) Selected figures, themes, movements, and problems. Content varies. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.

445 Theological Issues in Medical Ethics (3) (Same as Philosophy 445.)

490 Readings and Research in Religious Studies (3) Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.

499 Seminar in Religious Studies (3) For advanced students in religious studies; required for majors. Selected specific topics; nature and function of myth in religion, problem of evil, transcendence, theories of

Religion, hermeneutics, integrating various disciplines involved in study of religion. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.

532 Topics in the History of Religions (3) Prereq: Consent of instructor.

533 Topics in Religious Thought (3) Prereq: Consent of instructor.

591 Foreign Study (1-15) See College of Liberal Arts.

592 Off-Campus Study (1-15) See College of Liberal Arts.

593 Independent Study (1-15) See College of Liberal Arts.

Romance and Asian Languages

(College of Liberal Arts)

MAJORS DEGREES

French ........................................ M.A.
Spanish ....................................... M.A.
Modern Foreign Languages ........ Ph.D.

John B. Romeiser, Head

Professors:
Barrette, Paul E., Ph.D. .................. California
Brady, Patrick, D.U.P. ....................... Sorbonne
Cobb, Carl W., Ph.D. ....................... Tulane
Elliott, Jacqueline C. (Emeritus), M.A. .......... Illinois
Handelman, Michael H., Ph.D. .......... Florida
Hefflin, William H., Ph.D. ............... Florida State
Irving, Thomas B. (Emeritus), Ph.D. ... Princeton
Maurino, Ferdinando D. (Emeritus), Ph.D. ........ Columbia
Petroska, Maria (Emeritus), Ph.D. .......... Kentucky
Pinkas, Clara (Emeritus), Ph.D. .......... California
Rivera-Rodas, Oscar (Liaison), Ph.D. ........ California
Romeiser, John B. (Liaison), Ph.D. .......... Vanderbilt
Vazquez-Big, A. M. (Emeritus), Ph.D. .......... Minnesota
Wallace, Albert H. (Emeritus), Ph.D. .......... North Carolina
Washburn, Yulan M., Ph.D. ............... North Carolina

Associate Professors:
Campbell, Edmund J., Ph.D. ................ Yale
Creech, Bryant, Ph.D. ....................... California
DeRycke, Robert M., Ph.D. .................. Illinois
DiMaria, Salvatore, Ph.D. .................. Wisconsin
DiPuccio, Denise M., Ph.D. ............... Kansas
Duncan, Cynthia K., Ph.D. ............... Illinois
Evans, Karen D. (Liaison), Ph.D. .......... Kentucky

Assistant Professors:
Beauvois, Margarit, Ph.D. ................ Texas
Briozo, Flavia, Ph.D. ....................... Washington
Cazenave, Odile, Ph.D. ...................... Canada
Da Cruz, Jose, Ph.D. ....................... California
Ehrlich, Linda, Ph.D. ....................... Hawaii
Holmlund, Christine, Ph.D. ............... Wisconsin
LaCure, Jon, Ph.D. ......................... Indiana
Nakama, Constance, Ph.D. ............... Sorbonne
Wilkinson, Douglas, Ph.D. ............... Yale
Young, Dolly, Ph.D. ....................... Texas

The Department of Romance and Asian Languages offers two advanced degrees: the Master of Arts in French and in Spanish and the
THE MASTER'S PROGRAM

Thesis Option
1. Completion of a minimum of 24 semester hours in coursework plus at least 6 hours in course 500 Thesis. In French, 501 is required; in Spanish, 550. A maximum of 6 hours may be taken at the 400 level, the rest at the 500 level, and under certain conditions the student may take 600-level seminars. If the student chooses to have a minor (such as Italian or Portuguese), at least 24 hours (including 6 hours of thesis) must be taken in the major, 6 in the minor.
2. A thesis, with a minimum of 6 semester hours in course 500.
3. A written examination covering the coursework and selected items from a master reading list.
4. A final oral examination covering the thesis.

Non-Thesis Option
1. Completion of at least 30 semester hours, with a maximum of 9 at the 400 level, the rest at the 500 level, including 501 (French) or 550 (Spanish). Under certain conditions, the student may take 600-level seminars. If the student chooses to have a minor (such as Italian or Portuguese), at least 24 hours must be taken in the major, 6 in the minor.
2. Three term papers that have been accepted by the student's advisory committee.
3. A written examination covering the coursework and selected items from a master reading list.
4. A final oral examination discussing the thesis.

THE DOCTORAL PROGRAM

The Ph.D. in Modern Foreign Languages is offered jointly by the Department of Germanic and Slavic Languages and the Department of Romance Languages and requires advanced training in at least two foreign languages.

Admission Requirements
Applicants must have completed a B.A. in either French, German, or Spanish to be accepted into this program. Both graduates of institutions in the United States and those with undergraduate degrees from institutions outside the United States must have a grade point average of at least 3.0. Consideration will also be given to applicants who do not have an undergraduate degree in one of the three foreign languages but do have the equivalent of an undergraduate major in one of them.

Requirements for the Ph.D.
Candidates must complete a minimum of 63 semester hours of coursework beyond the Bachelor's degree, distributed as follows:
1. First Concentration: French, German, or Spanish. It consists of a minimum of 39 semester hours beyond the Bachelor's degree, distributed as follows:
   - A maximum of 6 hours of 400-level classes taken for the M.A. may be applied.
   - A minimum of 21 hours at the 500 level (exclusive of thesis hours) including French 584 (3), German 550 (3), or Spanish 550 (3); German 512 (3), French 512 (3), or Spanish 512 (3); French 515-16 (2,2) or German 520 (3).
   - At least 12 hours at the 600 level (exclusive of dissertation hours).
2. Second Concentration: French, German, Italian, Russian, or Spanish (different from the first concentration). It consists of at least 18 hours of courses beyond the Bachelor's degree, at least 12 of which must be at the 500 or 600 level.
3. Cognate Field: Six hours must be in graduate courses numbered 400 and above in a field outside the department of the first concentration but related to the student's principal area of research. If the cognate field is yet a third foreign language, a reading proficiency exam will be administered after completion of the 6 cognate hours by the language section concerned.
   - The coursework for Track II must be distributed as follows: (1) at least 45 hours in the first concentration; (2) at least 12 hours in the second concentration; and (3) at least 6 hours in a cognate field.
   - First Concentration: French or Spanish. It consists of 45 semester hours beyond the bachelor's degree, distributed as follows:
     - A maximum of 6 hours of 400-level classes taken for the M.A. may be applied.
     - A minimum of 27 hours at the 500 level (exclusive of thesis hours) including French 584 (3) or Spanish 550 (3); French 512 (3) or Spanish 512 (3); and French 516 (2) or the appropriate Spanish course.
   - At least 12 hours at the 600 level (exclusive of dissertation hours).
2. Second Concentration: French, German, Italian, Portuguese, Russian, or Spanish (different from the first concentration). It consists of at least 12 hours, with a minimum of 3 hours at the 500 level. Students are encouraged to take classes that complement the primary area of expertise in the first concentration, so that this second concentration will be a useful research tool for the dissertation and future professional activities. (Because Track II students will have taken 12 graduate hours instead of 18 hours in the second concentration, they will normally not be eligible to teach that language at institutions which follow SACS guidelines for college foreign language teaching.)
3. Cognate Field: Six hours must be in courses numbered 400 and above and in a field outside the candidate's major, if the student has not chosen a third foreign language as his or her cognate area, basic competence (determined by a reading examination with translation into English administered by the department concerned) in a third language is required. If the student's first and second languages are Romance languages, the third language should be chosen from another language family.

A comprehensive examination on the language and literature of the first and second concentrations must be passed before the student may be admitted to candidacy. The candidate is required to defend his/her dissertation in an oral examination. Central emphasis is put on the doctoral dissertation as a final test of the candidate's scholarly qualifications.

Graduate Teaching Assistants in the program should have the opportunity and will be strongly encouraged to instruct at least two foreign languages, subject to staffing needs.

The program should have the opportunity and will be strongly encouraged to instruct at least two foreign languages, subject to staffing needs.

Doctoral students are strongly encouraged to reside and study abroad and will be assisted in identifying potential sources of financial support (e.g., Fulbright, McClure, Rotary fellowships). For additional courses, see Germanic and Slavic Languages.

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 Modern Foreign Languages is available to residents of the state of Alabama or Kentucky. Additional information may be obtained from the Admissions Specialist in the Office of Graduate Admissions and Records.

Asian Languages

GRADUATE COURSES
431 Readings in Chinese Literature (3) Prerequisite: Mastery of intermediate level Chinese or consent of instructor. May be repeated. Maximum 9 hrs.
451 Readings in Japanese Literature (3) Prerequisite: Mastery of intermediate-level Japanese or consent of instructor. May be repeated. Maximum 9 hrs.
471 Selected Topics in Asian Studies (3) Content varies. May be repeated. Maximum 9 hrs.

French

GRADUATE COURSES
410 Medieval French Literature (3) Major representative works of medieval French literature. Texts in modern French. Prerequisite: 212, 218 or equivalent.
411 French Literature of the 16th Century (3) Highlights of 16th-century French literature. Excerpts from Rabelais and Montaigne; readings of poems from writers from Lyon and members of the Pléiade. Prerequisite: 212, 218 or equivalent.
412 French Literature of the 17th Century (3) Major representative works of 17th-century French literature. Texts in modern French. Prerequisite: 212, 218 or equivalent.
413 French Literature of the 18th Century (3) Major works of Enlightenment. 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 through 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. Stresses in-class contact rather than outside preparation. Prereq: 342 or 345, 2 hrs weekly.
425 Introduction to Descriptive Linguistics (3) Phonetics and phonemics, morphology and syntax. Types of language, families, dialects, and dialect geography. Application of descriptive linguistics—field linguistics, dialect study; its practical use in learning languages, by practitioners in professional fields, and in languages other than French. 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 301-02). Required of all majors. May be repeated with consent of department.
426 Methods of Historical Linguistics (3) (Same as German 426, Russian 426, Spanish 426, and Linguistics 426.)
428 Romance Linguistics (3) Development of Classical Latin through Vulgar 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, 216 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 de Champlain and Journals de Jasselin, and works 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 explication de texte. A course in critical theory and premodern approaches. 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.
531 French Literature of the 16th Century I (3) Literature of the first half of the 16th century. Rabelais and other prose writers, humanists, and poetry of Marot, Lyonnaise group, and young Pleiad poets.
532 French Literature of the 16th Century II (3) Literature of the second half of the 16th century, mature works of Pleiade writers and such poets, as d'Amboïgne and Sponde; Montaigne; writers of scientific works and memoirists; dramatists; playwrights.
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.
571-72 Trends in Modern French Literature (3,3) In-depth study of some of most revolutionary, challenging periods, and nonrevolutionary movements of 20th century. Prereq: 342 or 345.
581-82 The French Novel (3,3) French novel from the 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 critical ideas utilized over centuries and applied to various types of literature. Prereq: 212 or equivalent.
591 Foreign Study (1-15) See College of Liberal Arts.
592 Off-Campus Study (1-15) See College of Liberal Arts.
593 Independent Study (1-15) See College of Liberal Arts.

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 Petrarch to Tasso; Guarino 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: Italian 212 or consent of instructor.
409 Directed Readings (3)

410 Italian Theatre (3) Survey of Italian theatre from Renaissance to present. Prereq: Intermediate Italian or consent of instructor.
421 Topics in Italian Literature and Cinema (3) Italian literature and cinema from 1830 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 since 1830. Films in Italian with English subtitles. May be repeated. Maximum 6 hrs. (Same as Cinema Studies 421.
510 Readings in Italian Literature (3) Topics vary. May be repeated with consent of department.
591 Foreign Study (1-15) See College of Liberal Arts.
592 Off-Campus Study (1-15) See College of Liberal Arts.
593 Independent Study (1-15) See College of Liberal Arts.

Portuguese

GRADUATE COURSES
431-32 Topics in the Literature & Language of Portuguese-speaking World (3,3) Outstanding works of literature and culture from Portuguese countries. Topics may vary. Prereq: At least one course at the 300 level or the equivalent. May be repeated with consent of department.
591 Foreign Study (1-15) See College of Liberal Arts.
592 Off-Campus Study (1-15) See College of Liberal Arts.
593 Independent Study (1-15) See College of Liberal Arts.

Spanish

GRADUATE COURSES
401 Phonetics (3) Prereq: Intermediate Conversation and Composition or consent of instructor.
402 Advanced Grammar (3) Finer points of grammatical structures. Required of all majors. Native speakers must receive consent of instructor. Prereq: Intermediate Conversation and Composition or consent of instructor.
422-24 Advanced Conversation and Composition (3,3) Advanced conversational and written skills in Spanish for pre-professionals. Native speakers must receive consent from instructor to take course. Prereq: 423: Intermediate Conversation and Composition or consent of instructor. Prereq: 423: Advanced Conversation and Composition or consent of instructor.
425 Introduction to Descriptive Linguistics (3) (Same as French 425, German 425, Russian 425, and Linguistics 425.)
426 Methods of Historical Linguistics (3) (Same as German 426, French 426, Russian 426, and Linguistics 426.)
428 Romance Linguistics (3) (Same as French 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.
435-36 Survey of Spanish Literature (3,3) 435—Spanish literature through Golden Age. 436—Spanish literature since 1700. Prereq: 311, 312.
450 Hispanic Drama (3) Close reading and analysis of representative works by selected dramatists of Spain and Spanish America. Topics vary. Prereq: Aspects of Spanish and Spanish-American literature or consent of instructor. May be repeated with consent of department. Maximum 6 hrs.
451 Hispanic Prose (3) Close reading of selected works of prose fiction and essays by major writers from Spain and Spanish America. Topics vary. Prereq: Aspects of
Spanish and Spanish-American Literature or consent of instructor. May be repeated with consent of department. Maximum 6 hrs.

