The University of Tennessee began as a liberal arts institution. Before the turn of the century, less emphasis was placed on the liberal education. However, the liberal arts continued to thrive, emerging as a college in 1904. Thus, the College of Liberal Arts (now known as the College of Arts and Sciences) is one of the oldest established colleges in the university.

The College of Arts and Sciences consists of a wide array of academic disciplines and interdisciplinary programs. The central purposes of a liberal education include the encouragement of intellectual tolerance, a dedication to the quest for knowledge as a worthwhile goal in and of itself, and the cultivation of a responsible, creative individual mind. These qualities enable one to develop an ability to reason and to express oneself clearly, an incentive to absorb emerging knowledge, and a competence to confront the uncertainties of human experience. Faculty research and creative activity is the foundation on which education in this college is built. As a result of that endeavor, the lives of students are enriched and the world’s body of knowledge grows.

The College of Arts and Sciences offers programs in twenty-seven academic disciplines leading to nine advanced degrees: Doctor of Audiology, Doctor of Philosophy, Master of Arts, Master of Fine Arts, Master of Mathematics, Master of Music, Master of Public Administration, Master of Science, Master of Science in Planning.

Facilities for research and service include the Center for Applied and Professional Ethics, the Center for Environmental Biotechnology, the Center for Psychoanalysis and the Humanities, the Center for Quaternary Studies of the Southeastern United States, the Center for the Study of War and Society, the Child Behavior Institute, the Forensic Anthropology Center, the Hearing and Speech Center, the Institute for Applied Microbiology, the Institute for Resonance Ionization Spectroscopy, the Joint Institute for Heavy Ion Research, the Psychological Clinic, the Science Alliance, and the Social Science Research Institute.

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Facilities for research and service include the Center for Applied and Professional Ethics, the Center for Environmental Biotechnology, the Center for Psychoanalysis and the Humanities, the Center for Quaternary Studies of the Southeastern United States, the Center for the Study of War and Society, the Child Behavior Institute, the Forensic Anthropology Center, the Hearing and Speech Center, the Institute for Applied Microbiology, the Institute for Resonance Ionization Spectroscopy, the Joint Institute for Heavy Ion Research, the Psychological Clinic, the Science Alliance, and the Social Science Research Institute.
LECTURERS
Devlin, J.L., PhD ........................................ Tennessee
Pendry, D.A., PhD ....................................... Texas
Qirko, H.N., PhD ........................................ Tennessee

ADJUNCT PROFESSORS
Bogard, J.S., PhD ........................................ Texas
Harrison, F.V., PhD ..................................... Stanford

ADJUNCT ASSOCIATE PROFESSORS
Dessel, J.P., PhD ......................................... Arizona
Sullivan, L.P., PhD ...................................... Wisconsin (Milwaukee)

ADJUNCT ASSISTANT PROFESSORS
Crites, G.D., PhD ....................................... Tennessee
Jacobson, J.A., PhD ...................................... Tennessee
Klenk, R.M., PhD ........................................ Washington
Lev-Tov, J., PhD ......................................... Tennessee
Polhemus, R.R., PhD ................................... Tennessee
Riggs, B.H., PhD ......................................... Tennessee
Symes, S.A., PhD ........................................ Tennessee
van de Moortel, A., PhD ......................... Bryn Mawr

POST-DOCTORAL RESEARCH ASSOCIATES
Spradley, M.K., PhD .................................. Tennessee
Weinand, D.C., PhD .................................... Tennessee

MAJOR DEGREES

ANTHROPOLOGY MAJOR

Archaeology concentration
Biological anthropology concentration
Cultural anthropology concentration
Mediterranean archaeology concentration
Zooarchaeology concentration

ANTHROPOLOGY PhD

Archaeology concentration
Biological anthropology concentration
Cultural anthropology concentration
Zooarchaeology concentration

The Department of Anthropology offers both the Master of Arts and Doctor of Philosophy with a major in anthropology and concentrations in archaeological, biological anthropology, cultural anthropology, and zooarchaeology. A concentration in Mediterranean archaeology is available on the master's level. Additional information on the anthropology graduate program may be obtained from the departmental brochure (see the department's Web site) or by contacting the department.

MAJOR DEGREES

ANTHROPOLOGY MAJOR

Admission

Students wishing to enter the Master of Arts program with a major in anthropology should have an undergraduate GPA of 3.50 in the major, 3.00 overall, and hold a bachelor's degree from an accredited university with a major in anthropology. Applicants with a major in a related field (biology, sociology, geology, classics or geography) will be considered only if they have a formal minor in anthropology or its equivalent (at least five upper-division anthropology courses).

In cooperation with the Classics and History Departments, the Department of Anthropology offers a concentration in Mediterranean archaeology. Students who apply in this area should have completed appropriate undergraduate courses in archaeology or anthropology. An anthropology minor is preferred.

All prospective MA students must make formal application to the University of Tennessee, Knoxville, Office of Graduate and International Admissions. Copies of the application form, transcripts, and GRE scores that are sent to Graduate and International Admissions should also be sent directly to the Department of Anthropology at the same time. In addition, the department requires a letter of intent from the applicant indicating career goals and reasons for selecting the University of Tennessee, Knoxville, three letters of recommendation, and one sample of the prospective student's written work (a class paper or research report). These materials should be sent directly to the Graduate Secret-
DOCTOR OF PHILOSOPHY
ANTHROPOLOGY MAJOR

In addition to the Graduate Council requirements, requirements for the PhD with a major in anthropology, in the appropriate sequence of completion, are as follows.

Admission

Admission to the PhD program is contingent upon completion of all requirements prior to that level. Master’s thesis candidates at the University of Tennessee, Knoxville, who are conditionally accepted into the PhD program can enroll as doctoral students the semester following conferral of the MA. Students holding master’s degrees from other institutions must apply by January 15 for admission the following fall and must begin their studies in the fall semester.

Admission to the PhD program is based upon the applicant’s academic record and credentials and also on the fit between an individual’s interest and faculty areas of research. Applicants will not be admitted to the PhD program unless appropriate faculty members are available to chair and serve on the doctoral committee. Doctoral program applicants should communicate directly with the potential chairperson and two additional members of the anthropology faculty who will be asked to serve on the committee.

Applicants to the PhD program should meet the same academic standards as MA program applicants and furnish the same materials (see Admission under Master of Arts). Admission to the program requires either

- Acceptance of a master’s in anthropology.
- or
- Acceptance of a master’s in another discipline with the provision that the student will follow the first-year program with entering MA students, i.e., complete the core courses (510, 560, 590) and pass the graduate evaluation examinations.

Requirements

Doctoral Committee

A doctoral committee is appointed following admission to the program. In consultation with this committee, the student defines the future program of studies. When the student and committee have agreed upon the specific fields of specialized competence over which the student will be examined, a brief delineation of the fields by the student, approved by the members of the committee, is presented to the department head and the student’s major professor. As early as possible, but no later than a full semester after admission to candidacy, the student must formally present a written dissertation proposal to the department head and advisor.

Residence and Coursework

Every potential PhD candidate must complete two consecutive semesters of full-time residence prior to taking the doctoral comprehensive examination. The student must complete the minimum coursework requirements of the Graduate Council, including at least 9 hours of 500- or 600-level courses outside of anthropology, chosen in consultation with the doctoral committee, particularly the outside member who represents the cognate area. Outside coursework may be taken in a single discipline or be distributed across two or more disciplines as appropriate to the individual’s program of study.

Statistics

Demonstration of competence in statistics by completing Statistics 537 and 538 with a grade of B or better is required.

Language

Students must demonstrate knowledge of one foreign language. This language should normally be French, German, Russian or Spanish, but another language may be substituted at the committee’s discretion. This requirement may be met by either

- Successful performance on a language examination administered by the appropriate language department. A student electing this alternative should consult with the advisor.
- or
- Completion of the second semester of specialized reading courses for graduate students with a grade of B or better.

The department does not accept completion of the intermediate (200 level) sequence of a language as a formal option for fulfilling the language requirement.

Doctoral Comprehensive Examination

Students must successfully complete a written and oral comprehensive exam.

- Comprehensive Written Examination – When the PhD aspirant has completed all of the foregoing requirements and is judged by the committee to be prepared in the field(s) of concentration, the student will be required to take a comprehensive written examination. The exam will consist of three sections and be given by the student’s committee. All three sections must be taken within seven consecutive days.

- Comprehensive Oral Examination – This examination follows shortly after successful completion of the comprehensive written exam. The major professor acts as chairperson of the committee.

Admission to Candidacy

Upon successful completion of the comprehensive exam and with the formal approval of the Dean of the Graduate School, the student is admitted to candidacy for the PhD degree. The formal dissertation prospectus must be filed no later than one full semester after advancement to candidacy.

Dissertation Research

This period of research and writing will be under the direct guidance of the candidate’s major professor. The major professor will act as chairperson of the candidate’s committee. The candidate must earn a minimum of 24 hours in Anthropology 600 and maintain continuous registration until the dissertation is accepted. The option of presenting publishable papers as a dissertation is not a formal option for the Anthropology Department.

Defense of Dissertation Examination

When the dissertation has been tentatively accepted by the committee, a final oral examination will be held. The committee conducts the exam, which is ordinarily held as a colloquium in which the candidate will expound on the nature and significance of his/her contribution to anthropological knowledge as set forth in the dissertation.

SCHOOL OF ART

http://web.utk.edu/~art
Paul Lee, Director
Suzanne Wright, Associate Director
Tom Riesing, Graduate Liaison

Professors
Brakke, M., MFA ........................................... Yale
Goldstein, M.B., MFA ........................................ Nebraska
Habel, M., PhD ................................................ Michigan
Lee, B., MFA .................................................... Yale
Lee, P., MFA .................................................... Cranbrook
Leland, W.E., MFA .......................................... Tennessee
Lyons, B., MFA ................................................. Arizona State
Magden, N., PhD ............................................. Case Western Reserve
Riesing, T.J., MFA ........................................... Nebraska
Staples, C., MFA .............................................. Michigan State
Wilson, D., MFA ............................................. Wisconsin
Yates, S.A., MFA ............................................. North Carolina (Greensboro)

Associate Professors
Brogden, S., MFA . . . . . . New York State College of Ceramics at Alfred
Dewey, W., PhD ................................................. Indiana
Hiles, T.W., PhD .............................................. Penn State
Neff, A.L., PhD ................................................. Pennsylvania
Shnerler, D., MFA ........................................... Virginia Commonwealth
Wright, S., PhD ................................................. Stanford
Assistant Professors
Bivens, E.W., MFA .................................................. Colorado
Boylan, A.L., PhD .................................................. Rutgers
Brown, J., MFA ...................................................... Rhode Island School of Design
Lough, W., MFA ..................................................... Temple
Lowe, S., MGD .......................................................... North Carolina State
Martin, F., MFA ....................................................... Cranbrook
Sprecher, J.B., MFA .................................................. Iowa
Tinajero-Baker, P., MFA ............................................. Colorado

MAJOR DEGREE
Art MFA*

Art
- Ceramics concentration
- Drawing concentration
- Graphic design concentration
- Media arts concentration
- Painting concentration
- Printmaking concentration
- Sculpture concentration

* The Master of Fine Arts is the terminal degree in studio art.

MASTER OF FINE ARTS

ART MAJOR

Admission
To become a candidate, the applicant must be admitted by the Office of Graduate and International Admissions and approved by the School of Art. In addition to the minimum admission requirements, the School of Art specifically requires the following:
- A detailed letter of intent including statement requesting assistantship, if desired.
- Three letters of recommendation from former professors or professionals in the field.
- An undergraduate major in art or evidence of equivalent proficiency.
- A portfolio to be evaluated by the faculty.

Further information is available by writing to the School of Art.

Requirements
A minimum of 60 hours to include the following:
- Successful completion of 20 hours of studio in a concentration area. An inter-area program must be approved by the graduate faculty only after the second semester in residence. Ten hours of concentration must be in second-year courses.
- A minimum of 9 hours of graduate-level academic (non-studio) courses of which at least 6 hours are to be in art history.
- 11 hours of electives consisting of any combination of courses offered by the university for graduate credit.
- Project in Lieu of Thesis (20 hours). A third year of semindependent study. Student must have completed all other coursework prior to registration.

Four semesters (normally the first 40 hours) beyond the bachelor’s degree are required in residence. An exception is made for working professional designers who may complete their first 20 hours, with the permission of the faculty, on a part-time basis. Residence is defined by the School of Art as a minimum enrollment of 6 hours per semester and use of School of Art facilities so that students are available for discussion and criticism.

The candidate’s committee will consist of a minimum of three members and a maximum of six members and will be appointed prior to registration for 599. The committee must consist of one faculty member from the candidate’s concentration area (designated as chairperson) and a faculty member from outside the concentration area. The inclusion of an art history faculty member on each committee is encouraged.

With the completion of all requirements for the MFA, the student must produce an exhibition and, in the presence of that work, must satisfactorily complete an oral examination.

Academic Standards
- First-year evaluation. At the end of the first two semesters in residence, the student must present a portfolio for evaluation by the faculty and receive permission to continue in the program.
- Second-year evaluation. With completion of all coursework, the student must present work for evaluation by the faculty and receive permission to register for Project in Lieu of Thesis.

- If, in a review by the student’s major area faculty, the student’s progress is deemed insufficient, the faculty may recommend a work period without advancement toward the degree, probation with specific goals set for a specific time, or dismissal.

Art History Minor
A graduate minor in art history may be arranged during the student’s first semester of study with the consent of the student’s area instructors and the art history faculty. Students must complete a minimum of 12 hours in art history that is agreed upon by the art history faculty after review of previous undergraduate coursework. A reading knowledge of French, German, or Italian is a prerequisite, unless waived by the art history faculty. Graduate Council policy stipulates that a member from the minor unit must serve on the thesis committee.

DEPARTMENT OF AUDIOLOGY AND SPEECH PATHOLOGY

http://web.utk.edu/~aspweb/

Lisa Schwarz, Head
Professor
Schwarz, L., PhD ..................................................... Oregon

Associate Professors
Erickson, M., PhD ..................................................... Southern California
Flapan, P., PhD ....................................................... Wisconsin
Harkrider, A., PhD ................................................... Texas
Hedrick, M., PhD ....................................................... Vanderbilt
Karow, C., PhD ....................................................... Texas
Swanson, L., PhD ...................................................... Purdue
Thein, J., PhD ........................................................ Iowa

Assistant Professors
Ha, S., PhD ........................................................ Illinois
Horton-Ikard, R., PhD ................................................. Wisconsin
Johnstone, P., PhD ..................................................... Texas
Pylyer, P., PhD ........................................................ Tennessee
Saltuklaroglu, T., PhD ................................................. East Carolina
Von Hapsburg, D., PhD .............................................. Texas

Instructor
Singleton, T., MS ..................................................... Colorado State

Clinical Director
Michael, A., PhD ..................................................... Vanderbilt

Clinical Faculty
Baker, S., MA ............................................................ Tennessee
Barnes, V., MA ........................................................ Tennessee
Beason, H., AuD ......................................................... Tennessee
Beeler, J., MA ........................................................ Tennessee
Buehler, V., MA ........................................................ Georgia
Cuellar, M., PhD ......................................................... Georgia
Donels, E., MA ........................................................ Tennessee
Humphrey, E., AuD ..................................................... Tennessee
Hume, S., PhD ........................................................ Tennessee
Jenkins, K., MA ........................................................ Tennessee
Noss, E., MA .......................................................... Arizona School of Health Sciences
Schay, N., AuD ........................................................ Tennessee
Sealfoss, M., AuD ....................................................... Tennessee
Sheridan, C., MA ......................................................... Tennessee
Valentine, D., PhD ..................................................... Tennessee
Vaughn, T., MS ........................................................ Eastern Kentucky
Webb, P., MEd ........................................................... Florida
Yeager, K., AuD ........................................................ Tennessee

58 COLLEGE OF ARTS AND SCIENCES
MAJORS
Audiology
Aural habilitation concentration
Speech Pathology
Aural habilitation concentration
Speech and Hearing Science
Aural habilitation concentration

DEGREES
MA
Audiology
Speech Pathology
Speech and Hearing Science

PhD
Aural habilitation concentration
Hearing science concentration
Speech and language pathology concentration
Speech-language science concentration

MASTER OF ARTS
AUDIOLGY MAJOR
Graduate study leading to the MA with a major in audiology is available only to those students accepted to and enrolled in the AuD program or the PhD program in speech and hearing science. This degree is awarded to students who desire a master's degree as part of their progress toward a doctorate.

A student must be in good standing within the AuD or PhD program and must have completed a minimum of 42 credits of academic coursework at the 500 or 600 levels (not including Audiology and Speech Pathology 512 or Audiology and Speech Pathology 515) and must pass a qualifying examination or equivalent.