542 Hispanic Poetry (3) Major poets of each period, either Spanish or Spanish-American. Topics vary. Pre-req: Aspects of Spanish and Spanish-American Literature or consent of instructor. May be repeated with consent of department. Maximum 6 hrs.

549 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. Pre-req: 311, 312 or equivalent.

461 Special Topics (3) Aspect of Hispanic literature, culture, linguistics, or foreign language pedagogy. Topics vary. May be repeated with consent of department. Maximum 6 hrs.

471 Latin American Civilization (3) Latin America's diverse heritage and major social and political institutions. Pre-req: 311, 312 or equivalent.

573-74 Survey of Spanish American Literature (3,3) Historical survey from Conquest to late 19th century. Pre-req: Major literature courses. Writers and works of Spanish America. May be repeated. Maximum 6 hrs.

579 Social Protest Literature of Latin America (3) Analysis of literature as means of unmasking social ills that have traditionally beset Latin America. Indigenismo, Black literature, problems of the malechita. Pre-req: 311, 312 or equivalent.

582 Advanced Communication Skills for Teachers (3) Warrants their being excused by department. Except those whose previous training or experience may be repeated. S/NC 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

512 Teaching a Foreign Language (3) Practical application of methods for teaching and evaluating basic 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.

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 others preparing to seek maintenance or enhancement of 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 16th centuries.

533 Golden Age Prose (3) Wide range of prose fiction in Spain during 16th and 17th centuries. Moorish, pastoral, pastoral and exemplary novels, and dialogues.

534 Don Quixote (3)

535 Golden Age Poetry (3) Garcilaso, Fray Luis de León, San Juan de la Cruz, Lope de Vega, Quevedo, and Góngora.

537 Golden Age Drama (3) Major dramatists of period: Lope de Vega, Tirso de Molina, Rubén de Darío, Guillén de Castro, Calderón de la Barca, Moreto, and Rojas Zorrilla.

542 The Generation of '36 and Ortega (3) Unamuno, A. Machado, Azorin, Valle-Inclán, Benavente, Ortega y Gasset.

543 The 20th-Century Spanish Novel (3) Baroja, Azorín, Valle-Inclán, Pérez de Ayala, Cela, Delibes, Goizsola, Malalde, and at least one present-day novelist.

545 Modern Spanish Poetry (3) From Bécquer, Unamuno, A. Machado, Jiménez, Lorca, Guillén, Alexandre, and contemporary, Celya.

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 6 hrs.

552 Directed Readings (3)

561 Spanish American Colonial Literature (3) From pre-Columbian era through 18th century. Reading and analysis of selected works from Colonial Spanish American period and their Continental sources. Indigenous texts and authors.

562 Nineteenth-Century Spanish American Literature (3) From early nineteenth century to 1880. Content varies with regard to genre, theme, literary movements, or other aspects contributing to definition of Spanish American literature.


573 The Spanish American Novel: Chile and the River Plate Nations (3) Novels from Chile, Argentina, Uruguay and Paraguay. Modern period.


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, theory and criticism of genre.

591 Foreign Study (1-15) May be repeated. Maximum 6 hrs.

592 Off-Campus Study (1-15) May be repeated. Maximum 6 hrs.

593 Independent Study (1-15) May be repeated. Maximum 6 hrs.

600 Doctoral Research and Dissertation (3-15) May be repeated. S/NC only. E

621 Seminar in Spanish Language (3,3) Topics vary in field of Peninsular literature. May be repeated with consent of department. Maximum 9 hrs.

631 Seminar in Spanish Literature (3,3) Topics vary. May be repeated with consent of department. Maximum 9 hrs.

Rural Practice

(College of Veterinary Medicine)

MAJOR DEGREE

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

E. M. Green, Head

Professors:


Associate Professors:


Assistant Professors:


Residents:


Interns:

Collazo, J. D. V.M. ............... Louisiana State Lentz, L., D.V.M. .............. Minnesota

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

Russian

See Germanic and Slavic Languages

Social Work

(College of Social Work)

MAJOR DEGREES

Social Work ..................... M.S.S.W., Ph.D.

Eunice Shatz, Dean

Professors:

McLarnan, G. (Emeritus), M.S.S.W. .................... Tennessee
Mullins, M. Kate (Emeritus), Ph.D. .............. Chicago
Noee, Roger M., D.S.W. ........................... Tulane
Orten, J. D., D.S.W. ................................. Alabama
Rubenstein, H., Ph.D. ................................. Chicago
Schatz, Eunice, Ph.D. ................................. Brandeis

Associate Professors:
Bell, W. J., D.S.W. ...................................... Tulane
Charging, J. W., Ph.D. ............................... Peabody
Cruthirds, C. Thomas, D.S.W. ................. Tulane
Fiene, Judith, Ph.D. .................................. Tennessee
Jennings, G., Ph.D. ..................................... Michigan
Moses, A. E., D.S.W. ................................. California
Nugent, W., Ph.D. .................................... Florida State
Orme, J., Ph.D. ........................................ Washington (St. Louis)
Spicuzza, Frank, M.S.S.W. ......................... Tennessee
Vaughn, H., Ed.D. ..................................... Memphis State

Assistant Professors:
Campbell, P. M., D.S.W. ............................. Alabama
Collier, J. C., M.S.W. ................................ Tulane
Crawford, S., M.S.W. ............................... Texas
Jones, J., Ph.D. ......................................... Bryn Mawr
Patterson, D., Ph.D. .................................... Utah
Resnick, C., Ph.D. ..................................... Yeshiva
Spaulding, E., Ph.D. ................................. Smith
Thompson, J., Ph.D. ................................. Rutgers

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

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

Admission 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 2.7 on a 4.0 scale, with preference given to applicants with 3.0 and above.
3. Personal qualifications acceptable for entrance into the professional practice of social work.
4. A B.S.W. from an accredited program, an overall undergraduate GPA of 3.0 or greater, and 3) personal qualifications acceptable for entrance into the professional practice of social work. Students admitted into advanced standing are required to complete a minimum of 42 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 plan 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 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 57 semester credit hours including a) completion of foundation courses and field practice (15 hours), b) the course Social Work with Oppressed Populations (3 hours), and c) at least six courses (18 hours) and three semesters of field practice (15 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 four basic areas required of all students before entering either of the concentrations. 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 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 evaluation of effective social welfare 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 actively participates 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 values, 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, only the 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 a S/N/C 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 courses. Students interested in proficiency examinations are referred to The Graduate School statement describing the procedure for applying for examination.

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.

The program consists of foundation courses, elective courses, and dissertation research. The courses are available only in Knoxville. Students and their committees can develop a plan for completing their research in Nashville and Memphis based on the availability of dissertation resources.

Admission Requirements

The Ph.D. program is designed for students who have completed a Master's degree in an accredited college of social work and have post-Master's social work/social welfare 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, planning, and evaluation 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 begun 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 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 foundation curriculum. The comprehensive examination is administered by members of the doctoral committee and is designed for the student to demonstrate comprehensive knowledge of the major and cognate areas and 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.

MINOR IN GERONTOLOGY

Graduate students in the College of Social Work may pursue a specialized minor in gerontology. This interdisciplinary/interdisciplinary minor gives the student an opportunity for combining the knowledge about aging in American society with current concentration. Please refer to Human Ecology for specific requirements.

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.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 Admissions Specialist in the Office of Graduate Admissions and Records.

GRADUATE COURSES

NOTE: 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) P/NP only. E

502 Registration for Use of Facilities (1-15) Required for the student not otherwise registered during any semester when assigned to class. May not be used toward degree requirements. May be repeated. S/NC only.

506 Practicum in Social Work Research (1-6) 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.

509 Graduate Seminar in Public Health (1) (Same as Public Health 509, Nutrition 509, Physical Education 509 and Nursing 509.)

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.

512 Social Work Practice (3) Basic theory, values, and methodology generic to social work practice at various system levels 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 interpersonal and intercultural, psychological, and social variables, implications of culture, race, ethnicity, and gender. Prereq: Admission to college or consent of instructor. F,Sp

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-making process through governmental social change through which aggregate social welfare services are proposed, authorized, financed, and programmed. Theories of complex organizations applied to social welfare service delivery settings. Prereq: Admission to college or consent of instructor. Sp

518 Social Work with Oppressed Populations (3) 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- ing conditions, ethnicity and race. Prereq: Admission to college or consent of instructor. F

520 Social Work Treatment with Individuals and Families (3) Nature and practice of work 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 practices 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. F,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 and 520, 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 modes, perspectives on family dynamics and interaction, and techniques of treatment and their application to families 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 relationship, and application of treatment approaches and skills for 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 clients. Models of social welfare administration, theoretical perspectives, context for designing organizational structure and processes, planning, developing, and implementing 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 allocation in human service organizations. Knowledge and skills in accounting, budgeting and auditing, techniques in fundraising, grant writing, marketing, 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 design and implementation, evaluative research design 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 within context of organization and its environment. 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 area or field of practice. Prereq: Foundation or consent of instructor. 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.

554 Social Policy Analysis (3) Techniques for assessing social, political, and economic implications of social policy proposals. Prereq: Foundation or consent of instructor.

561 Field Practice (3) Instruction and supervision in social work practice. Prereq or coreq: 512. S/NC only. E

561 Field Practice (3) Instruction and supervision in social worker practice. Prereq or coreq: 512. S/NC only. F

562 Social Work and Black Families (3) Historical and contemporary issues about black family systems. Development of frameworks to assess and plan for black families within service delivery systems. Prereq: Foundation or consent of instructor.

563 Social Aspects of Illness (3) Social, cultural, medical, and psychological factors underlying 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 alcoholism and drug abuse and addiction; recent research and treatment innovations. Prereq: Foundation or consent of instructor.

566 Social Gerontology (3) Physical, psychological, and social aspects of aging. Major social policies and programs. Prereq: Foundation or consent of instructor.

580 Field Practice (3) Instruction and supervision in social work practice. Prereq or coreq: 512. S/NC only. E

581 Field Practice (3) Instruction and supervision in social work practice. Prereq or coreq: 512. S/NC only. F

582 Field Practice (6) Instruction and supervision in social work practice. Prereq or coreq: 512. S/NC only. Sp

583 Field Practice (6) Instruction and supervision in social work practice. Prereq or coreq: 512. S/NC only. Sp

584 Field Practice (2-6) Instruction and supervision in social work practice. Prereq or coreq: 512. May be repeated. S/NC only. E

593 Independent Study (1-6) Individualized study, student selects, designs, and completes examination of special issue or problem. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs. F, Sp

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

601 Research for Social Work Practice I (3) Epistemological and methodological considerations for both quantitative and qualitative research for social work practice. F

602 Research for Social Work Practice II (3) Epistemological and methodological considerations for both quantitative and qualitative research for social work practice. Sp

604 Research in Social Service Settings (3) Advanced research, under faculty supervision, of practice issues in community agency, Prereq: First year required. Ph.D. courses or consent of instructor. May be repeated. Maximum 9 hrs. F, Sp

606 Research for Social Work Practice, Programs and Policy (3) Techniques and strategies for quantitative and qualitative analysis for social policy's impact on individuals and groups and for evaluating processes and outcomes of social work practice. F


613 Social Work Practice and Its Social Context II (3) Critical analysis of knowledge bases of major practice in administration and planning. Sp

640 History of American Social Work (3) Social, cultural, economic and political contexts for development of social work profession, development of education for profession, and modern welfare system. F


693 Directed Study in Social Work Research (3) Advanced individual study, under faculty guidance, of social work research issues. Prereq: First year required. Ph.D. courses or consent of instructor. May be repeated.

Sociology
(College of Liberal Arts)

MAJOR

DEGREES

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

Michael L. Benson, Head

Professors:

Betz, D. Michael, Ph.D. ...................... Michigan State
Black, James A., Ph.D. ....................... Iowa
Cleland, Donald C., Ph.D. ............ Michigan State
Hastings, Donald W., Ph.D. .............. Massachusetts
Hood, Thomas G., Ph.D. ................. Duke
Ploch, Donald R., Ph.D. ................. North Carolina
Shover, Neal, Ph.D. ....................... Illinois
Wallace, Samuel E., Ph.D. ............. Minnesota

Associate Professors:

Benson, Michael L., Ph.D. ............... Illinois
Cable, Sherry, Ph.D. ....................... Penn State
Gaventa, John P., Ph.D. .................... Oxford
Kurth, Suzanne B., Ph.D. .............. Illinois (Chicago)
Perrin, Robert G. (Liaison), Ph.D. .... British Columbia

Assistant Professor:

Jalata, Asafa, Ph.D. ................. SUNY (Binghamton)

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 551, 553, and 555. The energy, environment, and resource policy concentration includes 560, 563, 661, 662, 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. New students are admitted in fall semester only and applications must be received by the Graduate Admissions and Records Office by January 1.

ADMISSION REQUIREMENTS

1. Acceptable scores on the general Graduate Record Examination (GRE) scores in sociology are requested but not required.

2. Three letters of recommendation (forms may be obtained from the department).

3. Completion of the appropriate previous degree (baccalaureate or higher) and 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, Statistics 531, 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 material 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, Statistics 531, and one of the following: Sociology 504, 505, or 560. Sociology 634, 632, and Statistics 532 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 follow one of the following approaches:

1. 6 hours in one of the department's concentrations and 6 hours in a...
MINOR IN GERONTOLOGY

Graduate students in the Department of Sociology may pursue a specialized minor in gerontology. This interdepartmental/interdisciplinary minor gives the student an opportunity for combining the knowledge about aging in American society with his/her major concentration. Please refer to Human Ecology for specific requirements.

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 Admissions Specialist in the Office of Graduate Admissions and Records.

GRADUATE COURSES

405 Sociology of Sport (3) Social meaning, organization, and processes of sport. Prereq: 291 or consent of instructor. (Same as Physical Education 406.)

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; affect of society on older people.


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

450 Organizational and Corporate Crime (3) Analysis of crime and deviance committed by organizations. Case studies of corporatization of collective identity, 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 technology. (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.)

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

502 Registration for Use of Facilities (3-15) Required for the student not otherwise registered during any semester when student uses University facilities 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 and conflict.

505 Foundations of Criminology (3) Critical overview of contemporary developments in criminology, theories of crime causation and theories of responses to crime. 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 techniques. 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, qualitative and quantitative data collection techniques, data reduction, and analysis.

534 Advanced Sociological Analysis (3) Underlying assumptions and logical procedures used by sociologists in relating explanatory models to sociological research strategies and techniques.

540 Occupations (3) Involvement in work and society, technologies, economic stratification, and social organizations.

541 Collective Behavior, Social Movements, Social Change (3) Basic theory and research on conditions of social unrest in human collectivities and efforts of collective 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 development 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 analysis.

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

585 Seminar in Gerontology (1-3) (Same as Human Ecology 585, Educational and Counseling Psychology 585, Nursing 585, Psychology 585, Public Health 585, Human Performance and Sport Studies 585, and Social Work 585.)

591 Foreign Study (1-15) See College of Liberal Arts.

592 Off-Campus Study (1-15) See College of Liberal Arts.

593 Independent Study (1-15) See College of Liberal Arts.

594 Social Theories of Sport (3) (Same as Physical Education 515.)

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

599 Readings (3) Selected topics. May be repeated. Maximum 8 hrs.

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

622 Sociological Theory II (3) Distinct schools of sociological theory and contributors of their principal exponents. Prereq: 521 or consent of instructor.

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

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

636 Field Research (3) Research experience in selected fields using techniques of interviewing, partici-
Special Programs

James R. Stokely Institute

Lynn Champion, Director

The Stokely Institute curriculum comprises three seminars which are offered once annually during the summer term. The seminars are interdisciplinary in focus and are taught by faculty representing the humanities and fine arts, the natural sciences and the social sciences. The content of the three seminars embraces those 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. Seminar participants are encouraged to think critically and to reflect on the intellectual and practical implications of their learning.

Enrollment in the following courses is restricted to participants in the James R. Stokely Institute Fellows Program in the College of Liberal Arts 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

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 drawing on history of science, critical figures in shaping of scientific thought, and methodology for observation and experimentation in natural sciences.

530 Social Science Perspectives in the Liberal Arts (2) Seminar on nature of inquiry in social sciences. Emphasis on methodology for observation and research in study of human beings, their social environments and their behavior.

Special Services Education

(College of Education)

MAJORS

Special Education............................ M.S.
Rehabilitation Counseling.................... M.S.
Education........................................ Ph.D.

Laurence J. Coleman, Head

Professors:

- Benner, Susan M., Ed.D. ................. Columbia
- Coleman, Laurence J., Ph.D. ............ Kent State
- Doll, E. E. (Emeritus), Ph.D. .......... Pennsylvania
- Frey, Roger M. (Emeritus), Ed.D. ...... Illinois
- George, Thomas, Ed.D. ................. Tennessee
- Kronick, Robert F., Ph.D. ............. Tennessee
- McClam, T., Ph.D. ....................... South Carolina
- Miller, James H., Ed.D. ............... Auburn
- Schindler, W. Jean, Ph.D. ............. Kent State
- Welch, Ola, Ed.D. ....................... Tennessee
- Woodrick, William E., Ed.S. ........ Mississippi

Associate Professors:

- Cassell, Jack L., Ph.D. ............... Kansas
- Colvin, Craig R., Ed.D. .......... Virginia
- Hannum, Michael C., Ed.D. .......... Northern Colorado
- Greenberg, Katherine H., Ph.D. ...... George Peabody
- Mukay, S. Wayne, Ph.D. ............ Florida State

Assistant Professors:

- McLean, J. D., Ph.D. .................. Chicago
- Warden, K., Ph.D. ....................... Tennessee

Instructors:

- Ashmore, Don L., M.S. ............... Tennessee
- Barnes, Wendell W., Jr., M.Ed. .... Georgia
- Butterworth, J., Ph.D. .................. Vanderbilt
- Griffin, M., M.S. ....................... Tennessee
- Lacava, C., M.S. ....................... Tennessee
- Sandefur, R., M.S. ..................... South Carolina

Lecturer:

- Byrd, H. L., Jr., M.S. .................. Tennessee

The Department of Special Services Education offers graduate programs leading to the Master of Science with a major in Special Education or in Rehabilitation Counseling. The department also participates in the Doctor of Philosophy program in Education as described under Education.

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 certification in specific licensure areas). 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 39 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 27 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, physical-health 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 area should be taken. Approved specializations include affective/motivational approaches, assessment/management, cognitive, educational, 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 University, in program institutions, in program programs in the state or in programs for the hearing impaired in North Carolina, Kentucky, Georgia, 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 serving in various public and private settings. Students should expect to spend four semesters, including summer, in classwork and in internship. The program requires 54 semester hours. Thesis and non-thesis options are available.

ADDITIONAL PROGRAMS
Under the sponsorship of the Office of Special Education and Rehabilitative Services (R.S.A.), special emphasis is placed on 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 postsecondary 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 legal residents of some states to enroll in certain programs at UT Knoxville on an in-state tuition basis. The M.S. program in Special Education is available to residents of the states of Kentucky (concentrations in hearing impaired and early childhood only), South Carolina (concentration in hearing impaired only), Virginia (concentration in hearing impaired only), or West Virginia; the M.S. in Rehabilitation Counseling is available to residents of Alabama. Additional information may be obtained from the Admissions Specialist 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/NC only. Sp, Su

415 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.


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

420 Psychology and Education of Students with Mild Disabilities (6) Nature and characteristics of mild handicapped students with mental retardation, learning disabilities, physical handicap, emotional disturbance, educational disabilities, and emotional disturbance. Educational strategies found effective in modified classrooms; assessment, diagnosis, legal ramifications as well as psycho-social and pre-vocational aspects. Collaborative approaches to programming. Prereq: Special Education Principles, Special Education Strategies and Admission to Teacher Education and Curriculum and Instruction 422. Coreq: 425. S/NC only.

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

423 Communication Processes for the Hearing Impaired (3) Expressive and receptive vocabulary development and sign communication 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. Overview of research related to psychology, social adjustment, communication methodology, 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 these 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) Prereq: Special Education Principles and Special Education Strategies, Admission to Teacher Education and Curriculum and Instruction 422. Coreq: 430. S/NC only.

433 Observation of Clinical Practice (1) (Same as Audiology and Speech Pathology 433.)

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

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


456 Speech and Language Basis of Learning Disabilities in the Classroom (3) Normal communication development; understanding of speech and language impairments in school-age children; integration of oral/written communication into existing 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 examine, upon particular exceptionality, 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: 482.

472 Audiology I (3) (Same as Audiology and Speech Pathology 472.)

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

483 Clinical Practice in Communication Disorders in Schools (3) Supervised practice with children with communication disorders. Prereq: 473, 434 (80-100 clinical contact hrs.), 482.

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

500 Thesis (1-15) S/NC 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 requirement. May be repeated. S/NC only.


504 Clinical Experience in Teaching and Supervision of Exceptional Children (3-6) Placement in educational settings. May be repeated. Maximum 9 hrs. 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, and vocational, diagnostic 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; skills and knowledge for implementing instructional objectives in consultation with other professionals with whom the student is associated in educational, vocational and/or related fields.

511 Teaching in Hearing Impaired (3) Receptive and expressive language capabilities of hearing impaired. Designing, teaching, and testing unit of instruction for remediation of specific language errors. Prereq: 522.

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 development. Prereq: Prior sign language experience or consent of instructor.

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


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,
543 Medical Aspects of Disability (3) Etiology and Psychosocial Aspects of Exceptionalities (3) Educational counseling, and report writing.

541 Psychiatric Evaluation: Statistical Methods (3) Process principles and techniques used to determine vocational assets and liabilities of 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 behavior and vocational potential. Selection and use of occupational exploration programs and work compacts; application of situational tasks, job tryouts, and simulated work experiences in vocational evaluation. Clinical interpretation of data; summary report; 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. Exploring 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. Ration to loss, coping with disability, and societal rehabilitation.

543 Medical Aspects of Disability (3) Etiology and clinical syndromes related to disabling conditions served by special education and rehabilitation personnel. Restorative measures to eliminate or minimize resulting handicaps. Skills necessary to communicate with lay and professional persons.

545 The Rehabilitation Interview (3) Interview as used in assessment and planning with people who have disabilities and vocational handicaps. Supervised experience.

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 hours required).

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

552 Instructional Systems in Cognitive Education for Disabled Learners (3) Informal and dynamic assessments; application of 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 other innovative assessment approaches; advanced study of application to educational programming; basic statistics and application in assessment.

554 Assessment in Early Childhood Special Education (3) Development of knowledge and skills in appropriate formal and informal assessments of handicapped infants and young children. Development, implementation, diagnosis, placement and programming assessment issues. Prereq: 553 or consent of instructor.

555 Characteristics of Affective/Motivational Functioning in Children with Disabilities (3) Definition, methods, identification and symptoms of children with affective/motivational development in disabled youngsters. Comparison to normal development and that of children labeled disturbed or behavior disordered.

556 Instructional Systems for Affective/Motivational Education for Children with Disabilities (3) Educational strategies and models of instruction; situation, demonstration, and media. Teaching techniques, materials and teacher/pupil family interactions. Therapeutic forms of intervention through art, music, role play, play therapy, bibliotherapy, and group interactions. Prereq or coreq: 555 or consent of instructor.

557 Neuromuscular and Health Disorders: Education Implications (3) Neurophysiological systems, physical disabilities and special health conditions, assessment. Investigation of instructional techniques and adaptations.

564 Psychosocial Development of Gifted and Talented Children (3) Phenomenon of talent development. Content in context of home, school, and society. Implications of maltreatment. Practices for promoting social and emotional development. Prereq: 451 and 452 or equivalent or consent of instructor.

565 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/NC or letter grade.

585 Seminar in Research Techniques in Special Education (3) Evaluation of appropriate research methodologies with handicapped populations.


590 Application of Microcomputer Technology in Special Education and Vocational Rehabilitation (3) Application of microcomputer 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 practice 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. Development of assistive technology services; software programs and assistive devices; delivery systems, interdisciplinary evaluation/planning, and funding issues.


595 Clinical Experience in Assessment and Instruction (3) Academic remediation applied in lab/field setting: tasks related to teaching; assessment, preparation of lessons, and delivery of instruction. Coreq: 553 or letter grade. P

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

601 Seminar in Educational Theories in Special Education and Rehabilitation (3) Education theories: education and rehabilitation of exceptional persons. Theory 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 in Special Education and Rehabilitation (3) Development and implementation of research. 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/NC only.

610 Internship in Research in Special Education and Rehabilitation (3-9) Placement with professional employing the theoretically-based research: public school, institutions, agencies or university settings. Prereq: 9 hrs in statistical research and methodology. May be repeated. Maximum 9 hrs. S/NC only.

690 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/NC only.

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

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**Speech Communication**

(College of Liberal Arts)

Faye D. Julian, Head

Professors:

Julian, Faye D., Ph.D. .................................... Tennessee

Lester, Lorayne W., Ed.D. ............................ Tennessee

Yeomans, G. Allan (Emeritus), Ph.D. .............. Louisiana State

Associate Professors:

Ambrester, M. L., Ph.D. ............................... Ohio

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

Arnold, Christa L., Ph.D. ............................. Florida

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.

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

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

466 Rhetoric of the Woman's Rights Movement to 1930 (3) Historical and critical study of public address in campaign for women's rights in United States from 1830's through 1920's. (Same as Women's Studies 468.)
476 Rhetoric of the Contemporary Feminist Movement (3) Historical and critical study of rhetoric in campaign for women's rights in United States from 1940's to present. (Same as Women's Studies 476.)

480 Ensemble Interpretation (3) Study and presentation of literary texts through group performance.

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

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

591 Foreign Study (1-15) See College of Liberal Arts.

592 Off-Campus Study (1-15) See College of Liberal Arts.

593 Independent Study (1-15) See College of Liberal Arts.

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**Statistics**

(College of Business Administration and Intercollegiate Program)

**MAJORS**

Statistics ........................................ M.S.

Business Administration .......................... MBA

William C. Parr, Head

Professors:

Downing, Darryl J. (Adjunct), Ph.D. ...... Florida State

McLean, Robert A. (Emeritus), Ph.D. ...... Purdue

Parr, William C., Ph.D. ............. Southern Methodist

Philpot, John W., Ph.D. ............. VPI

Sanders, Richard D., Ph.D. .......... Texas

Sanders, William L. (Adjunct), Ph.D. .... Tennessee

Sylwester, David L., Ph.D. .......... Stanford

Thigpen, Charles C. (Emeritus), Ph.D. ...... VPI

Associate Professors:

Bozdogan, Hamparsum, Ph.D. ........ Illinois

Guess, Frank M., Ph.D. .......... Florida State

Leitnaker, Mary G. (Liaison), Ph.D. .... Kentucky

León, Ramón V., Ph.D. .......... Florida State

Lin, Dennis K., Ph.D. .......... Wisconsin

Mee, Robert W., Ph.D. .......... Iowa State

McGuire, Stephen S. (Adjunct), Ph.D. .... Kansas State

Raney, Gipsie B. (Adjunct), Ph.D. . NC State

Walker, Esteban, Ph.D. .......... VPI

Wright, Tommy (Adjunct), Ph.D. .... Ohio State

Younger, M. S., Ph.D. .......... VPI

Lecturers:

Schmidhammer, James L., Ph.D. ...... Pittsburgh

Instructors:

Donnelly, Sharon, M.S. ........... Tennessee

Netdert, Sharon, M.S. ........... Miami (Ohio)

Cwik, Charles, M.S. .............. Tennessee

Wright, S. Paul, M.S. .............. Tennessee

Additional Intercollegiate Program Committee Members:

Bunting, Dewey, Liberal Arts

Dessart, Don, Education

Fribourg, Henry, Plant and Soil Science

Glisson, Charles, Social Work

Huck, Schuyler W., Educational Counseling Psychology

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**THE MASTER'S PROGRAM**

The M.S. program in Statistics provides students with the foundations in theory and practice required for careers in applied statistics. In addition to the education traditionally offered in such a program, the department offers a concentration in industrial statistics, which provides unique opportunities for experiences in practical applications of statistics. Through involvement in The University of Tennessee Institute for Productivity Through Quality and related programs, department faculty participate in a variety of consulting and research projects in industry. Students may supplement their classroom study with an industrial internship and participation in research projects dealing with industrial problems. Department faculty also collaborate with researchers from many academic disciplines and hold joint appointments with the College of Agriculture, the Computing Center and the Medical Center. Statistics graduate students may gain consulting experience by working with faculty involved in these consulting activities. All students are encouraged to participate in supervised internship or consulting activities as part of their graduate program.