DOCTOR OF AUDIOLOGY
AUDIOLGY MAJOR
The Doctor of Audiology (AuD) program is designed to prepare individuals for professional careers in audiology. The degree program is clinically oriented, with primary emphasis on processes involved in hearing, vestibular function, and communication. The program is designed to meet the entry-level requirements for the practice of audiology established by the Council on Academic Accreditation of the American Speech-Language-Hearing Association. Students will be expected to demonstrate competencies in the following areas.

- Prerequisite knowledge and skills for the practice of audiology.
- Foundations of practice for audiology.
- Prevention and identification of auditory, vestibular, and related communication disorders.
- Evaluation of auditory, vestibular, and related communication disorders.
- Treatment of auditory, vestibular, and related communication disorders.

The program will normally consist of four calendar years of study beyond the baccalaureate degree with the first three years being devoted primarily to formal coursework, and the last year to a full-time externship in the practice of clinical audiology.

Requirements
A minimum of 112 hours, including a minimum of

- 67 hours of academic coursework at the 500- and 600-levels.
- 3 hours of directed research in audiology, vestibular, or related communication disorders.
- 24 hours of clinical practice in audiology.
- 18 hours of externship in audiology.
- A qualifying examination.
- A comprehensive examination.

AURAL HABILITATION CONCENTRATION
(see section below)

MASTER OF ARTS
SPEECH PATHOLOGY MAJOR
Admission to this graduate program is competitive. This graduate program is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association.

Requirements
The master’s program in speech pathology is a two year program and consists of the completion of 42 hours of academic content courses (including thesis) plus practicum.

The required courses are 506, 511, 518, 526, 527, 539 or 541, 540, 561, 582, and at least one seminar from 522, 523, 531, 620, or 661. At least 12 hours of elective courses with no more than 6 hours below the 500 level. Undergraduate coursework may not be substituted for seminar courses. Students who have not completed an undergraduate course in speech sound disorders, voice disorders, and fluency disorders must complete one graduate course in each of these areas.

Students majoring in speech pathology may elect either the thesis or non-thesis option. The master’s program in speech pathology with thesis includes 6 hours of 500 credit in the preparation of an acceptable thesis representing original independent work, and a final oral examination. Students in the non-thesis option must pass a final written examination.

AURAL HABILITATION CONCENTRATION
Graduate students in both audiology and speech pathology may elect to pursue a concentration in the area of aural habilitation. Admission to the program is competitive and applications are available on the departmental Web site. The aural habilitation concentration requires the following.

- Three semesters of clinical practicum in treatment of children who have hearing impairments totaling a minimum of 130 clock hours.
- Completion of 6 hours of graduate coursework in language, audiology and/or aural habilitation in elective requirements for the MA or AuD.

Specific requirements are outlined in the MA and AuD graduate handbooks as well as on the departmental Web site.

DOCTOR OF PHILOSOPHY
SPEECH AND HEARING SCIENCE MAJOR
The PhD program with a major in speech and hearing science seeks to develop individuals for professional careers in a variety of positions including research and college teaching in the concentration areas of audiology, hearing science, speech and language pathology, or speech-language science. The degree program is research oriented with primary emphasis on processes involved in normal, or disordered speech, language and hearing. Students will be expected to demonstrate their knowledge in areas related to the concentrated field of study. These areas include

- Basic speech, hearing, or language processes.
- Basic speech, hearing, or language disorders or differences.
- Related disciplines providing insight into human communication processes.
- Technical skills in instrumentation and experimental design which enable the student to investigate problems pertaining to speech and hearing processes.

Requirements
The doctoral program requires successful completion of coursework, research projects, a comprehensive examination and dissertation. The total program includes a minimum of 60 hours with a minimum of

- 6 hours in a research tool.
- 6 hours in a cognate field outside the department.
• 24 hours in the major area of study (6 hours must be at the 600 level within the department). These will include:
  a. A minimum of 6 hours on the topic of major interest.
  b. A minimum of 6 hours earned through participation in two different research projects.
  c. 3 hours of Audiology and Speech Pathology 611 (Experimental Design) course (or equivalent).
  d. 3 hours of Audiology and Speech Pathology 655 supervised teaching experience.
• 24 hours in dissertation, course 600, enrollment.

To complete the doctoral program, students must prepare a dissertation and defend it successfully. Students must pass a comprehensive examination with both a written and an oral component before being advanced to candidacy. The doctoral program should be developed in the first year of study and is the responsibility of the student and the doctoral committee.

DEPARTMENT OF BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY

http://web.bio.utk.edu/bcmb/
Bruce D. McKee, Head and Graduate Liaison

Professors
Ganguly, R., PhD .............................................Nebraska
Howell, E., PhD ..............................................Lehigh
Joy, D. (Distinguished Scientist), DPhil ..................Oxford (UK)
Koontz, J., PhD ...........................................Kentucky
McKee, B., PhD ..............................................Michigan State
Millhorn, D., PhD ............................................Ohio State
Mullin, B., PhD .............................................North Carolina State
Peterson, C., PhD ............................................Louisiana State
Roberts, D., PhD .........................................California (Davis)
Serpersu, E., PhD .............................................Hatecepe
Smith, J., PhD ...............................................London (UK)

Associate Professors
Bruce, B., PhD ............................................California (Berkeley)
Dealwis, C., PhD ..........................................London
Hall, J., PhD .................................................Illinois
Park, J., PhD ................................................Texas
Prosper, R., PhD .............................................Illinois
von Amim, A., PhD .........................................East Anglia (UK)

Assistant Professors
Alexandre, G., PhD ........................................Claude Bernard Lyon (France)
Fernandez, E., PhD ........................................Loyola
Guo, H., PhD ...............................................Harvard
Jain, N., PhD ................................................Brandeis
Kitazono, A., PhD ...........................................Nagasaki (Japan)
Labrador, M., PhD ........................................Madrid (Spain)
Nebenfuh, A., PhD .........................................Oregon State
Shpak, E., PhD ...............................................Ohio
Venkatchalam, S., PhD ....................................Ohio State

Adjunct and Research Faculty
Allison, D., MS ..............................................Tennessee
Georgiou, S., PhD .........................................Manchester
Hartman, F., PhD ...........................................Tennessee
Mazur, P., PhD ...............................................Harvard
O’Neill, H., PhD ..............................................Dublin (Ireland)

MAJOR DEGREES
Biochemistry and Cellular and Molecular Biology MS, PhD

Admission
Applicants for graduate study are expected to have a background equivalent to that required of undergraduate majors in this department. This includes a knowledge of the basic principles of biochemistry, cell biology, genetics and physiology. Requirements for admission are
• One year of general biology or the equivalent.
• A minimum of 8 hours of approved biology courses beyond the introductory level and including the subject areas of genetics, cell biology and physiology.
• Two years of chemistry including one year of general chemistry and one year of introductory organic chemistry with laboratory.
• At least one semester of biochemistry.
• One year of calculus.
• One year of physics.
• Graduate Record Examination scores.
• A minimum grade point average of 3.00 out of 4.00.

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

MASTER OF SCIENCE

BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY MAJOR

Requirements
• Biochemistry and Cellular and Molecular Biology 511, 512, and 515, and 6 hours of 516.
• Completion of course requirements as determined by the candidate’s faculty committee.
• Achievement of a 3.00 or better GPA in all courses taken for graduate credit.
• Participation in 601 and 603 during the entire period of residence. Participation in at least one journal club chosen from among 605-608 for three semesters.
• 6 hours of master’s research and a thesis.
• A final examination that covers both the thesis endeavor and the subject matter of the course requirements.

DOCTOR OF PHILOSOPHY

BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY MAJOR

Requirements
• Biochemistry and Cellular and Molecular Biology 511, 512, 515, and 6 hours of 516.
• At least two additional approved graduate courses in the life sciences or chemistry, or physics, or other physical science to be determined upon consultation with the mentor and the dissertation committee. No survey courses will be accepted.
• At least 6 hours of topics offered in 615 or its equivalent.
• Participation in 601 and 603 during the entire period of residence. Participation in at least one journal club chosen from among 605-608 for 6 semesters.
• Comprehensive examination, taken before the end of the third year of study.
• A dissertation reporting the results of original and significant research carried out during the term of candidacy.
• A final oral examination which will be concerned primarily with the student’s dissertation.

Petitioning for Master’s Degree
Students who have passed the comprehensive examination in the PhD program and have completed at least 30 hours of approved coursework for graduate credit, at least two-thirds of which must be at or above the 500 level, may petition the department for award of a master’s degree. The additional requirements for such a degree are
• Preparation of a research manuscript suitable for submission for publication in a major scientific journal and oral defense of that manuscript before an examining committee of three faculty members appointed by the head of the department, at least two of whom shall be members of the department.

or

• Publication of at least one full-length paper in a major scientific journal as senior author.

DEPARTMENT OF CHEMISTRY

http://www.chem.utk.edu
Craig E. Barnes, Head
Charles S. Feigerle, Graduate Liaison

Professors
Adcock, J.L., PhD ................................., Texas
Baker, D.C., PhD .................................Ohio State
Barnes, C.E., PhD .................................Stanford
Bartmess, J.E., PhD .................................Northwestern
Compton, R.N., PhD .................................Tennessee
Cook, K.D., PhD .................................Wisconsin
Dadmun, M.D., PhD .................................Massachusetts
Feigerle, C.S., PhD .................................Colorado
Guichon, G.A. (Distinguished Scientist, Science Alliance
Center of Excellence), PhD ............................. Université de Paris (France)
Harrison, R.J., PhD .................................Cambridge (UK)
Hinde, R.J., PhD .................................Chicago
Kabalka, W.H. (Robert H. Cole Professor, Alumni Distinguished Service Professor), PhD .............................Purdue
Kovac, J.D., PhD .................................Yale
Larose, J.Z., PhD .................................Wesleyan
Mays, J.W. (Distinguished Scientist, Science Alliance Center of Excellence), PhD .................................Akron
Pagni, R.M., PhD .................................Wisconsin
Schweitzer, G.K. (Alumni Distinguished Service Professor), PhD .............................Illinois
Sepaniak, M.J., PhD .................................Iowa State
Williams, T.F. (Alumni Distinguished Service Professor), PhD .................................London (UK)
Woods, III, C. (Associate to the Chancellor), PhD .................................North Carolina State
Xue, Z., PhD .................................UCLA

Associate Professors
Musfeldt, J.L., PhD .................................Florida
Schell, F.M., PhD .................................Indiana
Turner, J.F.C., PhD .................................Oxford (UK)

Assistant Professors
Best, M.D., PhD .................................Texas
Foister, S., PhD .................................California Institute of Technology
Lee, Y., PhD .................................Texas
Vogt, F., PhD .................................Karlsruhe (Germany)
Zhao, B., PhD .................................Akron

MAJOR DEGREES

Chemistry

Analytical chemistry concentration
Environmental chemistry concentration
Inorganic chemistry concentration
Organic chemistry concentration
Physical chemistry concentration
Polymer chemistry concentration

Chemistry (500 level or above) requirement must be at least one seminar. (No more than 2 hours may be applied to the course requirements.)

The requirements for the PhD in chemistry (except for the chemical physics concentration) consist of the satisfactory completion of the following requirements.

• Research and a dissertation to give 6 to 12 hours of graduate credit in Chemistry 500.

• Participation in seminar (Chemistry 501) during the entire period of graduate study, including the presentation of at least one seminar. (No more than 2 hours may be applied to the course requirements.)

• Prescribed courses based on performance on diagnostic examinations.

• Sufficient graduate coursework in chemistry (at the 400 level or above) and/or a related field to make an overall total of 30 hours, including one of the following sequences – 510-511-512; 530-531-532-533; 550-551-552, 570-572-573 and 590-594-595. At least 14 hours of this graduate coursework must be at the 500 level or above.

• A final oral examination.

DOCTOR OF PHILOSOPHY

CHEMISTRY MAJOR

Requirements

The requirements for the PhD in chemistry (except for the chemical physics concentration) consist of the satisfactory completion of the following requirements.

• Research and a dissertation to give at least 24 hours of graduate credit in Chemistry 600. Registration must be continuous from the beginning of research.

• Participation in seminar (Chemistry 501) during the entire period of graduate study, including the presentation of at least one seminar.

• Prescribed courses based on performance on diagnostic examinations.

• Completion of the comprehensive examination series and defense of an original research proposal to give 2 hours of credit in Chemistry 601.

• 18 additional hours in courses at the 500 level or above including at least one course above 601 and one of the following sequences – 510-511-512; 530-531-532-533; 550-551-552-553-554; 570-571-572-573; 590-594-595.

• A final oral examination.
The PhD program with a concentration in chemical physics is conducted jointly with the Department of Physics. Requirements depend on the choice of the major department. Chemistry departmental requirements include passing the above degree requirements plus 6 additional hours in physics at the 500 level or above. Three of the additional physics hours can be used to satisfy the 18 hours requirement listed above.

**Intercollegiate Graduate Minor in Computational Science**

The Department of Chemistry participates in the intercollegiate graduate minor in computational science (IGMCS) program. Any student pursuing a master’s or PhD with a major in chemistry can receive a minor in computational science by completing the appropriate IGMCS requirements. For further information, see the description of the IGMCS listed under the Department of Computer Science. The Department of Chemistry also contributes courses to the IGMCS program curriculum.

**DEPARTMENT OF CLASSICS**

http://web.utk.edu/~classics/

David W. Tandy, Head

**Professors**

Craig, C.P. (Lindsay Young Professor), PhD .............. North Carolina
Martin, S.D. (Senior Vice Provost), PhD ............... Michigan
Tandy, D.W. (Distinguished Professor of Humanities), PhD ........ Yale

**Associate Professor**

Sutherland, E.H., PhD ................................. California (Berkeley)

**Assistant Professors**

Granger, C.D., PhD ............................... Cornell
Laflerty, M.K., PhD ............................... Toronto (Canada)
Sklenar, R.J., PhD ................................. Michigan
Van de Moortel, A., PhD ............................ Bryn Mawr

**Research Professors**

Gessell, G.C., PhD ................................. North Carolina
Langdon, M.K., PhD ............................... Pennsylvania

**Lecturers**

Bartera, S., MA ................................. Urbino (Italy)
Downey, S.J., PhD ............................... Toronto (Canada)

**Adjunct Faculty**

Dessel, J.P., PhD ................................. Arizona
Dzon, M., PhD ................................. Toronto (Canada)
Fitzgerald, J.L., PhD .............................. Chicago
Hefferman, T.J., PhD ............................. Cambridge
Jones, D.W., PhD ................................. Chicago
Kulkowski, M., PhD ............................... Toronto (Canada)
Shepardson, C., PhD .............................. Duke
Stiebert, J., PhD ................................. Glasgow (UK)

The Graduate courses in the Classics include the wider reading of Greek and Latin authors in a selected field, a more detailed study of one of the great genres of classical literature, and the development of background for the appreciation of Greek or Roman life and literature.

Students admitted to the Master of Arts with a major in anthropology may pursue a concentration in Mediterranean archaeology (see Department of Anthropology).

**DEPARTMENT OF COMPUTER SCIENCE**

http://www.cs.utk.edu/

Michael W. Berry, Interim Head

David W. Straight, Graduate Liaison

**Professors**

Berry, M.W., PhD ............................... Illinois
Dongarra, J.J., PhD ............................... New Mexico
Gregor, J., PhD ................................. Aalborg (Denmark)
Langston, M.A., PhD .............................. Texas A&M
Plank, J.S., PhD ................................. Princeton
Pooe, J.H., PhD ................................. Georgia Tech
Thomason, M.G., PhD .............................. Duke
Vander Zanden, B.T., PhD ........................ Cornell
Ward, R.C., PhD ................................. Virginia

**Associate Professors**

Banks, D.C., PhD ............................... North Carolina
Beck, M., PhD ................................. Cornell
MacLennan, B.J., PhD .......................... Purdue
Parker, J.E., PhD ............................... Massachusetts Institute of Technology
Vose, M.D., PhD ................................. Texas

**Assistant Professors**

Huang, J., PhD ................................. Ohio State
Straight, D.W., PhD .............................. Texas

**Lecturer**

Mayo, J.W., MS ................................. Tennessee

**MAJOR DEGREES**

Computer Science

**DEGREES**

MS, PhD

**MASTER OF SCIENCE**

**COMPUTER SCIENCE MAJOR**

**Admission**

Two semesters of calculus plus two additional semesters of college mathematics (e.g. linear algebra, differential equations, probability) and a course in formal languages, as well as in systems programming, are required for admission.

**Requirements**

For the master’s degree, 30 hours of graduate credit are required, 24 of which must be 500 level or above. Computer Science 530, 560 and 580 or 581 are required for the degree. Graduate courses taken outside the department are sometimes allowed but must be approved by the Graduate Committee before enrolment.