Individuals with undergraduate or graduate degrees in other disciplines are encouraged to enter the program. The candidate's mathematics background should include differential and integral calculus of several variables. Individuals with limited mathematics background should seek departmental guidance regarding specific ways in which they may prepare themselves for the program by taking coursework as non-degree students. Requirements for application forms and further information may be sent to the Director of Graduate Studies, Department of Statistics, Stokely Management Center, University of Tennessee, Knoxville, TN 37996-0532.

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**Admission Requirements**

General admission requirements for The Graduate School are stated beginning on page 12. 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).

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**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.

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**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 3 hours for an independent study project.

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**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.

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**INTERCOLLEGIATE GRADUATE STATISTICS PROGRAM**

The Intercollegiate Graduate Statistics Program is a formal University of Tennessee academic program established to recognize graduate students in Statistics. Students are eligible for the program by taking coursework as non-degree students in departments which have approved Statistics minor and/or joint major curriculum offered through the program.

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**General Admission Requirements**

1. The student's sponsoring department must have established with the executive committee an approved joint degree program along with specified sequences of statistics courses taught by the Statistics Department and/or other departments.

2. The student's Admission to Candidacy form must contain all courses required for the Statistics minor/major set off in a group and labeled “Statistics courses required for the minor/major.”

3. In many cases, a student may not decide to apply for participation in the program until he/she has completed two or three statistics courses. In that case the student's major professor shall file a program change with the cooperating departments and assist the student in obtaining a Statistics Department faculty member to serve on the student's committee.

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**Degree Requirements**

The program offers the M.S. in Statistics with a minor in another department, a joint major program in which the student earns a Master's or doctoral degree in the student's sponsoring department along with the M.S. in Statistics, and a joint major and minor program in which the student earns a Master's or doctoral degree in the student's sponsoring department along with a minor in Statistics. The table below presents the minimum number of semester hours in statistics for each of these alternatives.
hours do not represent the minimum required for the degree program. The student selects courses to satisfy the requirements established by the student's sponsoring department and approved by the Program Executive Committee. The student's committee must include a faculty member from 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: Hours*  
M.S. in Statistics, minor outside of Statistics 21  
M.S. outside of Statistics, minor in Statistics 9  
M.S. outside of Statistics, usual separate requirements for Statistics 4  
M.S. in Statistics both degrees 15  
Doctorate outside of Statistics,** 24  
Doctorate outside of Statistics,** 4  
M.S. in Statistics (33 hours total) 4  
*Approved Statistics courses from the Department of Statistics and/or other departments.  
**Courses taken for the minor or the Master's degree in Statistics may fulfill requirements for the doctoral degree. Contact the home department for details.

BUSINESS ADMINISTRATION CONCENTRATION  
For complete listing of MBA program requirements, see Business Administration.  
MBA Concentration: Statistics. Minimum course requirements are 571, 566, 572 with prereq or coreq of 561.

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 unless his/her cumulative graduate 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 department 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 the statistics majors. Prereq: 251 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: Probability and Statistics for Scientists and Engineers I. Introduction to Statistical Software or graduate standing and consent of instructor. F  
462 Analysis of Variance and Experimental Design (3) Analysis of variance techniques for single and multi-factor models, post hoc procedures. Design considerations for completely randomized, hierarchical and split-plot experiments; balanced incomplete block and designs, response surface methodology and non-linear models. Prereq: Probability and Statistics for Scientists and Engineers II and Introduction to Statistical Software or graduate standing and consent of instructor. Sp

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/NC only. E  
531 Survey of Statistical Methods I (3) Univariate and bivariate data collection and organization, statistical estimation and hypothesis testing; analysis of relationships for categorical and numerical data, including Chi-square tests and simple linear and quadratic regression. Use of computing facilities required. Credit not given for both 531 and 537. Prereq: 1 yr. college mathematics. E  
532 Survey of Statistical Methods II (3) Multiple linear regression, including use of dummy variables; single and multiple factor analysis of variance and covariance; issues in experimental design and analysis. Use of computing facilities required. Prereq: 531. E  
537 Statistics for Research III (3) Principles and application of statistical methods, integrated with computer use. Computer use of available software. Prereq: 531 or introductory statistics. C  
538 Statistics for Research II (3) General linear model as applied to multiple regression and analysis of variance. Diagnostic and influence techniques. One-way, factorial, blocking, and nested designs, residual analysis. Prereq: 1yr. college mathematics. C  
551 Introduction to Computing for Data Management and Analysis (1) UTJC computing environment for beginners. Statistics; data manipulation. Use of operating system commands, system editor, utility programs and SAS statistical package for data entry and editing, file management and statistical analysis. Use of AT&T computer facilities required. Coreq: 531, 537 or 571. Prereq: 1 yr. graduate-level statistics and 1 undergraduate statistics course.  
572 Applied Linear Models (3) Simple and multiple linear regression using matrix algebra and general linear model; polynomial regression, weighted least squares regression, variance component estimation; linearly constrained linear models; polynomial regression diagnostics; general linear model approach to analysis of data from designed experiments. Use of standard computer packages. Prereq: 571 and matrix algebra.  
573 Design of Experiments (3) One-way ANOVA, multiple range tests, equal and unequal variances, transformations; factorial experiments, completely randomized designs, analysis of covariance, split-plot and nested designs, fractional factorial, 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 colloquia. Prereq: Admission to Statistics Department and of student's minor program. Prereq: Consent of statistics department director of graduate studies. May be repeated. Maximum 2 hrs. S/NC only. E  
592 Internship (1-6) Supervised off-campus experience in application of statistical principles and methods in business, industry, or government. Written and oral report. Prereq: 4 courses in graduate-level statistics and consent of statistics department director of graduate studies. May be repeated. Maximum 6 hrs. S/NC only. E  
593 Independent Study (2-6) Faculty directed readings and investigation of specified topic 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 (1-6) Supervised experience helping on-campus researchers plan, manage data, and develop and perform analyses specific to designs and hypotheses. Discussion of activities in regular seminar meetings. Final written reports and/or detailed diaries. Prereq: 572 or 538. May be repeated. Maximum 6 hrs.  
673 Advanced Topics in Design of Experiments and Linear Models (3) Experimentation for product and process improvement; response surface methodology and robust design methods; mixture experiments; optimal design topics; distribution theory and inference for linear models. Prereq: 573 or consent of instructor.  
675 Categorical Data Analysis (3) Log-linear analysis of multidimensional contingency tables. Logistic regression models and their applications, and use of statistical software. Prereq: 1 yr. graduate-level statistics, regression analysis and analysis of variance and familiarity with CMIS or VAX; or consent of instructor.  
679 Multivariate Statistical Modeling (3) Modern information based techniques and model selection in multivariate analysis, informational tests of significance with multivariate data, multivariate analysis of variance, multivariate regression and variable selection, multivariate cluster analysis, common principal component model, factor analysis model, covariance structural models with latent variables, mixture-model cluster analysis. Prereq: Matrix algebra and 564, or matrix-based linear models with experience in interactive computing, 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.
areas. Concentrations are available in agricultural, business, marketing and distribution, home economics, industrial, and technical education, and in general vocational education.

The degree requires a minimum of 60 hours of graduate study. Credits earned for the Master’s degree may meet program requirements in the courses which contribute to the program objectives of the candidate. A major core of studies offers advanced concepts in technological and adult education.

THE DOCTORAL PROGRAM

The comprehensive Ed.D. program in the department is designed to provide opportunities for graduate students to achieve professional objectives, develop needed competencies, and gain desirable experiences and understanding of technological and adult education.

The minimum requirements in the doctoral program consist of the following: departmental specialization, 12 hours; departmental core and electives, 21 hours; cognate field, 8 hours; professional education core, 9 hours; research techniques, 12 hours; and dissertation, 24 hours. A minimum of 90 hours above the baccalaureate is required.

The Doctor of Philosophy with a major in Education includes concentrations and specializations as listed under Education.

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 Ed.D. programs in Technological and Adult Education are available to residents of the state of South Carolina; the Ed.D. program is available to residents of Kentucky and West Virginia. Additional information may be obtained from the Admissions Specialist in the Office of Graduate Admissions and Records.

GRADUATE COURSES

401 Utilization of Community Resources (3) Strategies of developing linkages between vocational education and private sector through advising committees, councils, and working partnerships. Development and management of public relations programs. Prereq: 3 yrs teaching experience

415 Coordination Techniques (3) Necessary procedures, duties and responsibilities to implement, maintain, and evaluate successful cooperative education program. Prereq: Senior standing and consent of instructor. E

430 Principles and Organization of Business and Marketing Education (3) Historical background and development needs. Principles of vocational education in business and marketing, curriculum implications; establishing, evaluating, and improving programs.

432 Methods and Materials in Business and Marketing Education (3) Teaching techniques, aids and evaluation in subject matter fields. Prereq: Consent of instructor. S

435 Supervised Occupational Experience (3-9) Practical field experience in business and marketing settings under supervision of practitioner and departmental representative. May be repeated. Maximum 9 hrs.

438 Areas of Marketing (3) Marketing, personnel development, operations, and management as affects instructional leadership program in marketing education. Prereq: 432. S

454 Training Aids Development (3) Study and preparation of instructional aids and non-print media commonly used by technical instructors and trainers. Prereq: Senior standing or consent of instructor. S

455 Performance-Based Evaluation (3) Assessing effectiveness of training through development of performance-based measures. Evaluation of incumbent worker job performance. Prereq: Senior standing or consent of instructor. S

456 Organization and Operation of VICA/HOSA (3) Planning, organizing and implementing youth-club activities in vocational-technical programs. Prereq: Senior standing or consent of instructor. S

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 or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. S/N only. E

503 Problems in Lieu of Thesis (3) May be repeated. Maximum 6 hrs. S/N only. E

504 Research in Technological and Adult Education (3) Solution of problems encountered in technological and adult education. Review of studies unique to technological and adult education. Prereq: 12 hrs of graduate credit. F

505 Selection, Placement, and Follow-up Procedures in Technological and Adult Education (3) Methods and procedures utilized in establishing criteria for trainee selection and placement in instructional programs and in jobs. Collecting, analyzing, and reporting follow-up data appropriate for making program improvements. Prereq: Consent of instructor. Sp

509 Internship in Technological and Adult Education (3) Practical field experiences in selected settings under supervision of practitioner and departmental representative. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs. E

510 Foundations of Technological and Adult Education (3) Historical, philosophical, economical, social, and psychological foundations of vocational, technical and adult education; fundamental principles and contemporary objectives. Prereq: Consent of instructor. F

511 Issues and Trends in Technological and Adult Education (3) Academic, social, political, cultural, and other handicaps of special students. Prereq: 9 hrs of graduate credit. E

513 Special Topics in Technological and Adult Education (1-3) Specific objectives, activities, and evaluation. Prereq: Consent of instructor. May be repeated. Maximum 9 hrs. E

514 Individual Study in Technological and Adult Education (3) Prereq: Consent of supervisor. Approval form must be filed in office of department head. May be repeated. Maximum 6 hrs. E

515 Microcomputer Operations and Programming in Educational Technology (3) Operating microcomputers and BASIC programs for education and training applications. Hands-on experience in operating and programming microcomputers, writing, debugging, and running educational programs using sequential data files. Prereq: Teaching, administrative, or related experience in education or training, or consent of instructor. E

516 Microcomputer Software Development (3) Advantages of design in BASIC: random access and binary files, search and sort algorithms, and bitmapped graphics for educational environment. Hands-on learning and program development. Prereq: 515 or consent of instructor. E

518 Education Specialist Research and Thesis (3) May be repeated. Maximum 9 hrs. P/NP only. E

520 Survey of Adult Education (3) Historical development, philosophies of adult education agencies, associations, programs, issues, and literature illustrating processes of adult education and development of continuing education. Prereq: Consent of instructor. S

521 Program Development and Operation in Technological and Adult Education (3) Theories and methods from research to practice in planning and operating adult education programs. Prereq: Consent of instructor. S

522 Adult Development (3) Changes in characteristics of adults over life span and implications for adult education. Prereq: Consent of instructor. S

THE SPECIALIST PROGRAM

The Ed.S. program is a cooperative undertaking involving all vocational service
523 Post-Secondary Education for Adults (3) History, evolution, philosophy, structure and functions of post-secondary education, institutions, their programs, and clientele. Prereq: Consent of instructor. Sp, Su

524 Continuing Professional Education (3) Theories and concepts supporting design and management of educational programs for adults in professions. Prereq: 510 or equivalent. Sp, Su

530 Methods and Materials for VOE Programs (3) Development of instructional aids, recent developments and research, individualized instructional, and occupational clusters. Prereq: 510 or equivalent. Sp, Su

531 Organization and Supervision of VOE and Marketing Programs (3) Developing office and marketing organizations, utilizing computer systems and personnel. Prereq: 530. Open to VOE or marketing students. Trends in office and marketing education, physical facilities, state plans, instructor qualifications and advisory committees. Prereq: Consent of instructor. F, Su

532 Improvement of Instruction in Business and Marketing Education (3) Issues, research findings, methods, and materials for improved instruction of both secondary and post-secondary levels. Prereq: 12 hrs of graduate credit. Sp, Su

533 Improvement of Instruction in Office Technology (3) Research, principles of learning issues, and materials in typewriting, word processing, business communications, and office procedures. Prereq: Consent of instructor. F, Su

534 Improvement of Instruction in Accounting and Data Processing (3) Principles of learning issues, research findings and materials in basic accounting, automated accounting and data processing at secondary and post-secondary levels. Prereq: Consent of instructor. F, Su

535 Curriculum in Business and Marketing Education (3) Curriculum design in career, secondary, post-secondary, and higher education. Legislation, technology, social, economic and research results that affect business and marketing education. Prereq: Consent of instructor. Sp, Su

536 Organizing and Teaching Adult Business and Marketing Education (3) Planning, organizing, conducting, teaching and evaluating continuing education programs in business and marketing education; utilizing trade associations, employment agencies, business groups, and advisory committees in program implementation. Prereq: 3 yrs teaching experience and consent of instructor. F, Su

537 Measurement in Business and Marketing Education (3) Testing and evaluation of student performance in business and marketing education; teacher-made tests. Prereq: Consent of instructor. Sp, Su

540 Special Topics in Business and Marketing Education (1-3) Specific objectives, activities, and evaluations vary. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs. E

541 Practicum in Business/Marketing Education (3) Practical updating and upgrading experiences in non-traditional settings for business and marketing teachers. Prereq: 15 hrs of graduate credit. E

542 Problems in Business and Marketing Education (3) Selective research problems in teaching of business and marketing education and related areas. Prereq: Consent of instructor. E

550 Administration of Industrial Education Programs (3) Developing, staffing, administering and evaluating trade, industrial and technical education programs in secondary and post-secondary school settings. Prereq: Consent of instructor. Sp, Su

551 Supervision of Industrial Education Programs (3) Techniques used to improve industrial education programs. Staff development, curriculum improvement, and program updating techniques. Prereq: 455 or equivalent. F, Su

552 History and Philosophy of Industrial Education (3) Social, economic events and issues affecting 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 working relationships with other professionals involved in process of planning technical education facilities. Prereq: Consent of instructor. Sp, Su

554 Technical Program Planning (3) Instructional systems attending to analysis, design, development, implementation, and evaluation of trade, technical supervisor and related training. Prereq: Curriculum development 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 personnel. Prereq: 554 or consent of instructor. Sp

557 Advanced Methods of Teaching Technical Subjects (3) Proper selection and effective application of innovative methods and teaching specialized skills and technical information. Diversifying and individualizing teaching of technical subjects. 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) Research, principles of learning issues, and materials in training and evaluating technical 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 Productivity (3) Philosophy of improving industrial productivity through training. Principles of learning, issues, and materials in training and evaluating technical training programs. Prereq: 510 or consent of instructor. Sp

600 Doctoral Research and Dissertation (3-15) P/N P

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

602 Planning and Evaluation of Programs in Technical and Adult Education (3) Techniques utilized in planning, developing, and evaluating instructional programs. Prereq: 500-level 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/N C only.

606 Administration and Supervision of Technological and Adult Education (3) Leadership, policy, organization, planning, personnel, student development services, and budgeting relating to technical and adult education at secondary, post-secondary, and higher education levels. Principles, problem solving, and management activities. Prerequisites: Administrative theory course and consent of instructor. F, Su

610 Research Development in Technological and Adult Education (3) Research, development, theoretical base, research design, sampling, application of statistics, and evaluation of research in technological and adult education. Prereq: 6 hrs of advanced statistics courses and consent of instructor. Sp, Su

611 Internship in Technological and Adult Education (3) Field experience in relevant organizations. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs. F, Su

613 Special Topics in Technological and Adult Education (3) Prereq: Consent of instructor. May be repeated. Maximum 9 hrs. E

615 Advanced Microcomputer Software Applications (3) Advanced programming and application of intelligent program-generating software. Progression of commercial relational data-base management programing environments. Concepts and applications of communications and networking. Hands-on environment. Prereq: 516 or equivalent. Sp, Su


620 Seminar in Adult Education (3) Issues in adult education, theories and concepts, philosophical positions, research trends and methodologies. Prereq: 510 or equivalent. F, Su

621 Advanced Seminar in Program Planning (3) Concepts, principles, and theories related to program planning in adult education. Prereq: 521 or equivalent. Sp

622 Advanced Seminar in Adult Development (3) Adult development research. Designing research for studies of life cycle. Prereq: 522 or equivalent. Sp, Su

626 Adult Problem Solving and Learning (3) Contemporary research and theories in adult problem solving and learning. Prereq: Consent of instructor. Sp, Su


631 Higher Education in Business and Marketing Education (3) Textiles, Retailing and Interior Design

(Majors in College of Human Ecology)

MAJORS

Textiles, Retailing and Consumer Sciences M.S.

Human Ecology Ph.D.

Nancy B. Fair, Head

Professors:

Blakemore, R. G. (Emeritus), Ph.D. Florida State
DeLong, A. J. (Liaison), Ph.D. Penn State
DeJonge, Jacobylin C., Ph.D. Iowa State
Drake, Mary Fran, Ph.D. Penn State
Duckett, Kermit E., Ph.D. Tennessee
Wadsworth, Larry C., Ph.D. NC State

Research Assistant Professors:

Bhavsar, P., Ph.D. M.P. Indiana State
Deaver, Molly, Ph.D. Indiana State

DEGREES

Interior Design M.S.

Textiles, Retailing and Consumer Sciences M.S.

Human Ecology Ph.D.

[Table continues with various majors and degrees]
The Department of Textiles, Retailing, and Interior Design offers Master's degrees in Interior Design and in Textiles, Retailing and Consumer Sciences. The program in Textiles, Retailing and Consumer Sciences offers concentrations in textile science and in retail and consumer sciences. An interdepartmental/interdisciplinary minor in gerontology gives the graduate student an opportunity for combining the knowledge and experience about aging in American society with his/her own major concentration.

The Master's program in Interior Design will provide a balance between creative and theoretical foundations of the field; emphasis is placed on the dissemination of knowledge. The program is accredited by the Foundation for Interior Design Education Research (FIDER). The goal of the graduate program in interior design is to provide the student with scholarly and professional experiences through seminars, studio work, and research. Interdisciplinary thrusts will increase the depth of understanding of the field of interior design essential to function as educators or as independent professionals. Areas of emphasis within interior design may include: historic preservation and adaptive use/history of interior design, computer-aided design, and human environment interaction. Supporting courses are available in lighting, furniture design, business practices, etc.

The programs in Textiles, Retailing and Consumer Sciences prepare students for careers in industry, business, public and private agencies, and educational institutions. Master's level work enables students to conduct research in retail management and merchandising and in the consumer related areas to retail decision making. Students in textile science are expected to have a solid foundation in mathematics, as well as a formal background in a physical science or engineering. Interested students should contact the department head for more information.

**ADMISSION REQUIREMENTS**

A complete file for review includes the Graduate School application file, Department of Textiles, Retailing, and Interior Design application, Graduate Record Examination (GRE) scores for the general section, and three Graduate School Rating Forms completed by individuals who can attest to the potential for graduate education. Forms may be obtained from the Dean's Office, College of Human Ecology.

In addition to specified entrance requirements stipulated by The Graduate School, admission to the particular programs in the department is based on the following requirements:

**Interior Design**

Admission to the Master's degree program has a major in Interior Design requires: 1) a background in interior design, 2) a cumulative GPA of 3.0 or above (on a 4.0 scale), and 3) a portfolio of undergraduate studio work (or professional work, if applicable) submitted to the department. The portfolio may include slides or original work. It is recommended that deficien-

**Textiles, Retailing and Consumer Sciences**

Admission to the Master's degree program with a major in Textiles, Retailing and Consumer Sciences is dependent on completion of undergraduate courses that give the necessary background for success in the graduate program. For the concentration in Retail and Consumer Science, students should have an adequate background in retailing and/or consumer science supported by coursework in economics, marketing, mathematics, and statistics. For the concentration in textile science, students should have a basic technical background in textile science or materials science supported by mathematics through differential equations, organic chemistry, and general physics.

Superior students deficient in one or more of the above requirements, may be admitted at the discretion of the department's graduate faculty.

**THE MASTER'S PROGRAMS**

**Interior Design**

The M.S. in Interior Design requires the completion of 36 hours of graduate credit. The requirements for the degree include the following: in the major (510, 552, 564, and 590), 18 hours; a cognate area, 6 hours; research methods (RCS 562), 3 hours; and statistics, 3 hours; a comprehensive design project with acceptable documentation, a 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 the 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 committee, will be given upon completion of the thesis research. A non-thesis option is not available.

**Retail and Consumer Sciences**

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Required Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>510, 552, 564, 590</td>
<td>Major (Required courses)</td>
<td>19 hours</td>
</tr>
<tr>
<td>12 hours</td>
<td>Cognate Area</td>
<td>6 hours</td>
</tr>
<tr>
<td>3 hours</td>
<td>Statistics</td>
<td>3 hours</td>
</tr>
<tr>
<td>6 hours</td>
<td>Thesis</td>
<td>6 hours</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>34 hours</strong></td>
</tr>
</tbody>
</table>

**Textile Science**

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Required Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS 552</td>
<td>Research Methods</td>
<td>3 hours</td>
</tr>
<tr>
<td>1 hour</td>
<td>Textile Science courses</td>
<td>12 hours</td>
</tr>
<tr>
<td>3 hours</td>
<td>Cognate Area</td>
<td>6 hours</td>
</tr>
<tr>
<td>3 hours</td>
<td>Thesis</td>
<td>6 hours</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>34 hours</strong></td>
</tr>
</tbody>
</table>

*Must include RCS 552 or equivalent; or 3 hours of laboratory techniques in materials analysis and characterization.

**THE PH.D. CONCENTRATIONS**

**Consumer Environments**

Students enrolled in the Ph.D. program with a concentration in consumer environments are provided with a foundation in management and retail and consumer sciences or in understanding the consumer in the designed environment and management of facilities. From this base, students focus on retail and consumer sciences or on areas of specialization including historic preservation and adaptive use, human environment interaction and facilities management to further theory and application in advanced study and research. See the consumer environments concentration under Human Ecology.

**Textile Science**

Students enrolled in the Ph.D. program in Human Ecology with a concentration in textile science take one common course which provides a foundation for the integration of textiles and apparel in the context of the new environment. A required departmental research seminar exposes students to research being conducted in all areas of study in the department.

1. College Professional Seminar, HE 610 (3 hours)
2. RCS 552 (3 hours)
3. Research Methods which must include 6 hours of laboratory techniques in materials analysis and characterization
4. TS 590 (2 hours): Attendance at seminar is required for all full-time students
5. Six hours in statistics at the 500-600 level
6. Eighteen hours in textile science courses
7. Nine hours in a cognate area
8. Fourteen hours of other courses which may include up to 6 hours of dissertation
9. Dissertation (24 hours)

Note: Students must take a minimum of 9 hours at the 800-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, Mississippi, or Virginia. The M.S. program in Textiles, Retailing and Consumer Sciences is available to residents of the state of Mississippi. Additional information may be obtained from the Admissions Specialist in the Office of Graduate Admissions and Records. For the Ph.D., see Human Ecology.

**Interior Design**

**GRADUATE COURSES**

400 Proxemics (3) Space and behavior within cultural context. Application of design and design process. Theoretical foundations and concepts from environment and behavior. Simulation techniques and methods for identifying behavioral design requirements. Prereq: Human Environment Systems and Micro Computer for Interior Design 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/NC 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 (3-15) 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.

552 Seminar in Interior Design (3) Twentieth-century design concepts, persons, motivation, and creative components leading to social 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 application 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, anthropology and social and behavioral sciences. Prereq: 310 Behavioral science and 6 hrs natural science, or consent of instructor. Prereq: Consent of instructor.

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.

575 Environment and Aging (3) Seminar on design of physical environment and relationship to aging process. Concepts and theories from design, and social and behavioral sciences and physical/environmental science or consent of instructor.

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. E

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/NC only. E

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

610 Issues in Interior Design (1) Readings, reports, and discussion concerning current research and related issues in interior design. Prereq: Consents of instructor. Registration each semester.

620 Advanced Special Topics in Interior Design (3) Selected topics of major interest: history of interior design, historic preservation, environment and behavior. Topics vary. Prereq: 510, 552, 562, 564. May be repeated. Maximum 9 hrs.

625 Integrative Facilities Design in Consumer Environments (3) Methodologies and skills necessary for creation of settings responsive to needs of users. Techniques for programmatic analysis and development: goals, user requirements, technical, functional, and behavioral analysis of consumer in business and built environment.

630 Advanced Directed Study in Interior Design (3) Individual study in aspect of interior design culminating in scholarly paper. May be repeated. Maximum 9 hrs.

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.

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

695 Advanced Topics in Retail and Consumer Sciences (3) Lecture, group discussion on specialized topics: apparel production/management, functional design, handicapped/elderly, historic, consumer oriented, historic, textiles, international issues, non-wovens. Prototypes. Prereq: 9 hrs textiles/apparel graduate coursework. May be repeated. Maximum 9 hrs. Su

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

614 Theory in Retail (3) Analysis and evaluation of theory in retailing environment and its application to research in retailing. Prereq: 452.