**Thesis Option**

The student must reach agreement on a thesis topic with a faculty advisor and must take 6 hours of 500 Thesis. Six hours of 500 Thesis may count in the 24-hour requirement at the 500 level or above.

**Non-Thesis Option**

The student must take coursework in an area to prepare for the non-thesis master’s examination. The student’s advisor must verify that an acceptable set of courses has been taken before the student may schedule the examination. Information concerning the examination is available in the departmental office.

**Problems in Lieu of Thesis Option**

The student must reach agreement on the problem topic with a faculty advisor and pass an oral exam on the problems before a committee of three or more faculty members. At least two of the committee members must be computer science faculty.

**DOCTOR OF PHILOSOPHY**

**COMPUTER SCIENCE MAJOR**

**Admission**

A student seeking admission to the PhD program is expected to meet the following requirements.

- The student should have three letters of recommendation sent directly to the department head from individuals capable of assessing the student’s potential for advanced work in computer science (for example, college faculty or employers for whom the student has worked after earning a bachelor’s degree). The department reserves the right to contact these individuals or other knowledgeable people if additional information is deemed necessary or desirable.

- The student is expected to have taken the GRE verbal and quantitative general test within the past three years and to have these scores sent to the Office of Graduate and International Admissions.
Requirements

Original research reported in a dissertation of high quality is emphasized. The minimum hour requirements are 24 hours of course 600 Doctoral Research and Dissertation and 24 hours of graduate courses beyond the equivalent of a master’s degree (i.e., beyond 30 graduate hours) graded A-F. Computer Science 530, 560 and 580 or 581 are required for the degree. At least 6 hours of 600-level graded courses must be taken in computer science at the University of Tennessee, Knoxville. The students advisor and committee will establish the specific course requirements. The comprehensive examination consists of a departmental written examination and a subsequent oral examination conducted by the student’s committee.

Computer Science Minor

The graduate minor consists of any two of the four core courses (530, 560, 580, 581) plus an additional 3 hours of graduate computer science graduate-level courses at or above the 400 level.

Intercollegiate Graduate Minor in Computational Science

The Department of Computer Science participates in the intercollegiate graduate minor in computational science (IGMCS) program. Any student pursuing a master’s or PhD with a major in computer science can receive a minor in computational science by completing the appropriate IGMCS requirements. For further information, see the description of the IGMCS below. The Department of Computer Science also contributes courses to the IGMCS program curriculum.

Interdisciplinary Graduate Minor in Computational Science (IGMCS)

The Interdisciplinary Graduate Minor in Computational Science (IGMCS) is a formal academic program at the University of Tennessee established to allow students to earn a minor in Computational Science simultaneously with a master’s or doctorate in another academic discipline. The program is open to graduate students in all departments, which have an approved minor. The program is administered by a committee composed of representatives, including program faculty, from all colleges that have approved the IGMCS program and which have minor programs.

Requirements

Degree Program Hours in Approved IGMCS Courses
Master’s in home department, minor in computational science ........................................... 9
Doctorate in home department, minor in computational science ................................ 15

Computational Science is an emerging field of study that is truly interdisciplinary, with participating faculty from Mathematics, Computer Science, and many “Domain Sciences” across the curriculum that have embraced computationally intensive methods. Since Computational Science demands some basic level of understanding and skill in all three of these discipline clusters, the IGMCS program is designed to provide students seeking an advanced degree in one of these three areas with the knowledge and experience in the other two that is necessary to round out their education. Course options consist of courses in Mathematics, Computer/Information Science, and other participating departments selected according to a plan approved by the respective home departments, which then must be approved by the IGMCS Program Committee.

Procedures

The student’s home department (i.e., the department in which the student is currently pursuing an advanced degree) must have approved a program of courses with the IGMCS Program Committee prior to declaration of the IGMCS minor. That program will specify the sequences of Computational Science courses, selected from the IGMCS approved list, which are considered appropriate by the home department, and the home department must verify fulfillment of non-computational science degree requirements. Students wishing to participate in this program should contact their college representatives or the Chair of the IGMCS Program Committee.

The student’s graduate committee must include a member of the IGMCS faculty.

The student’s Admission to Candidacy form must contain all courses required for the chosen degree program delineated and labeled “Computational Science courses required for the minor in computational science.” Should the student decide not to apply for admission to the program until after completion of some of the courses, the student’s major professor should file a program change with the cooperating departments and assist the student in obtaining an IGMCS faculty member to serve on the student’s graduate committee.

Successful completion of the minor in Computational Science is recognized by appropriate documentation on the student’s transcript. Students who do not complete the requirements of the minor will still receive academic credit for the computational science courses they have successfully completed.

For more information contact Dr. Terry Moore at tmoore@cs.utk.edu or visit http://igmcs.utk.edu.

DEPARTMENT OF EARTH AND PLANETARY SCIENCES

http://geoweb.gg.utk.edu/

Claudia I. Mora, Head
Jeffrey E. Moersch, Graduate Liaison

Professors

Broadhead, T.W., PhD ..................................................... Iowa
Dunne, W.M. (Associate Dean), PhD ............................... Bristol (UK)
Hatcher, Jr., R.T. (UT Knoxville/ORNL Distinguished Scientist), PhD ............................ Tennessee
Labotka, T.C., PhD ............................................................ California Institute of Technology
McKay, L.D. (Jones Professor of Hydrogeology), PhD ................. Waterloo
Mckinney, M.L., PhD .......................................................... Yale
McSween, H.Y. (Distinguished Professor of Science), PhD ....... Harvard
Mora, C.I. (Carden Professor), PhD .................................. Western Ontario (Canada)
Taylor, L.A. (Distinguished Professor of Science), PhD ............ Lehigh

Associate Professors

Baker, G.S. (Jones-Bibee Professor of Geophysics), PhD .............. Kansas
Clark, G.M., PhD ............................................................... Penn State
Fedo, C.M., PhD .............................................................. Virginia Tech
Kah, L.C., PhD ................................................................. Harvard
McKay, E., PhD ................................................................. Cornell

Assistant Professors

Finkelstein, D.B. (Jones Professor of Environmental Geochemistry), PhD ........................................... Illinois
Jessup, M.J., PhD ............................................................ Virginia Tech
Moersch, J.E., PhD ......................................................... Cornell

Lecturers

Deane, W., MS ................................................................. Tennessee
Sumrall, C.D., PhD ........................................................... Texas

MAJOR DEGREES

Geology

MS, PhD

The Department of Earth and Planetary Sciences offers both the Master of Science and Doctor of Philosophy degrees with a major in geology. Persons interested in these programs should contact the Director of Graduate Admissions in the department.
Admission

For admission, an applicant must provide transcripts of previous university work, two rating forms or letters of recommendation, and GRE scores (general). Students are not normally admitted under non-degree status.

Prerequisite for both degrees is a bachelor’s degree, including coursework in mineralogy, optical mineralogy, petrology, stratigraphy, paleontology, structural geology, and field geology. One year each of coursework in calculus and chemistry and one year of coursework in biology, physics, or statistics are required. Applicants lacking any of these may be admitted, but are expected to make up significant deficiencies in their background through coursework outlined by the graduate committee.

MASTER OF SCIENCE

GEOLOGY MAJOR

Requirements

The department offers the thesis option in the master’s program. Graduation requires successful oral defense of a written thesis and a minimum 3.00 GPA in all graduate coursework.

Course requirements are a minimum of 30 hours, including:

• 6 hours of Thesis 500.

• Registration in 595 during the first two years in residence. Two hours may be counted toward the 30-hour minimum. This requirement may be waived in unusual circumstances.

• 16 hours of geology courses, with at least 14 hours at the 500 or 600 level, including at least one course from any three of the following five groups:
  1. 410, 460, 480, 530, 563, 565, 568.
  2. 450, 545, 546, 556, 557.
  3. 470, 570, 572, 575, 576.
  5. Any 400- or 500-level courses with graduate credit from related departments (allied sciences, mathematics, and engineering), selected with approval of the advisor.

• 8 hours of additional graduate coursework.

DOCTOR OF PHILOSOPHY

GEOLOGY MAJOR

The prerequisite for the PhD program, in addition to that for the MS program, is either a master’s degree with a major in geology or a bachelor’s degree plus completion of 24 hours of graded coursework with at least one course from any three of the groups listed in the third bullet above. These courses may be taken while completing other course requirements.

Requirements

Graduation requires passing a comprehensive examination, taken no later than the end of the second year, completion of all course requirements with a minimum 3.00 GPA, completion of the language requirement, and successful oral defense of the dissertation.

The comprehensive examination includes both written and oral parts in which the candidate will be tested on his/her knowledge of the area concerning the proposed dissertation and of related fields. The candidate is expected to be conversant in a wide range of geological sciences.

A minimum of 24 hours of graded coursework beyond the master’s degree is required in addition to the 24 hours of Dissertation 600. The coursework includes 9 hours of 600-level geology courses, 9 hours of 500-level or higher geology courses, and 6 hours of additional graduate courses. Extra departmental coursework is encouraged.

The student must demonstrate a reading knowledge of a foreign language in which there is a body of geologic literature as approved by the student’s dissertation committee. The foreign language requirement may be waived for PhD students whose native language is not English and who have demonstrated mastery of the English language as determined by the student’s dissertation committee.

DEPARTMENT OF ECOLOGY
AND EVOLUTIONARY BIOLOGY

http://eeb.bio.utk.edu/

Christine R.B. Boake, Head
Randall Smith, Associate Head
Karen Hughes and Sandy Echternacht, Graduate Liaison

Professors

Boake, C.R.B., PhD ...........................................  Cornell
Burghardt, G.M., PhD .......................................  Chicago
Echternacht, A.C., PhD .....................................  Kansas
Etnier, D.A., PhD ............................................  Minnesota
Gavrilts, S., PhD .............................................  Moscow State
Greenberg, N.B., PhD ........................................  Rutgers
Gross, L.J., PhD .............................................  Cornell
Harris, III, W.R., PhD ......................................  Tennessee
Hallam, T.G., PhD ..........................................  Missouri
Hughes, K., PhD .............................................  Utah
McCracken, G.R., PhD ......................................  Cornell
Petersen, R.H., PhD .........................................  Columbia
Rieber, S.E. (Distinguished Service Professor), PhD ... Wisconsin
Sayer, G.D., PhD .............................................  Idaho
Schilling, E., PhD ............................................  Indiana
Schultz, E., PhD .............................................  Indiana
Simberloff, D. (Gore Hunger Chair of Excellence), PhD ... Harvard

Associate Professors

Drake, J.A., PhD .............................................  Purdue
Small, R., PhD ..............................................  Iowa State
Smith, D., PhD ..............................................  Tennessee
Weltzin, J., PhD .............................................  Arizona
Wofford, B.E. (Curator of Herbarium), PhD ............... Tennessee

Assistant Professors

Field, T., PhD ...............................................  Harvard
Fitzpatrick, B.M., PhD ......................................  Davis
Fordyce, J.A., PhD ..........................................  Davis
Gilchrist, M.A., PhD ........................................  Duke
Sanders, N.J., PhD .........................................  Stanford
Schweitzer, J.N., PhD ......................................  Arizona
Williams, J., PhD ..........................................  Georgia

Research Professors

Cooper, L.W., PhD .......................................... Alaska
Grebe, J.M., PhD ........................................... Alaska

Research Assistant Professors

Bailey, J.N., PhD ........................................... Arizona
Glassen, A.T., PhD ......................................... Northern Arizona

Shared faculty are drawn from other university departments, the Oak Ridge National Laboratory, the United States Geological Survey, and the Tennessee Valley Authority.

MAJOR DEGREES

Ecology and Evolutionary Biology
Behavior concentration
Ecology concentration (including mathematical ecology)
Evolutionary biology concentration

Admission

Applications are accepted once a year. The deadline for receipt of all application materials is January 6 for those applicants wishing to enroll in the following fall or spring semesters. Applications incomplete as of that date, or received after that date will not be considered. Applicants are expected to have an academic background consistent with a bachelor’s degree in one of the life sciences. They are expected to have completed a minimum of one year of general biology, two years of chemistry including one year of general chemistry, one year of physics, and one year of general geology.
of college-level calculus. Occasionally, applicants who are highly qualified otherwise but lack one of these courses or course sequences will be admitted with the expectation that the deficiency will be made up within the first year of graduate study. Applicants are required to submit scores from the general Graduate Record Examination (GRE) and successful applicants will usually have a composite score on the verbal, mathematical and analytical sections of the GRE of at least 1850. Submission of scores on appropriate (e.g., biology, mathematics) advanced GRE examination is recommended but not required. Applicants are also expected to have an overall grade point average of at least 3.00 and 3.00 or above for all science and mathematics courses on a 4.00 scale (successful applicants will usually have grade-point averages well above these minima).

Application must be made to both the Office of Graduate and International Admissions and the department. The departmental application requires three letters of reference from persons capable of assessing the applicant’s suitability for graduate work in biology and a statement of professional goals and reasons for applying to this program. Applicants for the doctoral degree are expected to have made prior contact with potential research advisors in the department’s graduate program and this approach is recommended for applicants for the master’s degree program as well. Inquiries should be directed to the Chair, Graduate Committee, Department of Ecology and Evolutionary Biology, The University of Tennessee, Knoxville, Tennessee 37996-1610.

MASTER OF SCIENCE
ECOLOGY AND EVOLUTIONARY BIOLOGY

MAJOR
Requirements
In addition to general requirements of the Graduate Council, aspirants for the Master of Science are expected to

- Take a prescriptive diagnostic examination during the first semester in residence which covers major concepts in ecology and evolutionary biology. The examination may be taken twice and must be passed before the student is admitted to candidacy.
- Complete course requirements as determined by the department and the student’s faculty research committee.
- Satisfactorily complete and defend a research thesis.

DOCTOR OF PHILOSOPHY
ECOLOGY AND EVOLUTIONARY BIOLOGY

MAJOR
Requirements
In addition to general requirements of the Graduate Council, aspirants for the Doctor of Philosophy degree are expected to

- Take a prescriptive diagnostic examination covering major concepts in ecology and evolutionary biology. The examination may be taken twice and must be passed before the student is admitted to candidacy.
- Complete course requirements as determined by the department and the student’s faculty dissertation research committee.
- Pass a written and oral comprehensive examination designed to test for adequate knowledge in those areas essential to the student’s research program.
- Satisfactorily complete and defend a dissertation.

The department does not require a reading knowledge of a foreign language, but this may be imposed by the student’s faculty dissertation research committee. If so, the student has the option of demonstrating reading knowledge of the prescribed lan-

Environmental Policy Minor

The department participates in a program designed to give graduate students an opportunity to develop an interdisciplinary specialization in environmental policy. See Department of Political Science for program description.

DEPARTMENT OF ENGLISH

http://web.utk.edu/~english/

John P. Zomchick, Head

Misty G Anderson, Graduate Liaison

Professors
Atwill, J.M., PhD ............................................ Purdue
Cox, D.R. (Executive Associate Dean), PhD .................. Missouri
Dumas, B.K., PhD ......................................... Arkansas
Dunn, A.R., PhD ............................................ Washington
Ensor, A.R., PhD ............................................ Indiana
Ganne, Jr., S.B. (Interim Associate Dean and Young Professor), PhD ............................. Princeton
Goslee, D.F., PhD ........................................... Yale
Goslee, N.M. (Alumni Distinguished and Young Professor), PhD .................................. Rutgers
Hirshfeld, H.A., PhD ...................................... Duke
Hest, R., PhD .............................................................. Duke
Hirst, R., PhD ............................................... Rensselaer Polytechnic
Howes, L.L., PhD ......................................... Columbia
Jennings, L.D., PhD ......................................... North Carolina
Knight, M., MFA .............................................. Bowling Green
Zomchick, J.P., PhD ......................................... Columbia

Associate Professors
Anderson, M.G., PhD ............................................ Vanderbilt
Elias, A.J., PhD ............................................... Penn State
Hirschfeld, H.A., PhD ...................................... Duke
Hest, R., PhD .................................................. Rensselaer Polytechnic
Howes, L.L., PhD ......................................... Columbia
Jennings, L.D., PhD ......................................... North Carolina
Knight, M., MFA .............................................. Virginia
Reif, M.J., PhD ................................................... Kansas

Assistant Professors
Billone, A.C., PhD ............................................ Princeton
Coxe, D., PhD .................................................. Stanford
Dizon, M., PhD .............................................. Toronto (Canada)
Fishman, J.M., PhD ........................................... Stanford
Haddox, T., PhD ............................................. Vanderbuilt
Ikard, D., PhD .................................................. Wisconsin
Schoenbach, L.M., PhD .................................. Virginia
Seshagiri, U., PhD ............................................ Illinois

Lecturers
Aajii, M.P., PhD ............................................ Alabama
Barrow, R., PhD ............................................ Iowa
Burton, J.C., PhD ........................................... State University of New York (Stony Brook)
Capps, S.E., PhD ........................................... Tennessee
Dziuban, E.K., MA .......................................... Texas
Goddard, K.C., MA ......................................... Texas
Hardwig, M.R., PhD ......................................... Tennessee
Hardwig, W.J., PhD ............................................ Florida
Harris, S.C., PhD ............................................ Tennessee
Havens, K.L., PhD ........................................... Toronto (Canada)
Hussein, A., PhD ............................................... Tennessee
Knox, L., MA ................................................... Indiana
Larsen, W.B., PhD ............................................ Tennessee
Mabee, F.P., PhD .............................................. Southern California
McCue, K., MA ................................................ Tennessee
The Department of English offers the Master of Arts and the Doctor of Philosophy degrees with a major in English. Thesis and non-thesis options are available for the MA, as well as a special concentration in writing. The department also offers a creative writing concentration in the doctoral program.