615 Retail and Consumer Sciences Literature and Thought (3) Evaluation of retail and consumer sciences literature with emphasis upon research literature, development of scholarly thought, and identification of potential areas of further study. Prereq: 562. Marketing 501. Economics 501, F.A

616 Research Methods, Models and Measurement in Retail and Consumer Sciences (3) Quantitative methods and analytical concepts in research process. Mathematical and statistical formulation of retail and consumer sciences phenomena, utilizing models, model building and measurement constructs. Prereq: 562. Statistics 581. F, Sp

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.

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

695 Advanced Topics in Retail and Consumer Sciences (3) Lecture, group discussion, individual research on advanced topics and research areas of current significance to retail and consumer sciences. May be repeated. Maximum 6 hrs.

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

550 Consumer Economics and Market Choices (3) Economic framework for evaluating consumer behavior and consumer choice within market system. Theory of consumer preferences and decision making; consumption and demand models for individuals and households. International consumer economics, issues and policies. Prereq: Textile and Apparel Economics, Mathematics 503 or equivalent. F.A

552 Economics of Textile Complex (3) Economics 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 policies. Prereq: Calculus III or equivalent; micro economics. F.A

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, handicapped/elderly, historic design, consumer oriented, historic, textiles, international issues, non-wovens. Prototypes. Prereq: 9 hrs textiles/apparel graduate coursework. May be repeated. Maximum 9 hrs. Su

590 Research Seminar (1-3) Research topics in retail and consumer sciences. May be repeated. S/NC only. F, Sp

595 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.

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

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.

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

695 Advanced Topics in Retail and Consumer Sciences (3) Lecture, group discussion, individual research on advanced topics and research areas of current significance to retail and consumer sciences. May be repeated. Maximum 6 hrs.
510 Fiber Science (3) Physical properties, mechanical properties and microstructure of polymeric fibers; relation to end-use properties. Prereq: Organic Chemistry and Thermal Physics or equivalent.

520 Optical Microscopy (4) Basic compound and polarizing microscopy for imaging, optical property measurements, and structure elucidation. Other methods of optical microscopy. Prereq: Fundamentals of Physics: Wave Motion, Optics and Optical Physics or equivalent.

521 Nonwovens Science and Technology I (3) Nonwoven fabric technology; different web forming processes; and relationships among the chemical, morphological and mechanical properties of fibers and orientation in webs to final performance properties of bonded structures. Prereq: Organic chemistry or consent of instructor.

526 Advanced Textile Dyeing and Finishing (4) Chemistry, processing and fastness of chemical finishes and various classes of dyes on different fibers. Prereq: 510 or consent of instructor. 2 hrs and 4 labs. 5p

528 Nonwovens Science and Technology II (3) Interrelations between mechanics of production and mechanical properties of nonwoven fabrics; characterization of fiber morphology and web structure; chemistry of nonwoven binders and finishes; and engineering of specific fabric properties. Prereq: 521 or equivalent.


590 Research Seminar (1) Research topics in textile science. May be repeated. S/N only. F, Sp

593 Directed Study (1-3) Individual problems in textile science. Prereq: 9 hrs textiles graduate coursework. May be repeated. Maximum 9 hrs.

595 Advanced Topics in Textile Science (1-3) Lecture, group discussion on specialized topics. Prereq: 9 hrs textiles graduate coursework or consent of instructor. May be repeated. Maximum 9 hrs.

600 Dissertation (3-15) P/N only. E

625 Physical Chemistry of Fibers (3) Physical chemistry of fibers and fiber forming polymers: surface chemistry and thermal properties. Prereq: 510.

626 Physics of Fiber Structures (3) Morphology of polymeric structures; thermal and processing history on mechanical, electrical and chemical properties of fibers. Prereq: 510.


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

ASSOCIATE PROFESSOR:
Black, W., M.F.A. University of Illinois
Crockedale, J., M.F.S. (Southern Methodist University)

Assistant Professor:
DeCuir, L. J., M.F.A. Tulane University
Gould, B. K., M.F.A. (Catholic University of America)
Oliva, J. L., Ph.D. Northwestern University
Weber, T. M., M.F.A. Alabama

Adjunct Faculty:
Arnould, P., M.A. Catholic University of America

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 degrees 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 the M.F.A. degree in 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 year of residence. A diagnostic examination in theatre history and literature/criticism and 3 hours of advanced theatre history is required. An additional 3 hours of each may be required as determined by the diagnostic examination.

Students in the M.F.A. degree program are evaluated annually by course performance or portfolio submission. Continuation in the program is with the approval of the faculty committee for the M.F.A. degree program. Theatre 599 Projects in Lieu of Thesis and an oral defense of the project 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 and at least 12 hours of Theatre 580, Design and Technical Production Seminar, and at least 6 hours in the projects courses. Theatre 401, Principles of Design is required the first year of residence.

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 Play 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 585 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 specialization 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.

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.F.A. program in Theatre is available to residents of the state of Virginia (concentration in costume design only). Additional information may be obtained from the Admissions Specialist in the Office of Graduate Admissions and Records.

GRADUATE COURSES

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

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

420 Special Studies in Acting (3) Content varies. Exercises in selected areas such as styles, techniques, and practice in selected areas such as improvisation and movement. Prereq: Advanced Acting and consent of instructor. May be repeated. Maximum 9 hrs.

423 Period Movement and Dance (2) Movement styles and dances from Renaissance to 20th century. Prereq: Stage Movement or consent of instructor.

424 Theatre Dance II (Advanced dance technique) Work with the elements of musical theatre. Prereq: Theatre Dance or consent of instructor. May be repeated. Maximum 6 hrs.

425 Selected Musical Theatre Techniques (2) Study and practice of musical theatre material: dance and vocal work. Prereq: Theatre Dance or consent of instructor. May be repeated. Maximum 4 hrs.

427 Applied Phonetics (3) Development of skills in transcription and reproduction of principal varieties of English Language in North America and Great Britain.
510 Studies in Theatre History (3) Intensive study of selected topics in theatre history. May be repeated. Maximum 9 hrs.
512 Dramatic Literature Analysis (3) Dramaturgical history of major playwrights, using a variety of analytical approaches from Aristotelian to Structuralist.
520-21-22-23-24-25 Master Classes in Acting (4,4,4,4,4,4) Master classes in acting techniques, voice, and movement. Theatre MFA students only.
536 Projects in Play Directing (3) Practical work in play directing involving various lengths and kinds of scripts. May be repeated. Maximum 9 hrs.
542 The Social History of Costume (3) Study and analysis of costume as related to society’s manners and mores, architecture and furniture.
543 Projects in Costume Design (1-3) Problems of play interpretation and theatrical costume design and production. May be repeated. Maximum 9 hrs.
545 Millinery for the Stage (2) Pattern making and construction techniques for making hats for Margery to present. Prereq: Consent of instructor.
546 Advanced Costume Pattern Making (3) Advanced studies in pattern design and construction techniques. May be repeated. Maximum 9 hrs.
553 Seminar in Playwriting (1-3) Tailored for advanced students in playwriting. Prereq: Consent of instructor. May be repeated. Maximum 18 hrs.
554 Studies in Scenic Design (3) Advanced scenic design techniques and approaches to designing for complex plays. May be repeated. Maximum 9 hrs.
556 Advanced Scenery Painting (2) Advanced instruction in materials, techniques and principles of scenic painting; studio experience in dimensional simulation, faux-finish and colored detail. Prereq: 454 or consent of instructor.
560 Projects in Lighting Design (1-3) Conception and completion of major projects, both theoretical and actual, in the design process. May be repeated. Maximum 9 hrs.
561 Projects in Stage Lighting Design (1-3) Conception and completion of major projects, both theoretical and actual, in the design process. May be repeated. Maximum 9 hrs.
562 Special Problems in Lighting Design (3) Advanced problems in lighting design and production. May be repeated. Maximum 6 hrs.
563 Projects in Sound Design (1-3) Production assignment as sound designer on approved play or relevant projects in field of sound design/history/methodology. Prereq: 463 or approval of instructor. May be repeated. Maximum 9 hrs.
570 Dramaturgy: Theory and Practice (3) Methods and materials. Prereq: Consent of instructor.
572 Seminar in Playwriting (3) Exercises and projects tailored for advanced students in playwriting. Prereq: Consent of instructor. May be repeated. Maximum 18 hrs.
575-76 Studies in Dramatic Theory and Criticism (3,3) Broad-based study of major ideas about drama.
580 Design and Technical Production Seminar (1-6) Selected aspects of design and technical production. Prereq: Consent of instructor. May be repeated. Maximum 18 hrs.
585 Production Workshops (1-6) Directed experience in production collaborations. Prereq: Consent of instructor. May be repeated. Maximum 12 hrs.

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
- Sims, M. H., Ph.D. ....................... Auburn

Associate Professors:

- Daniel, G. B., D.V.M. .................. Purdue
- DeNovo, R. C., Jr., D.V.M. ............ Illinois
- Ellison, G. W., D.V.M. ................ Texas A&M
- Gompf, R. E., D.V.M. .................. Ohio State
- Harvey, R. C., D.V.M. .................. Tennessee
- Morgan, R. V., D.V.M. ................ Illinois
- Padelford, R. R., D.V.M. .............. Missouri
- Selcer, R. R., D.V.M. ................... Texas A&M
- Schmeltz, L. P., D.V.M. ............... Auburn
- Weigel, J. P., D.V.M. ................... Colorado State

Assistant Professors:

- Adams, W. H., D.V.M. ................ Florida
- Frank, L. A., D.V.M. .................... Tufts
- Jenkins, C. C., D.V.M. ................. Tuskegee
- Millis, D. L., D.V.M. .................. Missouri
- Thomas, W. B., D.V.M. ............... Auburn
- Ward, D. A., D.V.M. ................... Tennessee

Research Professor:

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

Research Associate Professor:

- Panjehpour, Masoud, Ph.D. ............ Toledo

Clinical Assistant Professor:

- Shull, E. A., D.V.M. .................... Tennessee

Clinical Research Associate:

- Sackman, J. E., D.V.M. ............... Michigan State

Clinical Instructors:

- Arrington, K. A., D.V.M. ............ Tennessee
- Campbell, S. L., D.V.M. .............. Wisconsin
- Mawby, D. I., D.V.M. .................. Saskatchewan
VETERINARY MEDICINE

(College of Veterinary Medicine)

MAJOR

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

THE PROFESSIO NAL 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. Preprofessional course requirements must be completed by the end of the spring term following one 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.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>Humanities and Social Sciences*</td>
<td>18</td>
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<tr>
<td>Physics</td>
<td>8</td>
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<tr>
<td>General Chemistry</td>
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<td>General Biology</td>
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<tr>
<td>Genetics</td>
<td>3</td>
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<tr>
<td>Cellular Biology**</td>
<td>3</td>
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<tr>
<td>TOTAL</td>
<td>56</td>
</tr>
</tbody>
</table>

*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

Application 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 Graduate Admissions by January 15 each year. All supporting documents, official transcripts, and Veterinary College Application 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 first and second year programs with the summer break following years one and two. The third year of the professional curriculum begins immediately following semester six and is a continuous clinical rotation experience extending over one calendar year.

The first year consists mostly of the preclinical subjects of anatomy, physiology, histology, and microbiology. Also included in this first year are clinical subjects of 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 courses are team-taught on an organ system basis.

The final year (three semesters) is devoted to intensive education in solving animal disease problems, involving 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 allows select students who have specific educational goals (such as advanced or dual degree programs) to enroll in all, some, or none of the regularly scheduled courses during that semester. Students enrolled in the D.V.M. program are required to complete at least 16 credit hours in the sixth semester and may register for up to 10 credit hours of graduate courses without enrolling in The Graduate School 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 in an area of interest 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 which leads to the Master of Science and the Doctor of Philosophy. Because of the interdisciplinary departmental administration of the College of Veterinary Medicine, the faculty have 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 Admissions Specialist in the Office of Graduate Admissions and Records.

PROFESSIONAL COURSES

811-12 Microbiology I,II (5.4) Pathogenesis of bacterial, viral, fungal and parasitic diseases. Study relating microbial structure, metabolism and genetics to patterns of disease and mode of action of antimicrobials, antigens and antibodies. Immunobiology, study of mechanisms of immune reaction, diagnostic immunology, and role of active immune response.


827 Special Problems in Animal Science (1-8) Extra- murral and specially designed study for students interested in select topics in anatomy, histology, and physiology.
Welch, H. G. (Emeritus), Ph.D. .................. Florida
McCranken, G. F., Ph.D. ....................... Cornell
Pimm, S. L., Ph.D. ............................... New Mexico State
Richter, Susan E., Ph.D. ........................ Wisconsin
Roth, L. Evans, Ph.D. ........................... Chicago
Shivers, C. A., Ph.D. ............................. Michigan State
Vaughan, G. A., Ph.D. ........................... Duke
Welch, H. G. (Emeritus), Ph.D. ........................... Florida
Whitson, G. L., Ph.D. ........................... Pennsylvania

Associate Professors:
Boake, C. R. B., Ph.D. .......................... Cornell
Burnham, K. D. (Emeritus), Ph.D. .......................... Iowa
Drake, J. A., Ph.D. ............................... Purdue
Fox, David J., Ph.D. .............................. Johns Hopkins
Ganguly, P., Ph.D. ............................... Nebraska
Gittleman, J. L., Ph.D. ........................... Sussex
Greenberg, Neil, Ph.D. .......................... Rutgers
McKee, B. D., Ph.D. .............................. Michigan State
Pan, M. L., Ph.D. ............................... Pennsylvania

Research Associate Professor:
Tindall, R., Ph.D. ............................... Penn State

Assistant Professors:
Hall, J. C., Ph.D. ................................. Illinois
Prosster, R. A., 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. Graduate Record Examination scores (general and biology); and
7. a 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 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.