Detailed information about the master's and doctoral programs and individual graduate courses may be obtained by writing the Director of Graduate Studies in English, 306 McClung Tower. A prospective student may contact the department for application forms and procedures or may download them from the departmental Web site at http://web.utk.edu/~english/graduate.php. For additional information, please visit the graduate Web site through the College of Arts and Sciences home page at www.artssci.utk.edu.

The Department of English does not accept students in non-degree or provisional status. A student who wishes to enter the department must apply in degree-seeking status for his/her application to receive consideration for admission to any graduate program in English.

MASTER OF ARTS
ENGLISH MAJOR

Requirements
A minimum of 24 hours in English beyond the BA to include 6 hours at the 600 level; 12 additional hours at the 500-600 level (only 3 hours of 593 Independent Study may be applied toward the MA), and 6 hours for graduate credit at any level, including the 400-level. In this coursework, students must maintain at least a 3.00 GPA.

Thesis Option
Written under the direction of a faculty member of the department and approved by a committee of two other faculty members. Six hours of credit will be given.

Non-Thesis Option
Six hours of additional courses at the 500-600 level, making a total of 30 hours of required coursework.

Language Requirement
Evidence of proficiency in one foreign language to be fulfilled in one of the following ways.
- Completion of the second year of a language at college level with a grade of C or better.
- Completion of French 302 or German 332 at the University of Tennessee, Knoxville, with a grade of B or better.

- Passing of the regular PhD foreign language examination as currently administered at the University of Tennessee, Knoxville.

Final Examination
A candidate presenting a thesis must pass a 1-hour oral examination; a candidate presenting a creative project must pass a ninety-minute oral examination. The examination consists of a short thesis defense, but chiefly of questions covering the general history of English and American literature, not merely the coursework taken. A reading list of primary works designed to help the student prepare for these questions is available in the office of the Director of Graduate Studies in English.

A non-thesis student must pass a written examination, followed by a 1-hour oral examination, both consisting of the same sort of questions as the examination taken by the thesis student.

Residence Requirement
There is no residence requirement for the MA, but students should attempt to pursue a full-time program whenever possible.

WRITING CONCENTRATION
The master’s program with writing concentration is intended for those students who plan to do freelance or creative writing, specialize in teaching writing courses at the college level, work as professional editors or writers in business or industry, or pursue doctoral studies.

The requirements for the writing concentration are the same as those for the thesis option above with the following exceptions.

Coursework
Writing students may substitute two 400-level writing courses for two 500-level courses. Students must take at least 9 hours in writing and 9 in literature, the remaining 6 to be selected from any English courses at the proper level. Of the courses in writing, at least 3 hours must be taken at the 500 level; additional 500-level courses are strongly recommended.

Writing Project
One of the following writing projects for 6 hours of credit is required.
- A thesis, using research to analyze some aspect of writing or rhetorical theory.
- A creative project, such as a collection of poems or short stories, a short novel, a play, or a creative work of non-fiction prose.

The nature and length of each project will be determined by the Director of Graduate Studies in English after consulting with the student and the project director. In addition to the director, two other Department of English faculty members will supervise and approve the project; at least one should be from the literature faculty.

Final Examination
The reading list may be modified by the MA examining committee, meeting as a body with the student, to reflect the candidate’s particular writing emphasis. However, most of the oral examination should focus upon the literature outlined in the original reading list.

DOCTOR OF PHILOSOPHY
ENGLISH MAJOR

Requirements
A student must successfully complete a program of study, normally six full semesters as outlined below, approved by the candidate’s committee or the Director of Graduate Studies in English.
Coursework

At least 54 hours beyond the BA (of which at least 30 hours must be beyond the MA) to include at least 21 hours at the 600 level; at least 15 hours at the 500 level or above (only 3 hours of 593 Independent Study may be applied toward the MA and 3 after the MA); a 3-hour course in teaching composition; and 15 additional hours at any level approved for graduate credit (including a maximum of 12 hours at the 400 level if approved by the Director of Graduate Studies).

Up to 6 of these additional hours may be taken in some cognate field or fields such as history, philosophy, and French. These courses must be drawn from those approved for graduate credit. All other coursework must be in the English Department. In this coursework, students must normally maintain a 3.50 GPA.

Dissertation

Twenty-four hours of dissertation are required. These represent the research for and writing of the dissertation. The research and dissertation will be directed by a faculty member of the department and approved by a doctoral committee of three or four other faculty members.

Language Requirement

A language requirement met in one of the following ways.

- Two languages approved by the Director of Graduate Studies in English. The requirement for each language may be fulfilled by (a) completion of French 302 or German 332 with a grade of B or better; (b) completion at the University of Tennessee, Knoxville, of any two courses on the 300 level or above in the foreign language or literature with at least a grade of B in each course; (c) passing of the regular PhD foreign language examination as currently administered at the University of Tennessee, Knoxville.

- One modern language approved by the Director of Graduate Studies in English. This requirement must be fulfilled by a passing grade on the language examination given by the University of Tennessee, Knoxville, and completion of two courses given in the foreign language at the 400 level or above, at least one course to be at the 500- or 600-level. A minimum grade of B must be received in each course.

- One modern language approved by the Director of Graduate Studies in English and intensive study of the English language. This requirement must be fulfilled by completion of (a), (b), or (c) for one foreign language; and completion of 6 hours in English language courses with grades of B or better, at least 3 of which must be from English 508 or 509 History of the English Language (offered in alternate years only). For the other 3 hours, the student may either complete the history of the language sequence or choose one other course in language taught in the Department of English at the 500 or 600 level and approved by the Director of Graduate Studies in English. These courses will not count toward the minimum number of courses for the PhD, and anyone electing this language option may not take the comprehensive examination in linguistics.

Examinations

- A first-year review conducted at the end of the first year of PhD coursework.

- A comprehensive examination which may be divided as the department directs (see the English Department graduate student Web site). The comprehensive examination is given twice a year, normally in March and September. Before a student may take it, he/she must have completed all required coursework. A student must also have met all requirements for foreign languages before beginning the first part of the examination.

Dissertation Defense

A one-hour examination on the dissertation and other related areas is required.

Residence Requirement

Two consecutive semesters as a full-time student are required. For students not on teaching assistantships, full-time consists of 9 or more hours of coursework and/or dissertation hours each semester. For students on assistantships, full-time consists of at least 6 hours of courses and/or dissertation hours and 3 hours of teaching each semester.

DEPARTMENT OF GEOGRAPHY

http://web.utk.edu/~utkgeog/
Carol Harden, Interim Head

Professors
Aiken, C.S., PhD ............................................... Georgia
Bell, T.L., PhD ................................................ Iowa
Foresta, R.A., PhD .......................................... Rutgers
Harden, C.P., PhD ........................................ Colorado
Horn, S.P., PhD .............................................. California (Berkeley)
Pulsipher, L.M., PhD ..................................... Southern Illinois
Raflston, B.A., PhD ....................................... Northwestern
Rehder, J.B., PhD ........................................ Louisiana State
Shaw, S.L., PhD ........................................... Ohio State

Associate Professors
Gressino-Mayer, H., PhD .................................. Arizona
Orvis, K., PhD ............................................... California (Berkeley)

Assistant Professors
Drever, A., PhD .............................................. California (Los Angeles)
Kalafsky, R., PhD ......................................... New York (Buffalo)
Tran, L.T., PhD ............................................... Hawaii

Adjunct Faculty
Gripshover, M.M., PhD .................................... Tennessee
Kappelle, M., PhD ......................................... Amsterdam
Liu, C., PhD .................................................. Tennessee
Tankersley, R.D., PhD .................................... Tennessee
Zanetta, M.C., PhD ......................................... Ohio State

MAJOR DEGREES

Geography  MS, PhD

The master’s degree emphasizes development of professional competence as a geographer and offers opportunities to gain substantial depth in a concentration or a major technique. An emphasis in geographic information science is available for students who have appropriate backgrounds in mathematics and computer science. The doctoral program is for those who have demonstrated proficiency in conducting independent research. The department is particularly well-qualified to direct graduate work in location analysis, transportation geography, urban and rural geography, cultural ecology, and the geography of the natural environment (especially biogeography and geomorphology). The faculty is qualified to direct students from a variety of approaches ranging from historical and humanistic to rigorously analytic and GIS-based.

MASTER OF SCIENCE GEOGRAPHY MAJOR

Requirements

The department offers the thesis and non-thesis options for the Master of Science. Both options require a minimum of 30 hours beyond the completion of a sound undergraduate major program. The MS program requires students to have a background in quantitative methods equivalent to the course content of Geography 415 and some familiarity with key themes and approaches in both physical and human geography. At least two-thirds of the total hours in the degree program must be at or above the 500 level and must include 501 (at each offering dur-
ing residency), 504, and 3 hours at the 600 level. In the thesis option, 6 hours must be Thesis 500. A final examination is required in both programs.

DOCTOR OF PHILOSOPHY

GEOGRAPHY MAJOR

The doctorate is a research degree and is granted only to those who demonstrate proficiency in conducting independent research. Students must have a broad foundation and understanding of the discipline; these should have been achieved in a comprehensive master's program.

Requirements

Course requirements for the degree shall be determined by the student's faculty committee in accordance with specific interests and needs. The program must include 504, 515, 599, 9 hours of 600-level seminars, and (at each offering during residency) 501. A minimum of 9 hours must be earned in collateral fields, with courses selected for their relevance to the special fields. PhD students whose master's-level work was in a field other than geography and for whom the master's area remains close to their PhD specialty areas may petition to substitute geography hours in courses outside of their specialty areas for up to 3 of the 9 required outside hours. Competency in quantitative methods and basic human and physical geography is required. Additional tools, including languages, will be required as appropriate to the student's areas of research specialization.

Examinations required for admission to candidacy include a written comprehensive examination, comprised of two written examinations in which the student will be tested on his/her knowledge of two special fields and related areas of geography and an oral examination on the student's program, the special fields and related areas, and the dissertation proposal. All parts of the written comprehensive examination should be taken within the same semester.

Environmental Policy Minor

The department participates in a program designed to give graduate students an opportunity to develop an interdisciplinary specialization in environmental policy. See Department of Political Science for program description.

Intercollegiate Graduate Minor in Computational Science

The Department of Geography participates in the intercollegiate minor in computational science (IGMCS) program. Any student pursuing a master’s or PhD with a major in Geography can receive a minor in computational science by satisfying the requirements for the IGMCS. PhD students whose master’s-level work was in a field other than geography and for whom the master’s area remains close to their PhD specialty areas may petition to substitute geography hours in courses outside of their specialty areas for up to 3 of the 9 required outside hours. Competency in quantitative methods and basic human and physical geography is required. Additional tools, including languages, will be required as appropriate to the student’s areas of research specialization.

Examinations required for admission to candidacy include a written comprehensive examination, comprised of two written examinations in which the student will be tested on his/her knowledge of two special fields and related areas of geography and an oral examination on the student’s program, the special fields and related areas, and the dissertation proposal. All parts of the written comprehensive examination should be taken within the same semester.

MAJOR DEGREES

History

American history concentration
European history concentration

The MA program includes a thesis and non-thesis option. The doctoral program has concentrations in American and European history with special focuses in the areas identified under Group II doctoral fields and Group III teaching fields.

Detailed information may be obtained from the Director of Graduate Studies in History, who also advises all incoming students.

MASTER OF ARTS

HISTORY MAJOR

Admission

- Successful completion of a baccalaureate degree from an accredited institution, preferably with a major in history.
- Acceptable scores on the Graduate Record Examination (general).

Requirements

Complete 510 and a 600-level research seminar normally during the fall and spring semesters of the first year in the graduate program. Complete 521 in preparation for the MA examination. As many as 9 related hours may be taken outside the department. As many as 9 graduate hours taken elsewhere may be applied toward the MA degree. Except by prior approval of the Director of Graduate Studies in History, a student’s coursework must be at the 500 level or above.

Thesis Option

Twenty-four hours of coursework and 6 hours of Thesis 500 for a total of 30 hours are required. Thesis students are required to select one MA field and write a thesis. At the end of the program the thesis student will take a two-hour oral examination on both the thesis and the field.

Non-Thesis Option

A total of 30 hours of coursework is required. At least 6 hours must be completed in each of two MA fields. The primary field is examined by a two-hour written exam followed within one week by a one-hour oral examination. The single grade of pass/fail will be given at the conclusion of the oral examination. No examination is given on the secondary field.

Master of Arts Fields

- United States (colonial to present).
- Premodern Europe.
- Modern Europe.
• Asia.
• Retention and Termination.
A 3.00 overall grade point average is required to remain in good standing. MA students must take the MA examination no later than the semester following the completion of 30 hours. A student who fails the MA examination must repeat the examination no later than the following semester. A student who fails the examination a second time or does not take the examination when required will be dropped from the graduate program.

**DOCTOR OF PHILOSOPHY**

**HISTORY MAJOR**

**Admission**

- Successful completion of the MA degree from an accredited institution.
- Acceptable scores on the Graduate Record Examination (general).

**Requirements**

Before being admitted to doctoral candidacy, a student must fulfill the following requirements.

- Complete History 510 at the University of Tennessee, Knoxville, (may be waived for comparable experience elsewhere).
- Spend two consecutive semesters in residence.
- Complete 9 hours in one Group I doctoral field. There is no minimum hours requirement for a Group II field. Complete 9 hours in one Group III field, including the appropriate 511, 512, or 513 course and two additional courses at the 500 level. The Group III field must be in a different geographic area from the Group II field. Courses taken to fulfill MA degrees may be counted toward all field requirements.
- Fulfill the foreign language requirement.
- Complete two 600-level research seminars. (One must be completed at the University of Tennessee, Knoxville.) Students who have completed a master's thesis need complete only one research seminar (must be taken at the University of Tennessee, Knoxville), and History 621.
- Maintain a 3.00 overall grade-point average in graduate work attempted.
- Complete 24 hours of graduate coursework (21 hours graded A-F) at the University of Tennessee, Knoxville, beyond that required for the MA. Up to 6 hours may be taken outside of the department.
- Except by prior approval of the Director of Graduate Studies in History, a student's coursework must be at the 500 level or above.

**Language Requirement**

Students must demonstrate competence in one foreign language through coursework or examination. The student’s doctoral committee may specify any other languages or research tools, such as statistics, essential for the student’s preparation. The foreign language requirement must be fulfilled before taking the comprehensive examination.

**Group III (Teaching Field) Examination**

This is a one-hour oral exam that must be completed at any time before the comprehensive examination is taken. If a student fails the exam, he or she may retake the exam one time only and must do so the following semester. European and U.S. history courses may not be used for the Group III World History field.

**Comprehensive Examination**

The comprehensive examination consists of a written exam (Group I) and an oral exam (Group II) and must be taken no later than the semester following the semester in which the student completes the residence, coursework, and language requirement (summer excluded). Failure to take the comprehensive examination within the required time will be counted as a failure on the examination. No student will be permitted to take the comprehensive examination unless he or she has passed the Group III examination (see above) and has an overall grade point average of at least 3.00. Qualified students will be examined in one field selected from the Group I list below and one field selected from the Group II list below. The two exams are taken in the same semester. The Group I is an eight-hour written exam. It must be passed before the Group II can be taken. The Group II is a two-hour oral exam. A student who fails either exam must repeat it the following semester (summer excluded). A second failure on either exam will cause the student to be dropped from the history graduate program. A student who does not repeat a failed exam within the required time will likewise be dropped from the program.

**Admission to Candidacy**

Upon successful completion of the above requirements, a doctoral student may be admitted to candidacy.

**Doctoral Fields**

**Group I.** Pre-modern Europe; Modern Europe; United States (colonial to present).

**Group II.** To be defined by the student’s doctoral committee from within one of the following fields.

- United States – Colonial and Early Republic; 19th century; 20th century; Regional; Military and Foreign Relations; Social and Cultural; American Political.
- European – Ancient; Medieval; Early Modern; Modern; Political and Diplomatic; Intellectual and Cultural; Social and Economic; National Fields.

**Group III (Examined Teaching Field).** World History; Western Civilization; U.S. Civilization.

**Dissertation and Defense**

Original research forms the basis for the dissertation. Doctoral candidates must register for a minimum of 3 hours of 600 Dissertation Research each semester and must complete 24 hours of dissertation credit. A final oral defense is given on the dissertation in its historical context. The program must be completed within eight years from admission as a potential candidate.

**INTERDISCIPLINARY PROGRAMS**

*Don Richard Cox, Executive Associate Dean, College of Arts and Sciences, Director*

The College of Arts and Sciences offers a series of interdisciplinary undergraduate majors and minors through its interdisciplinary programs. These programs include Africana studies, American studies, Asian studies, cinema studies, comparative literature, environmental studies, global studies, Judaic studies, Latin American studies, legal studies, linguistics, medieval studies, and women's studies.

Certain courses within these programs are available for graduate credit as listed below. See the Undergraduate Catalog for program descriptions and directors.

**LINGUISTICS**

*Iona Leki, English, Chair*

**GRADUATE CERTIFICATE IN LINGUISTICS**

The linguistics program offers a graduate certificate designed to meet the needs of individuals wishing to apply linguistics in various professional fields. It draws upon the strengths of faculty members in applied linguistics, sociolinguistics, and theoretical linguistics. The requirements focus upon the central aspects of the discipline of linguistics and aim to develop students’ basic knowledge and skills in the core disciplinary areas.

Upon successful completion of this program, students should
have an understanding of the basic theoretical concepts and approaches of the discipline and have gained experience in the use of analytic and research techniques. It is also designed to meet the specific needs of those students who are preparing to teach foreign language at the high school/junior college level and/or to obtain advanced level proficiency in linguistics and cultural knowledge.

Prospective candidates for the certificate may take up to 6 hours of certificate classes before making application for admission to the certificate program. Once admitted to the program, they must maintain a GPA of at least 3.00. Application to the certificate program must be made to the Chair of the Interdisciplinary Linguistics Program by submitting a letter of application and copies of undergraduate transcripts (and graduate transcripts, if applicable). A minimum of 18 hours is required. All courses must be selected in consultation with a program advisor, who must approve all courses for individual students prior to their being taken, except that, as noted above, up to 6 hours may be accepted from candidates upon admission.

Requirements
Students will satisfy the requirements of the certificate program by selecting 18 hours from the following lists, provided that those courses are selected in consultation with a program advisor, who approves their selection. A certificate cannot be earned without program approval by the advisor.

- At least one of the following courses – French 512, German 512, Spanish 512, Linguistics 423, 425.
- Additional courses from the following list for a total of 15 hours – Audiology and Speech Pathology 506, 601, English 508, 509, 680, French 421, 422, 510, German 510, 541, 631, 632, Linguistics 400, 401, 411, 426, 429, 435, 471, 472, 474, 476, 477, 485, 490, 575, Spanish 421, 531, Psychology 400, 543, 617, Statistics 531. Other courses may, where appropriate, be substituted for the courses listed above with the permission of the Chair of the Linguistics Program.
- A 3-hour capstone project, normally the preparation of a paper for presentation at a professional conference or for publication in a journal, planned and completed in consultation with a program advisor.

MEDIEVAL STUDIES
Robert Bast, History, Chair

GRADUATE CERTIFICATE IN MEDIEVAL STUDIES

The medieval studies program offers a graduate certificate enabling students with an interest in medieval topics to acquire a broad foundation in the interdisciplinary approaches to medieval research and to begin putting these approaches into practice. For students earning MAs or PhDs in traditional disciplines, the program will augment their training and may make them more attractive candidates for academic positions.

Prospective candidates for the certificate may take up to 6 hours of certificate classes before making application for admission to the certificate program. Once admitted to the program, they must maintain a GPA of at least 3.00. Application to the certificate program must be made to the Chair of the Medieval Studies Program by submitting a letter of application and copies of undergraduate transcripts (and graduate transcripts, if applicable). A minimum of 15 hours is required. All courses must be selected in consultation with a program advisor, who must approve all courses for individual students prior to their being taken, except that, as noted above, up to 6 hours may be accepted from candidates upon admission.

Requirements
Students will satisfy the requirements of the certificate program by selecting 15 hours from the following lists, provided that those courses are selected in consultation with a program advisor, who approves their selection. A certificate cannot be earned without program approval by the advisor.

- Medieval Studies 510.
- 12 additional hours chosen from at least two disciplines. A minimum of 6 hours must be taken in one discipline. Students may choose from the following courses – Art History 425, 431, 441, 451, 571, English 401, 402, 508, 513, 514, 610, 611, 620, 621, French 410, 429, 540, German 541, History 531, Italian 401, 402, Spanish 531, 532, Philosophy 520, 620, Political Science 475. Topics and special topics courses, where appropriate, may be substituted for any of the above courses with the permission of the Chair of the Medieval Studies Program.
- Demonstration of competency in reading medieval Latin either by earning an A or B in Classics 435 or by passing the University of Toronto's MA Medieval Latin exam, given on campus in fall and spring semesters. Where appropriate, students may substitute competency in reading medieval Greek, Hebrew, or Arabic. The chair of Medieval Studies, in conjunction with the Medieval Studies committee, will establish standards for determining competency in these languages as need arises.
- A non-credit capstone project, usually a paper. The paper should be interdisciplinary in its approach and may be an outgrowth of a seminar paper in another course. This capstone paper must be presented to an audience of Medieval Studies committee members and other interested faculty and graduate students before the certificate is granted.

WOMEN'S STUDIES
Cheryl Brown Travis, Psychology, Chair

GRADUATE CERTIFICATE IN WOMEN'S STUDIES

The women's studies program offers a graduate certificate, enabling students to develop critical thinking about the economic, social, and legal factors influencing women's roles in contemporary and historical societies and to evaluate those roles in the widest possible perspectives. Students may examine representations of women in the arts and the media, evaluate how science and medicine view women as objects of study, and study how women work as practitioners and researchers in these fields.

The program is designed to provide a supplementary perspective for students already enrolled in graduate programs, to provide an entry into graduate study for those who are exploring a number of disciplinary approaches, to provide enrichment for members of the community who have a bachelor's or an advanced degree, and to develop skills for professionals in various fields.

Prospective candidates for the certificate may take up to 6 hours of certificate classes before making application for admission to the certificate program. Once admitted to the program, they must maintain a GPA of at least 3.00. Application to the certificate program must be made to the Chair of the Women's Studies Program by submitting a letter of application and copies of undergraduate transcripts (and graduate transcripts, if applicable). A minimum of 15 hours is required. All courses must be selected in consultation with a program advisor, who must approve all courses for individual students prior to their being taken, except that, as noted above, up to 6 hours may be accepted from candidates upon admission.

Requirements
Students will satisfy the requirements of the certificate program by selecting 15 hours from the following lists, provided that those courses are selected in consultation with a program advisor, who approves their selection. A certificate cannot be earned without program approval by the advisor.
• Women's Studies 510.
• 12 additional hours drawn from at least two different disciplines. For students enrolled in an MA program, no more than two of the certificate courses may be drawn from that program or the department in which the MA program is housed. Students are encouraged to select from courses at the 500 level and above. Students may choose from the following list – Anthropology 517; Cultural Studies in Education 512, 548, 609; English 584; Health 420, 520; Public Health 585; Law 849, 862, 958; Sport Studies 543; Women's Studies 400, 410, 422, 425, 434, 469, 510, 543, 548, 593, 609.
• A capstone experience such as presenting research results to a professional group, submitting a work for publication, arranging an exhibit, or presenting a performance to a group approved by the individual advisor and the chair of Women’s Studies.

LIFE SCIENCES
(Interdepartmental)
John Koontz, Interim Chair

MAJOR
Life Sciences
Genome science and technology concentration
Plant physiology and genetics concentration

DEGREES
MS, PhD

The program leading to the Master of Science and Doctor of Philosophy degrees with a major in life sciences is interdepartmental and intercollegiate and is designed to augment offerings of individual departments in two concentrations – genome science and technology, and plant physiology and genetics. Students interested in these areas should contact either the Life Sciences chairperson or the director of the area of interest. Each concentration is administered separately and has unique admission requirements.

GENOME SCIENCE AND TECHNOLOGY CONCENTRATION
Cynthia Peterson, Director

The University of Tennessee-Oak Ridge National Laboratory Graduate School of Genome Science and Technology (GST) is a unique and multidisciplinary program for full time graduate study leading to the Master of Science or Doctor of Philosophy degree. The program focuses on developments in the biological and computational sciences relating to genome sequences, and the program is designed to take advantage of collaboration of the University of Tennessee, Knoxville, and the Oak Ridge National Laboratory. Students are trained in emerging areas of genome science, with emphasis on mammalian genomics, structural biology, proteomics, computational biology and bioinformatics, and bioanalytical technologies. Scientists from both campuses participate in teaching. Research projects pursued for either the MS or PhD are mentored jointly by a faculty member from each campus. A year-long introductory course in Genome Science and Technology focuses on inquiry conducted on a genome-wide scale. Laboratory rotations during the first year offer students hands-on experience in a variety of focus areas.

Applicants are expected to have a background in the biological, physical, or computational sciences. Requirements for admission are one year of general biology or the equivalent; two years of chemistry, including one year of general chemistry and one year of introductory organic chemistry with laboratory; one year of calculus; one year of physics; at least 8 hours in cognate sciences related to the program; a combined GRE score of 1800 for the verbal, quantitative, and analytical sections is highly desirable; three letters of recommendation; and a minimum grade point average of 3.00 out of 4.00. Coursework in genetics, cell biology, and computer sciences is advantageous. Superior students, deficient in one or more of the above requirements, may be admitted at the discretion of the program admissions committee. Deficiencies will be made up as a part of the courses taken by the individual student.

Requirements for the PhD are satisfactory completion of the genome science and technology core courses. (Life Sciences 505, 515-516, 520-521, 540-541; Biochemistry and Cellular and Molecular Biology 511 and 512); three semesters of GST laboratory, satisfactory completion of formal advanced courses in the areas of the student’s interest, passing both written and oral comprehensive examinations, a dissertation reporting the results of original and significant scientific research (a minimum of 24 hours of course 600 is required), a final oral/written examination on the dissertation, and a formal seminar presentation of the dissertation research. Participation in at least one seminar during each semester of residence after the first year is strongly recommended. The master’s degree requires a minimum of 30 hours of study approved by the student’s committee, a thesis, and an oral examination.

Intercollegiate Graduate Minor in Computational Science

The Graduate School of Genome Science and Technology participates in the intercollegiate graduate minor in computational science (IGMCS) program. Any student pursuing a PhD with a major in Life Sciences (genome science and technology concentration) can receive a Minor in Computational Science by completing the appropriate IGMCS requirements. For further information see the description of the IGMCS listed under the Department of Computer Science. The Graduate School in Genome Science and Technology also contributes courses to the IGMCS program curriculum.

PLANT PHYSIOLOGY AND GENETICS CONCENTRATION
Otto J. Schwarz, Director

This program provides the opportunity for intensive training and research experience in areas transcending the usual boundaries of botany, biochemistry, and agricultural plant sciences. Solutions of problems concerning the interactions of physiology and genetics in applied and fundamental aspects of plant science are the focus.

Admission requirements are a BA with a major in a biological, behavioral, or physical science; GRE (general) score; three letters of recommendation; and coursework including a year of calculus (differential and integral), one year of chemistry, and a year of physics. Specific course deficiencies may be corrected during the first year.

Required courses are Life Sciences 510; Biochemistry and Cellular and Molecular Biology 511, 512, 521, 522, Plant Sciences 471 or Ecology and Evolutionary Biology 560; Microbiology 410. The master’s degree requires a minimum of 30 hours of study approved by the student’s committee, a thesis, and an oral examination. The minimum requirements for the doctoral degree include at least 6 hours above the 600 level, 24 hours of course 600, courses approved by the student’s committee, a comprehensive examination, a doctoral dissertation, and a defense of dissertation.

DEPARTMENT OF MATHEMATICS

http://www.math.utk.edu/

Michael Frazier, Head

David F. Anderson, Graduate Liaison

Professors
Alexiades, V., PhD ........................................................ Delaware
Anderson, D.F., PhD ................................................. Chicago
Daverman, R.J., PhD ................................................ Wisconsin
Dobbs, D.E., PhD .................................................. Cornell
Dyjak, J., PhD .......................................................... Warsaw (Poland)
Feng, X., PhD .......................................................... Purdue
Frazier, M., PhD ........................................................ UCLA
Gavrillets, S., PhD .................................................. Moscow State
Gross, L., PhD .......................................................... Cornell
Hinton, D.B., PhD .................................................... Tennessee
Karakashian, O., PhD ............................................ Harvard
Lenhart, S., PhD .................................................... Kentucky
Mulay, S., PhD .................................................... Purdue
Plaut, C.P., PhD .................................................. Maryland
Rajput, B.S., PhD ................................................ Illinois
Richter, S., PhD ................................................... Michigan
Rosinski, J., PhD .................................................. Wroclaw (Poland)
Schaef er, P.W., PhD ............................................ Maryland
Simpson, H., PhD ................................................ California Institute of Technology
Son i, R.P., PhD ................................................... Oregon State
 Stephenson, K.R., PhD ........................................... Wisconsin
Sundberg, C., PhD ................................................ Washington
Thistlewaite, M., PhD ........................................... Manchester (UK)
Wade, W.R., PhD ................................................ California (Riverside)
Wagner, G.G., PhD ................................................ Duke
Xion g, J., PhD .................................................... North Carolina

Associate Professors
Chen, X., PhD .................................................... Rutgers
Collins, C., PhD ................................................ Maryland
Freire, A., PhD .................................................. Princeton
Schulze, T., PhD ................................................ Northwestern
Todorova, G.H., PhD .......................................... Moscow State
Tzermias, P., PhD ................................................ California (Berkeley)

Assistant Professors
Brodsky, N., PhD ................................................ Saskatchewan (Canada)
Conant, J., PhD .................................................. Rutgers
Denzler, J., PhD .................................................. ETH (Zurich)
Finotti, L., PhD .................................................... Texas
Nicoara, R., PhD ................................................ UCLA
Wang, C., PhD ................................................... Temple
Wis e, S., PhD .................................................... Virginia

Lecturers
Baiamonte, M., MS .............................................. Texas A&M
Bonee, K., MS ..................................................... Tennessee
Campbell, T., MM ................................................ Tennessee
Cook, T., MS ..................................................... Tennessee
Fowler, J., MA .................................................... Kentucky
Gil bert, M., MS ..................................................... Tennessee
Guest, R., MS ..................................................... Baylor
Hagan, R., MS ..................................................... Tennessee
Howard, J., MS ..................................................... Tennessee
Kiliania, H., MS .................................................... Tennessee
Linwood, D., PhD ................................................ Courant Institute
Long, J., PhD ..................................................... Michigan
McClard, M., MA ................................................ Murray State
Mount, J., PhD ..................................................... Illinois
Peery, M., MM ..................................................... Tennessee
Pringle, K., PhD ................................................ Oregon
Reagan, R.D., MM ................................................ Tennessee
Remus, C., MS ..................................................... Tennessee
Self, C., MS ..................................................... Tennessee
Smith, K., MM ..................................................... Tennessee
Stein, D., MS ..................................................... Tennessee
Sukanek, K., MS .................................................. Mississippi
Szczepanski, A., PhD ........................................... California (San Diego)

MAJOR DEGREES
Mathematics MMath
Mathematics MS
Applied mathematics concentration Mathematics PhD
Mathematical ecology/evolution concentration

The Mathematics Department has three graduate degrees—the Master of Mathematics degree, intended primarily for teachers; the Master of Science degree, designed to prepare students for industrial employment and for teaching; and the Doctor of Philosophy degree, designed to prepare students for industrial employment and for college and university teaching and research. Contact the department office for additional information.

A graduate minor in mathematics requires at least 6 hours of resident graduate credit in courses numbered above 400. The courses must be approved by both the major department and the Department of Mathematics.

For additional information, please visit the graduate Web site on the Department of Mathematics’ homepage at www.math.utk.edu.

MASTER OF MATHEMATICS

MATHEMATICS MAJOR

Before admission to the Master of Mathematics program, the applicant must have either (a) certification for teaching secondary mathematics in at least one state, or (b) three years of elementary school, secondary school, or community college teaching experience. Applicants must have successfully completed one year of calculus (141-142 or equivalent) and a course in matrix algebra (251 or equivalent).