GRADUATE COURSES

403 General Genetics Laboratory (3) Experiments designed to illustrate basic principles of inheritance; primary organism—Drosophila. Prereq: Biology 220. 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.
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 (2) (Same as Microbiology 439.)
445 Comparative Animal Physiology (3) Comparison of diverse physiological mechanisms aiding in adaptation to particular habitats and lifestyles. Prereq: Biology 210, 230, 2 yrs. of chemistry. Recommended prereq: 360.
449 Laboratory in Physiology (2) Prereq or coreq: 440 or 445.
450 Comparative Animal Behavior (3) Principles and methods of ethology, ecological, developmental, physiological and evolutionary aspects. (Same as Psychology 450.)
455 Comparative Animal Behavior Laboratory (3) Introduction to observational and experimental research in ethology. Coreq: 450. (Same as Psychology 455.)
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 physicochemical nature of inland waters with description of biotic communities and their interactions. Prereq: Chemistry 120-20 and Biology 220. 2 hrs and 1 lab.
472 Arachnology (3) Biology of spiders, mites, scorpions and relatives. Prereq: 360 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.
474 Ichthyology (4) Evolution, classification, collection and identification, distribution and biology of fishes, fresh-water fauna of Eastern North America. Prereq: Biology 230 or consent of instructor. 2 hrs and 2 labs.
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/N 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/N 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/N only.

504 Special Topics (1-3) 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/N 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.

510 Introduction to Electron Microscopy - Transmission Electron Microscope (4) Practical application of techniques for preparation of biological samples for viewing in transmission electron microscopy. Use of microscopes and ancillary equipment, darkroom techniques, preparation of materials for publication and special project. Admission limited only to departmentally approved graduate students. (Same as Botany 510.) 3-5 hrs. labs. Sp

511 Introduction to Electron Microscopy - Scanning Electron Microscope (3) Practical introduction to techniques of electron microscopy and to scanning electron microscopy. Prereq: Consent of instructor. 2 hrs and 2 labs.


516 Colloquium in Ethology (1) (Same as Psychology 516.)

521 Advanced Mammalian Physiology I (4) (Same as Animal Science 521.)

522 Advanced Mammalian Physiology II (4) Respiratory, gastrointestinal, and reproductive physiology, acid-base mechanisms, and metabolism. Prereq: 521. (Same as Animal Science 522.)

523 Physiology of Hormones (3) Cellular and organismal actions of hormones in invertebrate and vertebrate animals. Prereq: 490 or consent of instructor. Recommended prereq: Biochemistry 410. 2 hrs and 1 lab.

524 Physiological Ecology of Animals (3) Adaptive physiological responses of animals to natural changes in or extremes of physical and biochemical environments. Terrestrial vertebrates. Prereq: Undergraduate courses in animal physiology and ecology, 440 and Biology 230 or equivalent.

525 Physiological Ethology (3) Behavioral endocrinology and neurology from ethological perspective; reciprocal relationships of physiology and behavior in natural context. Term paper, review of assigned topic, creative development of special aspect. Prereq: 490 or undergraduate physiology, or consent of instructor.

526 General Vertebrate Neuroanatomy (3) (Same as Psychology 526.)

540 Insect Taxonomy I: Major Orders (3) Survey of classification of major orders of insects, with practical
experience in identification of insects at family level. Prereq: Consent of instructor. 4 hrs combined lecture and lab.

541 Insect Taxonomy II: Minor Orders (3) Survey of classification of minor orders of insects, with practical experience in identification of insects at family level. Prereq: 540 or consent of instructor. 4 hrs combined lecture and lab.

542 Insect Structure and Function (3) Integrated study of morphology and physiology at tissue and cellular level of insects. Prereq: Consent of instructor.

543 Aquatic Insects (3) Taxonomy and biology of aquatic insects; immature forms. Prereq: Consent of instructor. 2 hrs and 1 lab.

544 Fresh Water Invertebrate Zoology (3) Ecology and taxonomy of fresh water invertebrates exclusive of insects. Prereq: 360. 3 hrs lab and field study.

545 Advanced Animal Behavior (3) Second-level course in ethology, stressing evolution, genetics, physiology, ecology and human behavior. Prereq: 450 or equivalent. (Same as Psychology 545.)

547 Conceptual Foundations of Evolution and Behavior (3) (Same as Psychology 547.)

580 Biometry (3) Statistical methods in analysis of quantitative biological data. Prereq: Statistics course or consent of instructor.

573 Population Biology (3) Genetics and ecology of natural populations of plants and animals and aspects of behavior in determining population structure. Prereq: Introductory courses in ecology and genetics. (Same as Botany 573 and Ecology 573.)

575 Ecological Genetics (3) Genetics of natural populations, using both single-locus and quantitative genetic approaches. Prereq: 573 and statistics course.

583 Zoogeography (3) Processes determining geographic distribution of animals and distribution and composition of animal communities. Prereq: Ecology course or consent of instructor.

591 Foreign Study (1-15) See College of Liberal Arts.

592 Off-Campus Study (1-15) See College of Liberal Arts.

593 Independent Study (1-15) See College of Liberal Arts.

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

601 Advanced Topics (1-3) Readings and discussion of recent advances. Consult the departmental listing for offerings. May be repeated with consent of department. Maximum 9 hrs.

602 Seminar in Cell and Molecular Biology (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

603 Seminar in Genetics (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

604 Seminar in Developmental Biology (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

605 Seminar in Physiology (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

606 Seminar in Aquatic Biology (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

607 Seminar in Ecology (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

608 Seminar in Ethology (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

609 Seminar in Organic Evolution (1) Readings and discussion based on current literature. May be repeated. Maximum 12 hrs.

610 Current Topics in Cell and Developmental Biology (1) Critical analyses of current literature in journal club format. May be repeated. Maximum 10 hrs. S/NC only.
FACILITIES FOR
RESEARCH AND SERVICE
**Bureau of Educational Research and Service**

*(College of Education)*

Carol E. Kasworm, *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. 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*

In its economic research endeavors, CBER today has the same basic mission determined at its inception 56 years ago by founder Dr. Charles P. White—to produce and disseminate new information in the field of economic research. The mission has also expanded to include influencing decision quality in the public and private sectors and integrating departmental research through cooperative ventures in the international arena. In addition to the annual *Economics Report to the Governor, the Survey of Business* and the *Tennessee Statistical Abstract*, the Center publishes research on a wide range of socioeconomic and policy issues, including taxes, banking, telecommunications, environmental concerns, and employment prospects.

While its core mission remains little changed, the scope of the CBER unit has expanded from a largely individualistic fiscal assistance program to a regional economic research, policy analysis, and communications technology arm of the College of Business Administration, with a staff of over 30 academic and support professionals and graduate and undergraduate student assistants, located at 100 Glocker.

Increased emphasis on international participation, particularly in the light of the new democratization in Europe and the formation of the European Economic Community, has expanded the scope of activity of the Center through the formation of the East European Center and has opened up new possibilities for research in emerging European regional economies.

**Center for Information Studies**

*(Graduate School of Library and Information Science)*

The Center for Information Studies (CIS) was established in June 1989 to be a focal point for research related to information systems and services. The Center, located at 304 Temple Court, has performed research for the federal government, state and local governments, companies, etc. Projects have ranged from strategic planning efforts to information system and service evaluations, to modeling of scientific and technical communication. Staff of the Center have been actively involved in proposal development and project performance with faculty and staff in other centers and departments at the University.

Areas of interest to the Center include information systems design, information organization and retrieval in very large databases, directories and locator tools in a networked environment, design of regional library and information system networks, new technology applications, information system support for educational reform, modeling of information processes, development of measures and methods for evaluating information system performance and effectiveness.

**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 premiere 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 Keefer, Director
UT Space Institute
Tullahoma, TN 37388-8897
(815) 455-0631 Ext. 475
Communications Research Center
(College of Communications)

The Communications Research Center, 426 Communications Bldg., 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
Fred H. Harris, Interim Director

Faculty Associates:
Instructional Technology: Dr. Patricia L. Fisher; Art: Susan E. Metros; Computer Science: Dr. David W. Straight; Engineering: Dr. Osama Soliman; Physics: Dr. William E. Blass; Statistics: Dr. James L. Schmidhammer; Agriculture: Dr. Boyd Dearden; Human Ecology: Kurt Weiss; Social Work: Dr. David Patterson; Communications: Dr. Mark Miller.

Center (UTCC), which is part of the Division of Computing and Telecommunications, 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. Assistance with any computer related question, including information about UTCC services and facilities, is available by calling the Division of Computing and Telecommunications Help Desk at 974-8200.

The Computer Access for Education (CAFE) program provides every UT Knoxville student, faculty, and staff member 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 for research or administration 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, operations processing, the use of graphics, word processing, and the statistical and mathematical programs available at UTCC. Videotapes covering mainstream and microcomputer topics are available for private viewing at the Audiovisual Services section of Hodge Library and the UTCC Hodges Library Micro Lab. Instructional tapes on microcomputer software are in the Micro Lab. 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 VMScluster computers.

UTCC maintains online and printed documents describing the availability and use of system hardware and software. The IBM User’s Guide, the Unix User’s Guide, and the VMScluster User’s Guide 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 in a multivendor, heterogeneous environment. Ethernet and fiber optics connect many buildings on the Knoxville campus to provide rapid access to data in remote locations and supports several protocols including TCP/IP, DECnet, LAT, Novell NetWare and AppleTalk. A terminal port selection and multiplexing system, which is connected to a similar system at the Oak Ridge National Laboratory, provides access to the network through 141 dialup lines.

The UTCC network is connected to the Internet which provides access to other Internet sites via the Southeastern University Research Association Network (SURA). SURA connects to the National Science Foundation Network (NSFNET) which joins other state and The University of Tennessee Computing regional networks as well as directly connecting to the five NSF supercomputing centers: The Cornell National Supercomputer Facility, The National Center for Supercomputing Applications at the University of Illinois, the Pittsburgh Supercomputing Center, the National Center for Atmospheric Research, and the San Diego Supercomputer Center.

UTCC is an affiliate of the Pittsburgh Supercomputing Center, the National Center for Supercomputing Applications at the University of Illinois, and the Cornell National Supercomputer Facility. Consulting services are provided by UTCC on those systems.

UTCC is also a member of BITNET, a network of several thousand computers located at educational and research institutions throughout North and South America, Europe, and Asia. BITNET provides a gateway into Internet which allows all BITNET members to exchange messages with Internet nodes.

Several major operating systems provide both batch and timesharing computing services. The Time Sharing Option (TSO) runs under MVS/ESA on an IBM 3090-300E with three vector processors. The Conversational Monitor System (CMS) runs under VM/SP HPO on an IBM 3081-D. The OpenVMS operating system runs in a Digital Equipment Corporation VMScluster that consists of a 4 processor VAX 7000-640, a 2 processor VAX 6000-420 with 2 vector units, a 6 processor VAX 6000-460, and a 2 processor DEC 7000-620 1002. UNIX-based operating systems are the Solaris operating system available on two 560/50 file servers and several workstations from Sun Microsystems and the IBM operating systems and several workstations from Silicon Graphics Incorporated. UTCC provides technical support for other departmental workstations on the UT Knoxville campus that includes equipment from DEC, HP, Silicon Graphics, IBM and Sun Microsystems.

UTCC maintains more than 100 microcomputers, including several models of both Apple
Continuing Education and Public Service

Laverne B. Lindsey, Associate Vice Chancellor for Academic Affairs and 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 Community Programs, Department of Conferences, Department of Independent Study, and English Language Institute.

UNIVERSITY EVENING SCHOOL

Sam C. Bills, Associate Dean of Continuing Education and 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 Communications, Education, and Engineering offer all courses required for an advanced degree during the evening. 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 concentrated credit course during the Mini-Term period.

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.

Distance Education

The Evening School in concert with several academic departments at UT Knoxville offers interactive telecourses which allow students at distant locations to see and participate actively with the instructor teaching in Knoxville. Graduate courses and disciplines are transmitted to several sites through use of this advanced technology. Offerings are expected to increase through the 1990s.

Workshops

Credit workshops are coordinated through various academic departments of the University and give students the opportunity to participate in short period 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 advising and financial aid information is provided by the University Evening School for both on- and off-campus students.

Registration

Registration by mail, FAX, or phone 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 1-800-676-VOLS, FAX (615) 974-2027.

NON-CREDIT COMMUNITY PROGRAMS

Cheryl LaBerge, Director

Non-Credit Community Programs provides a comprehensive array of courses and seminars open to all individuals and businesses in Knoxville and surrounding communities. Courses are offered in the evening on the University campus and at selected off-campus locations. Courses are taught by University faculty when possible and citizens of the community who have gained a reputation for certain competencies or technical skills. Courses also are delivered "on-site" for business or industrial clients, with instructional services tailored to the needs of each individual group.

Courses range from computer literacy and management, to gardening, exercise, and music. There are also courses which meet requirements of the state or other agencies for certification in fields such as real estate, aviation, CEBS (Certified Employee Benefit Specialist) and CCA (Certified Credit Administrator). The department co-sponsors the Smoky Mountain Field School with the Great Smoky Mountains National Park.

Continuing Education Units (CEUs) are awarded to students satisfactorily completing selected courses and seminars offered by the department.

For further information or to register, contact Non-Credit Community Programs, 600 Henley Street, Suite 105, Knoxville, TN 37902 or telephone (615) 974-0150.

DEPARTMENT OF CONFERENCES

Norvel L. Burkett, Associate Dean of Continuing Education and Director

UT Conferences, housed in the Conference Center in downtown Knoxville, provides management services to individuals or groups who desire to hold a high quality convention, conference or meeting anywhere in the state of Tennessee or across the United States.