Requirements

The following requirements must be met.

- Complete 30 hours of coursework of which 21 must be at the 500 level. The coursework must include 504, 505, 506, 507, and 6 hours in 509.
- At most, 6 hours may be taken outside the Department of Mathematics (selected in consultation with the advisor).
- Pass a final examination upon completion of all coursework.

In exceptional circumstances, part of admission requirement (b) might be satisfied concurrently with coursework. Normally, Master of Mathematics degree students will start the program by taking 504 during the summer.

MASTER OF SCIENCE

MATHEMATICS MAJOR

Requirements

The department offers two options for the Master of Science degree. The first option requires a thesis for which 6 hours must be earned along with 24 additional hours of work in acceptable courses numbered above 400. Of the additional hours, 6 may be in an area outside the department and 15 must be in courses in mathematics numbered above 500.

After one semester of graduate study, a student whose advisory committee gives its approval may choose the non-thesis option for which 30 hours in courses numbered above 400 are required. Of these, 21 hours (at least 15 of which must be in mathematics) must be in courses numbered above 500. Of the 30 hours, 9 in courses approved by the advisory committee may be taken in fields other than mathematics. This option also requires that a written final examination be passed and that credit be received for a reading course (598) in which a term paper or project is required.

APPLIED MATHEMATICS CONCENTRATION

Requirements

For this concentration, available under the thesis or the non-thesis option, the student must complete the following.

- Prerequisites – Mathematics 371, 471, or 472; 512 or both 431 and 435; 447-448 or 445-446; 453.
- One hour of Mathematics 519 or 589.
- One course from each of the following five areas.
  5. Statistics – Mathematics 525, 527; Statistics 571; Ecology and Evolutionary Biology 560.
DOCTOR OF PHILOSOPHY
MATHEMATICS MAJOR

Requirements
For the PhD program in mathematics, the student must meet the following five requirements in addition to those of the Graduate Council:

- Demonstrate competency in advanced calculus and linear algebra by either a satisfactory performance on a diagnostic examination or by passing the appropriate 400-level course with a grade of B or better by the end of the student’s first year of graduate school. The appropriate course for advanced calculus is the 447-448 sequence and for linear algebra is the 457-458 or 453 sequence.
- Satisfy either the standard program or the interdisciplinary mathematical ecology/evolution concentration. A student intending to work in mathematical ecology/evolution may complete either but is encouraged to complete the interdisciplinary mathematical ecology/evolution concentration.
- Take at least two different one-semester research seminars and 599.
- Pass an examination in the field of specialization after requirements in bullets 1-3 have been met. This examination will be given by a committee appointed by the department head. A student may take this specialty examination no more than two times.
- Pass a one-year, 600-level sequence in mathematics outside the student’s area of specialization. The sequence selected to fulfill this requirement must be approved by the department head and the student’s doctoral committee.

These requirements must be completed no later than the start of the student’s seventh year (as a mathematics graduate student at UT).

Standard Program
A student must pass written examinations on two of the following year-long sequences — algebra (551-552), analysis (545-546), computational and applied mathematics (571-572), differential equations (535-536), stochastics (523-524), and topology-geometry (561-562). A student must pass one examination by the middle of his/her third year and both examinations by the middle of his/her fourth year. A student may not take any examinations after four failures. In addition to the two year-long sequences chosen for the written examinations, a student must take four one-semester 500-level courses from the following list grouped by examination area — analysis (545-546, 545-547), computational and applied mathematics (571-572, 574, 575, 576, 577, 578), differential equations (513-514, 515-516, 531-532, 535-536, 537-538, 585), stochastics (521-522, 523-524, 525-526, 527), and mathematical ecology/evolution (583), Ecology and Evolution Biology 509, 511, 512, 514. For the purposes of this requirement, the following pairs of Ecology and Evolutionary Biology courses count as a one-year course: 509/514, 511/514, and 512/514.

These four courses must contain a year-long sequence in an area different from the two written examinations and at least two areas different from the two written examinations. A grade of B or better is required in each of the four courses, with at least a B+ in two of the courses.

MATHEMATICAL ECOLOGY/EVOLUTION CONCENTRATION
A student must pass written examinations on mathematical ecology (581-582) and one of the following year-long sequences — analysis (545-546), computational and applied mathematics (571-572), differential equations (535-536), and stochastics (523-524). A student must pass one examination by the middle of his/her third year and both examinations by the middle of his/her fourth year. A student cannot take any examinations after four failures. In addition to the two year-long sequences chosen for the concentration, a student must take at least one 500-level course from the following list grouped by examination area — algebra (551-552, 555-556), analysis (545-546, 545-547), computational and applied mathematics (571-572, 574, 575, 576, 577, 578), differential equations (513-514, 515-516, 531-532, 535-536, 537-538, 581-582, 585), stochastics (521-522, 523-524, 525-526), and topology-geometry (561-562, 567-568). These four courses must contain a year-long sequence in an area different from the two written examinations and at least two areas different from the two written examinations. A grade of B or better is required in each of the four courses, with at least a B+ in two of the courses.

Requirements
For the PhD program in mathematics, the student must meet the following five requirements in addition to those of the Graduate Council:

- Demonstrate competency in advanced calculus and linear algebra by either a satisfactory performance on a diagnostic examination or by passing the appropriate 400-level course with a grade of B or better by the end of the student’s first year of graduate school. The appropriate course for advanced calculus is the 447-448 sequence and for linear algebra is the 457-458 or 453 sequence.
- Satisfy either the standard program or the interdisciplinary mathematical ecology/evolution concentration. A student intending to work in mathematical ecology/evolution may complete either but is encouraged to complete the interdisciplinary mathematical ecology/evolution concentration.
- Take at least two different one-semester research seminars and 599.
- Pass an examination in the field of specialization after requirements in bullets 1-3 have been met. This examination will be given by a committee appointed by the department head. A student may take this specialty examination no more than two times.
- Pass a one-year, 600-level sequence in mathematics outside the student’s area of specialization. The sequence selected to fulfill this requirement must be approved by the department head and the student’s doctoral committee.

These requirements must be completed no later than the start of the student’s seventh year (as a mathematics graduate student at UT).

Standard Program
A student must pass written examinations on two of the following year-long sequences — algebra (551-552), analysis (545-546), computational and applied mathematics (571-572), differential equations (535-536), stochastics (523-524), and topology-geometry (561-562). A student must pass one examination by the middle of his/her third year and both examinations by the middle of his/her fourth year. A student may not take any examinations after four failures. In addition to the two year-long sequences chosen for the written examinations, a student must take four one-semester 500-level courses from the following list grouped by examination area — analysis (545-546, 545-547), computational and applied mathematics (571-572, 574, 575, 576, 577, 578), differential equations (513-514, 515-516, 531-532, 535-536, 537-538, 585), stochastics (521-522, 523-524, 525-526, 527), and mathematical ecology/evolution (583), Ecology and Evolution Biology 509, 511, 512, 514. For the purposes of this requirement, the following pairs of Ecology and Evolutionary Biology courses count as a one-year course: 509/514, 511/514, and 512/514.

These four courses must contain a year-long sequence in an area different from the two written examinations and at least two areas different from the two written examinations. A grade of B or better is required in each of the four courses, with at least a B+ in two of the courses.

MATHEMATICAL ECOLOGY/EVOLUTION CONCENTRATION
A student must pass written examinations on mathematical ecology (581-582) and one of the following year-long sequences — analysis (545-546), computational and applied mathematics (571-572), differential equations (535-536), and stochastics (523-524). A student must pass one examination by the middle of his/her third year and both examinations by the middle of his/her fourth year. A student cannot take any examinations after four failures. In addition to the two year-long sequences chosen for the concentration, a student must take at least one 500-level course from the following list grouped by examination area — algebra (551-552, 555-556), analysis (545-546, 545-547), computational and applied mathematics (571-572, 574, 575, 576, 577, 578), differential equations (513-514, 515-516, 531-532, 535-536, 537-538, 581-582, 585), stochastics (521-522, 523-524, 525-526), and topology-geometry (561-562, 567-568). These four courses must contain a year-long sequence in an area different from the two written examinations and at least two areas different from the two written examinations. A grade of B or better is required in each of the four courses, with at least a B+ in two of the courses.

Intercollegiate Graduate Minor in Computational Science
The Department of Mathematics participates in the intercollegiate graduate minor in computational science (IGMCS) program. Any student pursuing a master’s or PhD with a major in Mathematics can receive a minor in computational science by completing the appropriate IGMCS requirements. For further information, see the description of the IGMCS listed under the Department of Computer Science. The Department of Mathematics also contributes courses to the IGMCS program curriculum.

DEPARTMENT OF MICROBIOLOGY
http://web.bio.utk.edu/micro/
Pamela Small, Graduate Liaison

Professors
Becker, J.M., PhD ........................................... Cincinnati
Moore, R.N., PhD ........................................... Texas
Saylor, G.S., PhD ........................................... Idaho
Small, P.L.C., PhD ........................................... Stanford

Associate Professors
Jouline, I.B., PhD ........................................... St. Petersburg (Russia)
Wilhelm, S.W., PhD ........................................... Western Ontario (Canada)

Assistant Professors
Alexandre, G.M., PhD ............................... Université Claude Bernard Lyon (France)
Buchan, A., PhD ........................................... Georgia
Onami, T.M., PhD ........................................... California (San Diego)
Reynolds, T.B., PhD ....................................... Vanderbilt
Sangster, M.Y., PhD ......................................... Western Australia (Perth)
Sparer, T.E., PhD ........................................... Emory University School of Medicine
Su, C., PhD ........................................... Penn State
Zinser, E.R., PhD ........................................... Harvard

Research Faculty
Fleming, J., PhD ........................................... Tennessee
Hauer, M., PhD ........................................... California (Irvine)
Layton, A.C., PhD ........................................... Purdue
Lee, B-K, PhD ........................................... Pennsylvania
Pfiffer, S., PhD ........................................... Florida State
Ripp, S., PhD ........................................... Oklahoma State
Sanseverino, J., PhD ...................................... Lehigh

Lecturer
McPherson, E.F., MS ....................................... Tennessee

Adjunct Faculty
Biggerstaff, J., PhD ........................................... Brunel (England)
Keller, M., PhD ........................................... Regensburg (Germany)
Schadt, C., PhD ........................................... Colorado
Verberkmoes, N., PhD .................................... Tennessee
White, B., MAT ........................................... Memphis

MAJOR DEGREES
Microbiology

The Department of Microbiology offers both the Master of Science and Doctor of Philosophy. Students have the option of se-
lecting from a variety of graduate research programs. For a departmental brochure, contact the department head.

Admission
Students are expected to have completed an undergraduate program with a 3.00 or better GPA on a 4.00 system. Included in the undergraduate course credits should be a full year of general biological science; one year of calculus; two years of chemistry, including one year of organic; one year of physics; and an introductory course in microbiology. In many cases, deficiencies in requirements may be removed by taking appropriate courses during the first year of graduate study. The department also requires the general portion of the Graduate Record Examination. A satisfactory score on each part is 550 or higher with rare exceptions. Three letters of recommendation should be submitted by current or former faculty members.

Each new graduate student meets with an advisory committee chaired by the departmental Director of Graduate Studies to plan a program of study for the first one or two semesters until a research advisor is selected. All first-year students participate in a laboratory rotation program during the first semester of study. This program allows the student to adjust smoothly to the research programs of the department, to develop a background of research procedures and concepts, and to facilitate the selection of a research professor. Usually the student selects a research professor toward the end of the laboratory rotation period. The major professor assists in the selection of and carrying out of a suitable research program and in the naming of a thesis or dissertation committee.

MASTER OF SCIENCE
MICROBIOLOGY MAJOR
The program leading to the MS is designed to provide the student with broad basic knowledge, to permit the acquisition of technical competence in the fundamentals of research, and to encourage creative and independent thinking.

Requirements
Two to three calendar years are usually needed for the course of study that has the following requirements.

- A 3.00 GPA in all courses taken in the department.
- A 3.00 GPA in courses taken in the department.
- A complete course sequence in biochemistry or molecular biology.
- Presentation of a research thesis and its oral defense.

DOCTOR OF PHILOSOPHY
MICROBIOLOGY MAJOR
The program leading to the PhD is designed to develop the student’s ability to pursue independent and original research in microbiology and allied fields, to teach both oral and written communication of the results of research to the scientific community, and to train effective teachers. Students may enter the program after receiving either a bachelor’s or master’s degree. Students who enter with a bachelor’s degree usually receive the PhD after four or five years; those with a master’s degree usually take three or four years to complete the degree.

Requirements
Departmental requirements are as follows.
- A 3.00 GPA in all courses taken for graduate credit after 12 hours have been earned in courses graded A-F.
- A 3.00 GPA in courses taken in the department.
- Satisfactory performance in at least one semester as a teaching assistant.
- One semester of physical chemistry.
- One course in statistics.
- Two semesters of biochemistry or molecular biology.
- Satisfactory performance in a comprehensive examination that must be attempted before the end of the fifth semester in the program and passed before admission to candidacy.
- The presentation of a research dissertation and its oral defense.

DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES
http://web.utk.edu/~mfl/  
Chauncey J. Mellor, Interim Head  
Stefanie Ohnesorg, Graduate Liaison

Professors
Brizio-Skov, F., PhD ...................................... Washington  
Campion, E.J., PhD ...................................... Yale  
Creel, B., PhD ........................................... California (Davis)  
DiMaria, S., PhD .......................................... Wisconsin  
Essif, L., PhD ............................................. Brown  
Handelsman, M.H. (Distinguished Professor), PhD .......... Florida  
Hodges, C.R. (Dean of the Graduate School), PhD .......... Chicago  
Holmlund, C., PhD ........................................ Wisconsin  
Holub, R. (Provost), PhD ................................... Wisconsin  
Levy, K.D., PhD ............................................ Kentucky  
Mellor, C.J., PhD .......................................... Chicago  
Rivera-Rodas, O., PhD .................................... California (Davis)  
Romeiser, J.B., PhD ....................................... Vanderbilt  
Young, D.J., PhD ......................................... Texas

Associate Professors
Ayo, A., PhD ................................................ Arizona  
Blackwell, S.H., PhD ....................................... Indiana  
Cruz-Cámara, N., PhD ..................................... State University of New York (Buffalo)  
Kaplan, G., PhD ........................................... Pennsylvania  
LaCure, J., PhD ............................................ Indiana  
Lee, D.E., PhD ............................................. Stanford  
McAlpin, M.K., PhD ....................................... Columbia  
Ohnesorg, S., PhD ......................................... McGill (Canada)  
Pervukhina, N.K., PhD .................................... Bryn Mawr  
Silva-Filho, E., PhD ....................................... North Carolina

Assistant Professors
Arnold, M.N., PhD .......................................... Texas  
Cano, L., PhD .............................................. Penn State  
Dubriel, S., PhD ........................................... Emory  
Duke, D., PhD .............................................. Pittsburgh  
Gimmel, M., PhD ........................................... Indiana  
Gregory, A., PhD .......................................... Texas  
He, D., PhD ................................................ British Columbia  
Horiguchi, N., PhD ....................................... Pennsylvania  
Johnson, E., PhD .......................................... Tennessee  
Kong, K., PhD .............................................. Michigan  
Magillow, D.H., PhD ...................................... Princeton

MAJORS

French MA
German MA
Spanish MA
Modern Foreign Languages PhD

First concentration
French  
German  
Spanish  

Second concentration
Applied linguistics
French  
German  
Italian
The Department of Modern Foreign Languages and Literatures offers graduate programs leading to the Master of Arts degree with majors in French, German and Spanish, and the Doctor of Philosophy degree with a major in modern foreign languages. Inquiries should be addressed to the graduate liaison.

MASTER OF ARTS

FRENCH MAJOR

Thesis Option
- Completion of a minimum of 24 hours in coursework plus at least 6 hours in course 500 Thesis. French 501 is required. 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 and 6 hours in the minor.
- A thesis with a minimum of 6 hours in course 500.
- A written examination covering the coursework and selected items from a master reading list.
- A final oral examination covering the thesis.

Non-Thesis Option
- Completion of at least 30 hours with a maximum of 9 at the 400 level and the rest at the 500 level, including French 501. 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 and 6 hours in the minor.
- A research paper from a course, which the candidate substantially expands with the approval of the committee.
- A written examination covering the coursework and selected items from a master reading list.
- A final oral examination to discuss the research paper.

GERMAN MAJOR

Thesis Option
The minimum requirements are 24 hours of coursework and 6 hours of Thesis 500. German 510 and 519 are required, as are three courses on German literature or culture, one of which may be at the 400 level. Also, students must take three additional courses, only one of which may be chosen from 411-412 or 485. All graduate teaching assistants should take 512, and other candidates may take 512 or any other course above 500. A maximum of three 400-level courses may be counted toward the 24 hours of coursework. An exam over the designated reading list is required, as is a thesis defense and a standardized language exam, such as the Zentrale Mittelstufenprüfung. Students who are interested in future PhD-level study are strongly advised to choose the thesis option.

Non-Thesis Option
The minimum requirements are 30 hours of coursework, including at least one 600-level course for which a seminar paper is required. German 510 and 519 are required, as are three courses on German literature or culture, one of which may be at the 400 level. Also, students must take three additional courses, only one of which may be chosen from 411-412 or 485. All graduate teaching assistants should take 512, and other candidates may take 512 or any other 500-level course. A maximum of three 400-level courses may be counted toward the 30 hours of coursework. A common written exam over the designated reading list is required, as is a standardized language exam, such as the Zentrale Mittelstufenprüfung. Each non-thesis MA candidate will have a committee of three faculty members in German to whom the student will submit a dossier consisting of the seminar paper and one paper previously submitted in a graduate course. The length and type of the papers is described in greater detail in the Manual for Graduate Students in German.

SPANISH MAJOR

Thesis Option
- Completion of a minimum of 24 hours in coursework plus at least 6 hours in course 500 Thesis. Spanish 550 is required. 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 and 6 hours in the minor.
- A thesis with a minimum of 6 hours in course 500.
- A written examination covering the coursework and selected items from a master reading list.
- A final oral examination covering the thesis.

Non-Thesis Option
- Completion of at least 30 hours with a maximum of 6 at the 400 level and the rest at the 500 level, including Spanish 550. 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 and 6 hours in the minor.
- Three term papers that have been accepted by the student’s advisory committee.
- A written examination covering the coursework and selected items from a master reading list.

DOCTOR OF PHILOSOPHY

MODERN FOREIGN LANGUAGES MAJOR

The PhD with a major in modern foreign languages requires advanced training in a major language (French, German, Spanish) and either a second language (French, German, Italian, Portuguese, Russian, Spanish) or applied linguistics.

Admission
Applicants must have completed a BA in 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 3.00. 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
Candidates must complete a minimum of 63 hours of coursework beyond the bachelor’s degree in addition to 24 hours of doctoral research and dissertation.

For candidates with French or Spanish as a first concentration, two tracks are available.

- **Track I.** The coursework for Track I must be distributed as follows: at least 39 hours in the first concentration; at least 18 hours in the second concentration; and at least 6 hours in a cognate field or in either the first or second concentration as approved by the student’s graduate committee.

- **Track II.** The coursework for Track II must be distributed as follows: at least 45 hours in the first concentration; at least 12 hours in the second concentration; and at least 6 hours in a cognate field or in either the first or second concentration as approved by the student’s graduate committee. 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 field at insti-
tions which follow SACS guidelines for college foreign language teaching.

The coursework for all concentrations must be distributed as follows.

- **First Concentration: German.** A minimum of 39 hours of German courses beyond the bachelor’s degree, distributed as follows.
  - **400 level** – A maximum of 6 hours of 400-level classes taken for the MA may be applied.
  - **500 level** – A minimum of 21 hours must be taken. These must include German 512, 519, and 560. These hours are excluded if 512 is used as part of a second concentration in applied linguistics, another course must be substituted in the first concentration.
- **600 level** – A minimum of 12 hours must be taken, exclusive of dissertation hours.

- **First Concentration: French or Spanish.** A minimum of either 39 (Track I) or 45 (Track II) hours of French or Spanish courses beyond the bachelor’s degree, distributed as follows.
  - **400 level** – A maximum of 6 hours of 400-level classes taken for the MA may be applied.
  - **500 level** – A minimum of 21 hours must be taken. These must include French 512, 519, 584 or Spanish 512 and 550. These hours are excluded if 512 is used as part of a second concentration in applied linguistics, another course must be substituted in the first concentration.
  - **600 level** – A minimum of 12 hours must be taken, exclusive of dissertation hours.

- **Second Concentration.** A minimum of 18 (German or Track I) or 12 (Track II) hours beyond the bachelor’s degree, taken in the field of applied linguistics or in a second language, either French, German, Italian, Portuguese (Track II only), Russian or Spanish. For Track I and German, 12 of these hours must be at the 500 level or above. For Track II, 3 of these hours must be at the 500 level or above.

- **French students choosing applied linguistics** must take French 421 or 429; 425; 512; and 9 (Track I) or 3 (Track II) hours of appropriate electives in English or French.

- **German students choosing applied linguistics** must take German 425, 435 or 510, 512, 3 hours of German linguistics, such as 426, 436, 631, or 632, and 6 hours of linguistics electives in English or German.

- **Spanish students choosing applied linguistics** must take Spanish 421 or 429; 425; 512; and 9 (Track I) or 3 (Track II) hours of appropriate electives in English or Spanish. The student’s graduate advisor must approve the electives chosen.

- **Cognate Field.** Six hours in graduate courses numbered 400 and above in a field outside the department or language family of the first concentration but related to the student’s principal area of research. Students choosing applied linguistics as a second concentration are strongly urged to take their cognate work in a second language. With the consent of the student’s graduate committee, the 6 hours in the cognate field may be substituted by 6 hours in either the first or second concentration.

- **Additional requirements.** For any languages taken as a first or second concentration, a student must demonstrate competence by taking a test. The test will include reading, writing, listening, and speaking, and should be completed by the time the student reaches 40 hours of study beyond the bachelor’s degree. Standardized examinations that may be used for this purpose include applicable portions of either the National Teachers Examination, the MLA Examination for Teachers and Advanced Students, or the proficiency standards of the United States Foreign Service Institute (FSI).

For students choosing applied linguistics as an area of second concentration, reading competence in a second language is required. Competence will be determined by translation of a text from the foreign language into English, the test will be administered by the department.

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 with a second concentration in another language should have the opportunity and will be strongly encouraged to instruct in the languages of both their first and second concentration, 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).

**SCHOOL OF MUSIC**

http://www.music.utk.edu

Roger L. Stephens, Director

Angela L. Baity, Associate Director for Graduate Studies

**Professors**

Bayne, P.S., MLS ........................................ North Carolina
Brock, J.P., MM ........................................... Alabama
Coker, J., MA .................................................... Sam Houston
Jacobs, K.A., DMA ........................................ Texas
Leach, C.F., DM ................................................. Northwestern
MacMurchie, W.S., MM ........................................ Wisconsin
McClelland, D.K., MA .................................... Columbia
Moore, M.C., PhD ............................................. Michigan
Northington, D.B., DMA ....................................... Yale
Pederson, D.M., PhD .......................................... Iowa
Sousa, G.D., PhD .............................................. Ohio State
Stephens, R., MM ................................................. East Carolina
Slutzenberger, D.R., DMA ...................................... Maryland

**Associate Professors**

Adams, F., MM ................................................ Tennessee
Baldwin, W., DMA ........................................ Maryland
Bailey, A.L., DMA ........................................ South Carolina
Binder, S., DM ................................................ Florida State
Boling, M., MM ................................................. Tennessee
Brown, D.R., WS, MM .......................................... Wisconsin
Brunell, D., DM ................................................. Indiana
Carter, P.Z., MM ................................................ Colorado
Freeman, C., MPA ............................................ Oklahoma City
Gay, L.C., PhD ................................................ Cuba
Murphy, B.A., PhD ........................................... Ohio State
Royse, D., DMA ................................................ Kent State
Ryder, D., DMA ................................................ Iowa
Searle, S.R., MM .............................................. Tennessee
Smith, C., BM ................................................ State University of New York
Spero, G.R., MM ............................................... Indiana
Stephens, M.B., MA, MM ....................................... Ohio State
Wentzel, A.N., MM ........................................ Southern California
Zelmanovich, M., MA ......................................... Lvov

**Assistant Professors**

Al-Taee, N., PhD .............................................. California (Los Angeles)
Carlson, R.G., PhD ........................................ North Carolina
DiSimone, L., MM ......................................... New England Conservatory of Music
Douglass, M., MM ............................................. Tennessee
Ewell, P., PhD ................................................ Yale
Fellenstein, J., MM ............................................. Western
Friso, C., DMA ................................................ South Carolina
Hawthorne, W.W., PhD ...................................... Cincinnati
Skog, A., MA .................................................. Stephen F. Austin
Stewart, M., PhD ............................................. Ohio State
The mission of the School of Music is to provide the highest quality instruction in the musical arts and to cultivate creative activity and research in the areas of composition, education, musicology, pedagogy, performance, and theory. As part of its mission, the school enriches the musical and educational lives of its students, the university community and citizens of Tennessee. In support of this mission, the school’s curricula and course offerings are designed to

- Develop technical and artistic abilities in performance.
- Foster individual and collaborative work.
- Promote an understanding of theoretical, historical and cultural studies of music.
- Provide skills in teaching and the knowledge of educational principles.
- Encourage interpretive, creative and scholarly expression.

Such preparation enables students to be competitive in music careers and related fields and to continue study at an advanced level. To foster a greater understanding of music, the faculty regularly engage in artistic, educational, and scholarly activities through performances, workshops, publications, and participation in professional organizations.

The school fulfills its service mission to enrich the educational and cultural life of the university community at large by offering a broad range of courses, performance opportunities, as well as public concerts, recitals, and musical productions.

The school also aims to promote a greater understanding of cultural diversity among faculty and students; build a diverse student and faculty community; and offer curricula that require students to engage with the musical richness of our world and develop their own musical identities within an increasingly interconnected globe.
videotape/DVD (public performance preferred). The student must also present a live audition before a designated faculty committee during the first semester of residence.

Once accepted, all students are required to take the diagnostic examinations in musicology, area literature, music theory, and ear training before registering for courses. The examinations are given on the first day of registration each semester, beginning at 9:00 a.m. and concluding at approximately 4:00 p.m. Each entering student should notify the graduate secretary to indicate the semester in which he/she intends to enter and take the examinations.

Program of Study

Students may specialize in string or keyboard performance. To receive the artist certificate in music, the student must successfully complete an artist certificate curriculum of at least 19 hours (see School of Music Graduate Handbook, available in 211 Music Building) with a cumulative GPA of 3.00 or better. The curriculum is centered on intensive activities related to performance, including private lessons, large and small ensembles, recitals, and courses in area literature, performance practices, and repertoire. Courses chosen for music electives should be lecture courses. All required recitals are to be performed in public with a committee of the School of Music faculty in attendance. Enrollment for a minimum of two semesters is required with a maximum of two years allowed for completion of the program. The School of Music may require additional hours. All course requirements must be completed at the University of Tennessee, Knoxville.

**DEPARTMENT OF PHILOSOPHY**

http://web.utk.edu/~philosoph/

John R. Hardwig, Head

Denis Arnold, Graduate Liaison

**Professors**

Aquila, R.E., PhD ........................................ Northwestern
Graber, G.C., PhD ........................................ Michigan
Hardwig, J.R., PhD ...................................... Texas
Nolt, J.E., PhD ........................................ Ohio State
Poslau, B.C., PhD ....................................... Yale

**Associate Professors**

Arnold, D., PhD ......................................... Minnesota
Hamlin, H.P., PhD ...................................... Georgia
Reidy, D.A., JD, PhD ................................... Kansas

**Assistant Professors**

Coffman, E.J., PhD ...................................... Notre Dame
Douglas, H., PhD ......................................... Pittsburgh
Shaw, J.C., PhD ........................................ Washington (St. Louis)

**Adjunct Faculty**

Gale, R.M., PhD ........................................ New York

**MAJOR DEGREES**

Philosophy

Religious studies concentration

Philosophy

PhD

The MA program includes thesis and non-thesis options and offers a concentration in religious studies. Detailed information may be obtained from the Director of Graduate Studies in Philosophy. Details concerning the religious studies concentration may be obtained from the Director of Graduate Studies in the Department of Religious Studies.

**MASTER OF ARTS**

**PHILOSOPHY MAJOR**

Requirements

**Thesis Option**

The course requirements for an MA with thesis are 30 hours, including 6 hours in Philosophy 500. Of non-thesis hours, at least two-thirds must be in courses at or above the 500 level. See the department's graduate student handbook for more specific details.

**Non-Thesis Option**

The non-thesis MA requires 30 hours of coursework of which at least two-thirds must be in courses at or above the 500 level. Students seeking the non-thesis option must also pass a final written examination on all work offered for the degree. An additional oral examination may be required. As a part of the master's degree, and in addition to a final comprehensive examination, a culminating (capstone) experience is expected. Examples of culminating experiences include presenting a paper at a refereed national or regional philosophy conference or presenting a paper at a departmental colloquium.

**DOCTOR OF PHILOSOPHY**

**PHILOSOPHY MAJOR**

Requirements

Students will ordinarily hold an MA with a major in philosophy or an equivalent degree when entering the PhD program. However, highly qualified applicants without an advanced degree may be admitted directly to the PhD rather than MA program if that is their preference. For students taking an MA in our department, 24 hours of additional coursework beyond those applied to the MA degree are required. For students admitted directly into the program without an advanced degree, 48 hours of coursework are required. For those admitted with advanced degrees in other fields, the number of hours required will be determined by the Graduate Committee. In all cases, this does not include credit hours for work on the dissertation (Philosophy 800) and the student’s dissertation committee may require additional coursework at its discretion. See the department’s graduate student handbook for more specific requirements.

Students must normally demonstrate a reading knowledge of one living foreign language in which there exists a significant body of philosophical literature. (In special circumstances relating to the area of dissertation research, the Graduate Committee may approve a language not satisfying these conditions or the requirement of a foreign language may be waived in favor of other appropriate research skills, if approved by the Graduate Committee upon recommendation by the Director of Graduate Studies.)

**DEPARTMENT OF PHYSICS AND ASTRONOMY**

http://www.phys.utk.edu/

Soren P. Sorensen, Head

Marianne Braeining, Director of Graduate Program

**Professors**

Barnes, F.E. (Joint Faculty), PhD ................................ California
Bingham, C.R., PhD ....................................... Tennessee
Blass, W.E., PhD ......................................... Michigan State
Breinig, M.J., PhD ....................................... Oregon
Calicott, T.A., PhD ....................................... Purdue
Cardall, C.Y. (Joint Faculty), PhD .......................... California
Compton, R.N., PhD ...................................... Tennessee
Crater, H.W. (UTSI), PhD .................................. Yale

Dagotto, E.R. (Distinguished Professor), PhD ....... Bariloche (Argentina)
Dai, P., PhD ................................................. Missouri
Davis, L. (UTSI), PhD ..................................... Auckland (New Zealand)
Eguiluz, A.G. (Joint Faculty), PhD ........................ Brown
Elston, S.B., PhD ......................................... Massachusetts
Georgiou, S., PhD ........................................ Manchester (UK)
Greene, G.L. (Joint Faculty), PhD ........................ Harvard
Guidry, M.W., PhD ....................................... Tennessee
Handier, T., PhD .......................................... Rutgers
Kamynchuk, I., PhD ....................................... ITEP (Russia)
Lefevre, L., PhD .......................................... Oregon
Macek, J. (Distinguished Professor), PhD .............. Rensselaer Polytechnic Institute
Moreo, A. (Joint Faculty), PhD ............................ Bariloche (Argentina)
Admission

A student who enrolls in graduate study with the intention of attaining an advanced degree in physics will have completed an undergraduate major in physics or its equivalent. Physics 311-312, 321, 361, 431-432, 421, 461, and 411-412 constitute the minimum coursework prerequisite to graduate study.

A student who intends to present physics as a graduate minor will have completed an undergraduate minor in physics or its equivalent. Physics 311 and 431-432 constitute the minimum coursework prerequisite to a minor in physics.

In addition to meeting the Graduate Council’s minimum requirements, applicants are strongly encouraged to submit scores from the Graduate Record Examination (general and subject).

All first-year graduate students are required, for advising purposes only, to take a diagnostic examination in undergraduate physics during the fall semester registration period.

MASTER OF SCIENCE

Requirements

The course requirements include 24 hours of physics courses, of which at least 12 hours are taken from Physics 506, 511-512 or 513-514, 521-522, 531, 541, 571, 573. Each candidate must present an acceptable thesis, 6 hours of 500, and pass an oral examination on course material and thesis.

Geophysics concentration. The department offers an MS thesis program with a concentration in geophysics. Program requirements are 12 hours from Physics 506, 513-514, 521-522, 531, 541, 571, 573; a minimum of 12 additional hours in geology, geophysics, and/or physics, as approved by the student’s committee; and the presentation of an acceptable thesis, 6 hours of Physics 500, and the passing of an oral examination on course material and thesis.