Utilizing the new Conference Center, statewide University system facilities, major hotels and convention centers across Tennessee and the U.S., the department assists University organizations and outside groups in designing programs to meet the needs of clients. The staff provides professional guidance and management for small group meetings as well as for major conventions of thousands of delegates. Consulting and support services range from planning and budgeting to lodging.
DEPARTMENT OF INDEPENDENT STUDY
David F. Holden, Director
The UT Knoxville Department of Independent Study administers the program of correspondence courses for all campuses of the University. This includes undergraduate credit courses, high school courses (for credit or for college entrance requirements), and non-credit courses. The courses utilize videotapes and audiotapes as well as traditional print materials. For information and enrollment forms for correspondence courses contact: 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. Internationally, 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. Classes also assist students in pronunciation, test-taking strategies, U.S. culture orientation, and university study skills.

ADDITIONAL INFORMATION
Additional information may be obtained at 907 Monticello St., (615) 974-3404; FAX (615) 974-6838.

Energy, Environment, and Resources Center
(Office of Associate Vice Chancellor)
Jack N. Barkenbus, Acting Director
The Energy, Environment, and Resources Center, 229 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 solid, hazardous, and radioactive waste management, information systems, environmental assessment, applications of biotechnology, global environmental problems, pollution prevention, 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. (Pete) Gossett, Vice President
The Institute of Agriculture traces its history to 1859 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. Klink, Associate Dean
The Agricultural Experiment Station was established by the action of the University's Board of Trustees on June 8, 1882, 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 United States 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 biological 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 affect the quality of rural life; (d) Understanding the production of foods 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 formulate effective production and marketing systems that improve 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 biogeochemical and physical, social, 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 100 graduate students. To serve Tennessee's diverse agriculture, branch stations are operated at Crossville, Grand Junction, Greeneville, Jackson, Knoxville, Lewistown, Milledgeville, 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 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.
The Learning Research Center engages in research and facilitates the research of others in all aspects of learning and teaching in higher education. The Center also builds upon this research to support faculty and graduate students in course design and instructional activities.

A significant part of the Center's research activity is coordinated through a weekly research seminar open to all faculty and graduate students. The results of the Center's research are disseminated through a number of dissertations, publications and presentations, including the series "Teaching-Learning Issues" which is sent to all faculty at the University and to others in this country. The Center offers a range of support programs for instructors, including individual consultations about teaching, occasional workshops, the GTA Seminar, the GTA Consultation service, the SPEAK testing program for foreign GTAs, a lending library of publications on college teaching and learning, an orientation for new faculty, and a course/teacher evaluation program. Several of the center's publications are designed to enhance instruction, including the GTA Newsletter and the New Instructor's Handbook. All of the Center's development activities are designed to improve instruction at UT, and to encourage and evaluation services are confidential.

The Center is located in Suite 5, Hoskins Library.

Libraries, The University of Tennessee, Knoxville

Paula T. Kaufman, Dean
Aubrey H. Mitchell, Associate Dean for Access Services
Diane E. Perushek, Associate Dean for Collection Services

Professors:

Bayne, Pauline, M.S.L.S. .......... North Carolina
Crawford, Mary Frances, M.S.L.S. .... Kentucky
Felder-Hoehne, Felicia H., M.S.L.S. .... Atlanta
Grady, Agnes M., M.L.Sc. ......... Washington
Kaufman, Paula T., M.B.A. ......... Columbus
LeClerc, Anne W., J.D., M.L.S. .... Emory
Phillips, Linda L., M.L.S. ......... Rutgers
Roder, Janette, J.D., M.L.S. ......... Tennessee

Associate Professors:

Baker, Gayle D., M.L.S. .......... Alabama
Bridge, Anne E., M.L.S. .......... Rhode Island
Britten, William A., M.L.S. ......... Clarion
Court, Matthew G., M.L.S. ......... Wisconsin
Crowther, Kermie T., M.Ln. ......... Emory
Dixon, Linda, M.L.S. .......... Tennessee
Goetsch, Lori, M.S.S. ............. Rosary
Harwood, Richard, M.L.S. ......... North Texas
Kim, Soon-Hyun, M.A.L.S. ......... Indiana
Leach, Sandra S., M.Ln. ......... Emory
Lloyd, James B., Ph.D. .......... Mississippi

The services and facilities of the University Libraries are accessible to persons with disabilities. Adaptive equipment such as a Kurzweil Personal Reader and TDD are available at the Hodges Library.

The Agriculture-Veterinary Medicine Library (Room A-113, Veterinary Teaching Hospital) has a strong collection in agriculture, veterinary, comparative and human medicine; and related biological sciences. It has a wide-ranging audiovisual collection and an extensive reference collection.

The Cartographic Information Center (Room 15, basement of the Hoskins Library, Cumberland Ave. & 15th St.) contains a worldwide collection of over 300,000 maps covering all subjects. Maps are received from the U.S. Geological Survey, Defense Mapping Agency, and the National Ocean Survey. Maps, atlases, globes, and books relating to cartography may be borrowed for reference, research, and teaching.

The Music Library (301 Music Bldg.) has a comprehensive collection of music and music literature, including books, scores, audio and video recordings, other periodicals, and microfilm. All materials in the Library of Congress "M" classification are located here.

The Special Collections Library (2nd floor, west wing, of the Hoskins Library) is a repository of regional and local materials, Tennesseeana, and other specialties, including legislative papers and memoeos 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.

The University Archives (Room 2, Hoskins Library) contains official records of the University; items published officially and unofficially by its units, departments, and agencies; and other materials that document University of Tennessee life.

The Social Work Library (1720 West End Ave., Nashville) serves College of Social Work students in field practice across the state. The library has a working collection of materials in social work and related disciplines.

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.

*Data excludes Law Library faculty and statistics.

Management Development Center

(Office of Associate Vice Chancellor)

W. Lee Humphreys, Director

The Management Development Center engages in research and facilitates the research of others in all aspects of learning and teaching in higher education. The Center also builds upon this research to support faculty and graduate students in course design and instructional activities.

A significant part of the Center's research activity is coordinated through a weekly research seminar open to all faculty and graduate students. The results of the Center's research are disseminated through a number of dissertations, publications and presentations, including the series "Teaching-Learning Issues" which is sent to all faculty at the University and to others in this country. The Center offers a range of support programs for instructors, including individual consultations about teaching, occasional workshops, the GTA Seminar, the GTA Consultation service, the SPEAK testing program for foreign GTAs, a lending library of publications on college teaching and learning, an orientation for new faculty, and a course/teacher evaluation program. Several of the center's publications are designed to enhance instruction, including the GTA Newsletter and the New Instructor's Handbook. All of the Center's development activities are designed to improve instruction at UT, and to encourage and evaluation services are confidential.

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*Data excludes Law Library faculty and statistics.
accepted responsibility for (1) developing close strategic partnerships with a selected set of companies to better facilitate learning and development of the knowledge which is truly externally valued and (2) acting as a facilitator in driving this knowledge into the credit curriculum of the College.

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 20 designs, develops, and markets fifty yearly offerings for 1500 participants. The Center emphasizes consistent, high-quality programming, 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.

Measurement and Control Engineering Center
(College of Engineering)

Arlene Garrison, Acting Director
The Measurement and Control Engineering Center, 102 Estabrook 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, signal and image processing, 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.

Nutrition Institute
(College of Human Ecology)

Dileep Sachan, Director
The Nutrition Institute is a system wide, multidisciplinary consortium of faculty who are engaged in clinical and experimental nutrition research, teaching and service. Its expertise and resources are multifaceted including tools and techniques used in cell biology, epidemiology, metabolism, and clinical training.

The multidisciplinary nature of nutrition has created a situation where nutrition research and teaching is dispersed among a number of academic units, including the Department of Nutrition in the College of Human Ecology as well as in several departments in the colleges of Agricultural Sciences and Natural Resources, Liberal Arts, Medicine, and Veterinary Medicine. The Institute provides a communication link among all efforts in nutrition sciences, coordinates collaborative research programs in nutrition and provides a unified forum for exchange and interactions with the national and international nutrition community. In addition, by creating formal ties among the units within the University that are involved in undergraduate, graduate and professional education in nutrition, teaching resources may be pooled to strengthen nutrition-related instruction in these units.

Oak Ridge Associated Universities

The University of Tennessee is a sponsoring institution of Oak Ridge Associated Universities (ORAU), a not-for-profit consortium of 62 colleges and universities and a management and operating contractor for the U.S. Department of Energy (DOE) with principal offices located in Oak Ridge, Tennessee. Founded in 1946, ORAU identifies and helps solve problems in science, engineering, technology, medicine, and human resources, and assists its member universities to focus their collective strengths in science and technology research on issues of national significance.

ORAU manages the Oak Ridge Institute for Science and Education (ORISE) for DOE. ORISE is responsible for national and international programs in science and engineering education, training and management systems, energy and environment systems, and medical sciences. ORISE’s competitive programs bring students at all levels, pre-college through postgraduate, and university faculty members into federal and private laboratories.

ORAU’s office for University, Industry, and Government Alliances (UIGA) seeks out opportunities for collaborative alliances among its member universities, private industry, and federal laboratories. Current alliances include the Southern Association for High Energy Physics (SAHEP) and the Center for Bio-Electromagnetic Interaction Research (CBEIR). Other UIGA activities include the sponsorship of conferences and workshops, the Visiting Scholars program, and the Junior Faculty Enhancement Awards.

Contact Dr. Lee Riedinger, Acting Associate Vice Chancellor for Research, for more information about ORAU programs.

Off-Campus Graduate Centers

KINGSPORT GRADUATE PROGRAM

UT Knoxville offers at Kingsport resident graduate programs in science and engineering at the Master’s level.

Students who enroll in these programs must be admitted to The Graduate School of UT Knoxville. Information and application forms may be obtained from the Kingsport University Center, The University of Tennessee, 1501 University Boulevard, Kingsport, Tennessee 37660.

OAK RIDGE GRADUATE PROGRAM

UT Knoxville offers graduate programs at Oak Ridge leading to Master’s and doctoral degrees in engineering and supporting areas. Courses are given in the evenings with research facilities provided by and used in cooperation with the Oak Ridge Associated Universities (ORAU).

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

Students who enroll in these programs must be admitted to The Graduate School at UT Knoxville. Information and application forms may be obtained from the UT-Oak Ridge Graduate Program, Post Office Box 117, TMSD Building, Oak Ridge, Tennessee 37831-0117.

NASHVILLE ENGINEERING GRADUATE PROGRAM

UT Knoxville offers graduate programs leading to the Master of Science with majors in Civil Engineering, Industrial Engineering, and other disciplines, as the need and resources permit.

Students who enroll in these programs must be admitted to The Graduate School of UT Knoxville. Information and application forms may be obtained from the Nashville Engineering Graduate Program, 1720 West End Avenue, Suite 401, 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 a major in Educational Administration and Supervision.

Students who enroll in this program must be admitted to The Graduate School of UT Knoxville. Information and application forms may be obtained from the UT-Knoxville Graduate Center, URC, 120 Race Hall, Chattanooga, Tennessee 37403.

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

UT Knoxville offers a program leading to the M.S. and Ph.D. degrees with a major in 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

UT Knoxville offers a fully accredited two-year program leading to the Master of Science in Social Work through the College of Social
Work, with programs in Knoxville, Nashville, and Memphis.

The UT Knoxville College of Social Work also offers a Doctor of Philosophy with a major in Social Work.

For complete information concerning the programs, see Social Work under Fields of Instruction.

Psychological Clinic
(College of Liberal Arts)

Leonard Handler, Director

The Psychological Clinic supports graduate research and training in clinical psychology. Psychosomatic and psychotherapy are offered on an outpatient basis to the general public as well as to University students and staff.

Statistical Consulting Center

The goal of the Statistical Consulting Center (SCC) is to help students, faculty and staff enhance the quality of their research by working together to effectively apply statistical methodology. SCC is co-sponsored by the University of Tennessee Computing Center and the Department of Statistics.

Services offered are assistance in design of study; management of data, analysis and interpretation of results; aid in choice and creation of the most effective statistical graphics; review of journal article, grant proposal, thesis or dissertation; writing of programs using statistical packages; teaching short courses on how to use statistical software.

There are five full-time Master's level statisticians, two half-time graduate research assistants, and a part-time faculty associate associated with the Department of Statistics. In addition, access is provided to faculty consultants.

A UT Computing Center account can provide access to many popular computers and statistics packages. Software is also available for use on personal computers through various site-licensing agreements.

Contact the Computing Help Desk, at 974-8200 and ask to speak to a statistical consultant. Charges for our services are billed through a UT Computing Center project code. Consultants are located at 200 Stokely Management Center.

Textiles and Nonwovens Development Center
(College of Human Ecology)

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 calendering; 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 operating full-time in 1972 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 multidisciplinary staff includes over 100 full-time researchers and technicians augmented with numerous faculty and students. The Center is presently organized into four major divisions: Logistics and Systems Analysis; Infrastructure and Environment; Safety and Traffic Operations; and Mobility Services and Policy.

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.

University of Tennessee
Space Institute

T. Dwayne McCay, Vice President

The Space Institute is a graduate education and research institution located on a 365-acre lakeshore campus in Middle Tennessee. UT-Space 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 research of their students in an environment of creative work and advanced study. Programs are available for 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 with majors in Aerospace Engineering, Aviation Systems, Chemical Engineering, Computer Science, Electrical Engineering, Engineering Science, Industrial Engineering (engineering management concentration), Mathematics, Mechanical Engineering, and Physics. In addition to the fundamental studies characteristic of each discipline, research opportunities are available in many areas including aerodynamics, atmospheric science, fluid mechanics, advanced space propulsion, neural networks, energy conversion processes, thermal sciences, coal combustion, magnetohydrodynamics, plasma physics, space systems, 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, picosecond 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. 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 sponsoring and coordinating 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 and training in fields relating to water resources and to encourage the entry of promising students into careers in these fields. The Center maintains a technical library which includes numerous water resources-related databases on CD-ROM.
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