Project Option

The course requirements include a minimum of 30 hours of graduate credit in courses composed of Physics 506, 511-512; 6 hours from Physics 593, 594 for a Project in Lieu of Thesis; 9 hours from 411-412, 421, 431-432, 461-462, 507, 508, 521-522, 531, 541, 555, 571, 573 (at least 3 hours above the 500 level); and 6 hours from a single minor field outside of the Physics Department, such as computer science, mathematics, engineering, chemistry, biology, education, business, or law.

The candidate must pass an oral examination on course material and on the project representing the culmination of an original research project completed by the student. A written report must be approved and accepted by the Physics Graduate Committee and the department head. An electronic version of the written report must also be submitted to the permanent electronic archive of the Physics Department available on the Internet.

Non-Thesis Option

Students seeking the non-thesis option must apply to the department’s graduate committee for permission to enroll under this program. The requirements are the satisfactory completion of 30 hours of coursework composed of 18 hours from Physics 506, 511-512 or 513-514, 521-522, 531, 541, 555, 571, 573; 6 hours from other courses numbered above 400 (preferably of advanced laboratory nature.) At least 20 hours must be taken at the 500-level or above. In addition, the candidate must pass a written examination administered by his/her committee.

DOCTOR OF PHILOSOPHY

Requirements

All students are expected to take the graduate core curriculum in physics consisting of Physics 521-522, 531, 541, 551, and 571. Students concentrating in chemical physics may substitute Chemistry 572 for Physics 551 and should complete at least 6 hours from Chemistry 530, 570, 571, 573, 595, 630, 670, and 690. Students must take a minimum of 15 hours of 600-level courses with 6 of these hours in their concentration area. Physics 601-602 are normally required of students concentrating in atomic physics; Physics 621-622 of students in nuclear physics; Physics 626-627 of students in elementary particle physics (and/or Physics 611-612 for students concentrating in theoretical elementary particle physics); Physics 615-616 of students in astrophysics and cosmology; and Physics 671-672 of students in condensed matter and surface physics.

Students concentrating in nanomaterials must take a minimum 15 hours of 600-level courses, of which at least 6 hours are offered by the department and at least 6 hours are from a list of
courses offered by several departments which are appropriate for a concentration in nanomaterials. This list is available from the Director of the Graduate Program. In addition to the departmental core curriculum listed above, they must take additional courses at the 400- through 500-level, with at least 6 hours offered by the department and 6 hours from the list.

To be admitted to PhD candidacy, students must fulfill all general requirements of the Graduate Council; pass the qualifying examination; have at least a 3.00 GPA on the graduate core curriculum; form a doctoral committee; and pass the comprehensive examination.

The qualifying examination is designed to test the student's knowledge of the fundamentals of physics. The performance needed to pass this examination corresponds to a mature command of the material typically included in the undergraduate physics major curriculum. The qualifying examination should be passed after the student's first year of study. Based on the student's performance on the qualifying examinations, the coursework, the GRE scores, and optional research participation, the faculty will decide if the student will be allowed to continue in the PhD program.

Students are required to find a research advisor and form a doctoral committee before the end of the second year of study. This committee is responsible for advising the student and monitoring his/her progress toward the doctoral degree.

The comprehensive examination is designed to test the student on specific knowledge and skills in the areas essential to the student’s research program; on capability to successfully complete the doctoral dissertation; and on general knowledge of the graduate core curriculum. The most essential component of this examination is the presentation and defense of an original research proposal. The comprehensive examination must be passed before the end of the third year of study. It contains both a written and an oral component and is conducted by the student's doctoral committee and an additional faculty member appointed by the department head.

The dissertation topic will be chosen with reference to one of the fields in which research facilities can be made available either at the University of Tennessee laboratories in Knoxville; the University of Tennessee Space Institute at Tullahoma, Tennessee; the Oak Ridge National Laboratory, Oak Ridge, Tennessee; or at other research facilities used by the university faculty.

### Intercollegiate Graduate Minor in Computational Science

The Department of Physics and Astronomy participates in the intercollegiate graduate minor in computational science (IGMCS) program. Any student pursuing a master's or PhD with a major in Physics can receive a minor in computational science by completing the appropriate IGMCS requirements. For further information, see the description of the IGMCS listed under the Department of Computer Science. The Department of Physics also contributes courses to the IGMCS program curriculum.

### DEPARTMENT OF POLITICAL SCIENCE

http://web.utk.edu/~polisci/

David L. Feldman, Head
Robert Gorman, Graduate Coordinator

### Professors

- Cunningham, R.B., PhD ................................. Indiana
- Feldman, D.L., PhD ................................. Missouri
- Fitzgerald, M.R., PhD ................................. Oklahoma
- Folz, D.H., PhD ................................. Tennessee
- Freeland, P.K., PhD ................................. Wisconsin
- Gant, M.M., PhD ................................. Michigan State
- Gorman, R., PhD ................................. New York
- Lyons, W., PhD ................................. Oklahoma
- Scheb, J.M., PhD ................................. Florida
- Zhong, Y., PhD ................................. Northwestern
- Tonn, B., PhD ................................. Johns Hopkins
- Kelly, N., PhD ................................. North Carolina

### Associate Professors

- Brule, D.J., PhD ................................. Texas A&M
- Down, I., PhD ................................. North Carolina
- Hwang, W., PhD ................................. Michigan State
- Jepson, E., PhD ................................. Wisconsin
- Morgan, J.M., PhD ................................. North Carolina

### Assistant Professors

- Houston, D.J., PhD ................................. State University of New York (Binghamton)
- Nownes, A.J., PhD ................................. Kansas

### DEGREES

- **Planning**
  - Environmental planning concentration
  - Land use planning concentration
  - Political science concentration
  - Public administration concentration
  - Real estate development/economic development concentration
  - Transportation planning concentration
  - Urban design concentration

- **Political Science**
  - MA, PhD

- **Public Administration**
  - MPA, JD-MPA

The Department of Political Science offers the Master of Arts, Master of Public Administration, Master of Science in Planning, and Doctor of Philosophy. The department also offers a dual program with the College of Law. Inquiries concerning all programs should be directed to the departmental office.

### Admission

Three departmental recommendation forms must be submitted to the Department of Political Science, at least two of which must be completed by instructors at the institution most recently attended. In addition, scores on the general portion of the Graduate Record Examination must be submitted.

### MASTER OF ARTS

### POLITICAL SCIENCE MAJOR

#### Admission

A bachelor's degree or its equivalent is required for admission. Normally an overall average of 3.00 is also required together with an average of 3.20 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.

#### Requirements

**Thesis Option (30 hours)**

Coursework, preparation of a thesis, and an oral examination on coursework and the thesis, are required. At least 12 hours must be in political science, with 6 in the field of methodology (Political Science 510 and either 511 or 512). Six hours may be earned through thesis credit.

**Non-Thesis Option (36 hours)**

Coursework, and a written comprehensive examination on all coursework are required. At least 12 hours must be in political science with 6 in the field of methodology (Political Science 510 and either 511 or 512) and 3 hours in the 600-level research seminar in the student's first field of interest.
MASTER OF PUBLIC ADMINISTRATION

PUBLIC ADMINISTRATION MAJOR

The MPA 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 hours, including a core program, an elective specialization and a recommended internship.

Admission

Applicants for admission to the program must have a bachelor’s degree or its equivalent. Normally, an overall average of 3.00 and an average of 3.20 in the last two years of political science or social science courses are required. In addition, a composite score of 1100 on the verbal and quantitative parts of the GRE is desired.

Students must demonstrate proficiency in the use of software applications for the personal computer. This requirement can be fulfilled by achieving a satisfactory grade in Political Science 596. Exceptions to this requirement will be considered on an individual basis.

Requirements

The MPA is a non-thesis program requiring 39 hours. Specific requirements include the following.

Core Curriculum (24 hours)

- General Perspectives (9 hours) – 550, 552, and one from 442, 539, 540, 548, 558, or 566.
- Analytical skills (6 hours) – 512, 514.
- Management skills (9 hours) – 560 and two from 556, 562, 564.

Specialization (9 hours) – A specialization is designed by the student in consultation with the coordinator of the MPA program. Possible specializations include general government, public health, budgeting and finance, planning, natural resources, program evaluation, criminal justice, public relations, personnel, and others.

Recommended Internship (6 hours) – Internships are arranged in consultation with the coordinator of the MPA program.

Final Examination – A written final examination, which may be followed by an oral examination, is required.

DUAL JD-MPA

The College of Law and the Department of Political Science in the College of Arts and Sciences offer a coordinated dual degree program leading to the conferral of both the Doctor of Jurisprudence and Master of Public Administration degrees. In this program, a student may earn the MPA and JD 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 summer term in addition to taking normal course loads for four academic years.

Admission

Applicants for the JD-MPA program must make separate application to, and be independently accepted by, the College of Law for the JD and the Department of Political Science and the Office of Graduate and International Admissions for the MPA 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 MPA program. Application may be made prior to or after matriculation in either the JD or the MPA program, but application to the dual program must be made prior to entry into the last 29 hours required for the JD and prior to entry into the last 15 hours required for the MPA.

Requirements

A dual degree candidate must satisfy the requirements for both the JD and the MPA degrees, as well as the requirements for the dual program. The College of Law will award a maximum of 9 hours of credit toward the JD degree for successful completion of approved graduate-level courses (500 or 600 level) offered in the Department of Political Science. The MPA program will award a maximum of 9 hours of credit toward the MPA degree for successful completion of approved courses offered in the College of Law. All courses for which such cross-credit is awarded must be approved by the JD-MPA 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). An internship is strongly recommended for students in the dual degree program, as it is for all MPA 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 MPA program. During those first two years, students may not take courses in the opposite area without the approval of the JD-MPA 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 JD or the MPA degree for courses taken in the other program except as such courses qualify for credit without regard to the dual program.

Awarding 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 be computed in determining a student’s GPA or class standing. The College of Law will award a grade of Satisfactory for an approved MPA 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 2.30 or higher and a grade of No Credit for any lower grade. The official academic record of the student maintained by the Office of the University Registrar shall show the actual grade assigned by the instructor without conversion.

MASTER OF SCIENCE IN PLANNING

PLANNING MAJOR

The Master of Science in Planning (MSP) degree is the normal route for entry into professional positions in urban and regional planning or related fields. Graduates are candidates for positions in regional, city, county, and metropolitan planning agencies; in local, state, and federal agencies concerned with physical, economic, and administrative planning; in private business and organizations dealing with development problems; and in private consulting. The Planning Accreditation Board, a joint undertaking of the American Institute of Certified Planners and the Association of Collegiate Schools of Planning, accredits the MSP program.

Admission

Applicants for admission to the program must have a bachelor’s degree or its equivalent. Normally, an overall grade point average of 3.00 and an average of 3.20 in the last two years of un-
ndergraduate courses are required. In addition, a composite score of 1100 on the verbal and quantitative parts of the GRE is desired. Students must demonstrate proficiency in the use of software applications for the personal computer, as well as in statistics. Taking an undergraduate statistics course can satisfy the latter. Achieving a satisfactory grade in Political Science 596 can fulfill the software applications requirement. Exceptions to this requirement will be considered on an individual basis.

Requirements

The MSP is a non-thesis program requiring 43 hours. Specific requirements include the following.

- **Core Curriculum (28 hours)** – 514, 531, 560, 581, 582, 583, 584, 585, 589, and 596 (1 hour). Students should plan to enter the program in the fall term to take core courses in the proper sequence.
- **Concentration (9 hours)** – Each student must choose a concentration from the environmental planning, land use planning, political science, public administration, real estate development/economic development, transportation planning, and urban design. Concentration courses are drawn from a prescribed set in the subject area from the department’s curriculum and from other departments in the university.
- **Recommended Internship (6 hours)** – Internships are arranged in consultation with the coordinator of the MSP degree program.
- **Comprehensive Exam** – Each student must pass a final comprehensive exam. Successful completion of a comprehensive exam is required before graduation. The exam will normally be taken after completion of the core requirements in the second year. Based on the material generally used by the American Institute of Certified planners (AICP), this requirement provides an additional capstone experience as well as preparation for meeting AICP professional certification requirements.

**DOCTOR OF PHILOSOPHY**

**POLITICAL SCIENCE MAJOR**

The PhD program prepares students for careers in college teaching, as well as careers in other occupations related to service in the public or private sectors.

**Admission**

Applicants for admission to the program should normally have completed a master’s degree in political science or a related field with a 3.50 GPA and have earned a composite score of at least 1100 on the verbal and quantitative parts of the Graduate Record Examination.

**Requirements**

Doctoral students admitted to the program must complete 84 hours beyond the bachelor’s degree, including 24 hours of coursework beyond the master’s degree, graded A-F; must successfully pass written comprehensive examinations in two broad subfields of political science, and must pass a final oral examination on the dissertation.

In addition, students must satisfy a research tool requirement. Usually, students meet this requirement by completing 12 hours of coursework numbered above 500 in empirical theory and research methodology. However, if a student’s advisor and program committee certify that competency in a foreign language is a more appropriate research tool, a foreign language can be used instead.

In addition to the total hours required for the degree, the following requirements must also be met.

- At least 69 hours must be in political science courses.
- At least 54 hours in political science must be in courses numbered above 500.
- Completion of Political Science 510, 511, and 512.
- Completion of at least three courses or seminars at the University of Tennessee, Knoxville, in each of the two broad subfields in which the students take examinations.
- Completion of at least one course or seminar in each of the five broad subfields available for graduate instruction in the department.
- At least 6 hours must be earned in political science courses numbered above 600.
- A total of 24 hours must be earned by writing the dissertation.

**Environmental Policy Minor**

The department houses a program designed to give graduate students an opportunity to develop an interdisciplinary specialization in environmental policy.

The program is designed to give master’s and doctoral level graduate students an opportunity to develop an interdisciplinary specialization in environmental policy. While administered through the Political Science Department, the program is coordinated by a committee of representatives from the following participating departments and programs – Agricultural Economics; Civil and Environmental Engineering; Ecology and Evolutionary Biology; Economics; Forestry, Wildlife and Fisheries; Geography; Management; Political Science; and Sociology.

Students may request admission to the minor following admission to a graduate program in one of the participating departments. Students in good standing in one of these programs may apply for admission to the minor in environmental policy. The coordinating committee will consider the admission of interested students. Applicants should have a background in both natural and social sciences evidenced by prior coursework or experience.

**Requirements**

One course in environmental studies from the student’s major discipline and one course in quantitative methods are required. These requirements may be fulfilled before or after admission to the minor. All students admitted to the minor will be required to register for Political Science 549 and to complete the following courses.

- A choice of Ecology and Evolutionary Biology 421 or 484 or another Ecology and Evolutionary Biology course with the consent of the program coordinating committee or Geography 433 or approved equivalent as determined by the program coordinating committee.
- 6 hours of coursework outside the major discipline approved by the coordinating committee.

Doctoral students seeking a minor in environmental policy must also complete, in addition to above, a policy-relevant dissertation approved by the coordinating committee.

**DEPARTMENT OF PSYCHOLOGY**

http://psychology.utk.edu

James E. Lawler, Head
Lowell Gaertner, Liaison
Brent Mallinckrodt, Liaison
Deborah Welsh, Liaison

**Professors**

Burghardt, G.M. (Alumni Distinguished Professor), PhD Chicago
Handler, L., PhD Michigan State
Hector, M., PhD Michigan State
Jones, W.H., PhD Oklahoma State
Lawler, J.E., PhD North Carolina
Lounsbury, J.W., PhD Michigan State
Lubar, J., PhD Chicago
Mallinckrodt, B., PhD Maryland
DOCTOR OF PHILOSOPHY
PSYCHOLOGY MAJOR

A student with a BA or BS may apply to the Department of Psychology for admission to the doctoral program with a concentration in clinical psychology, counseling psychology, or experimental psychology. All students must submit scores from the Graduate Record Examination (general and subject).

CLINICAL PSYCHOLOGY CONCENTRATION

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 a model of clinical psychology in which practice and research are integrated.

Requirements

After forming the doctoral committee, each student must pass a comprehensive examination administered and evaluated by the committee. Clinical program students must complete a pre-dissertation research project by the end of the second year.

The comprehensive examination is organized around a research case study of one client who has been assessed and/or treated by the student in the departmental psychological clinic. In addition to the case presentation, the paper presents the student’s comprehensive review of relevant research and theory as a context for procedure, results, and discussion of the case. 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). Finally, students must complete an acceptable doctoral dissertation and conduct a satisfactory oral defense of the dissertation.

Requirements are as follows.

• Apprenticeship with one faculty member during the first year, two days each week.
• A written pre-dissertation research project (completed before forming a doctoral supervisory committee) reported in a form acceptable to two members of the faculty or, if reviewed and accepted for publication or external presentation, by one member of the faculty.
• A supervised clinical placement two days (16 hours) each week during the second year and the following option during the third and fourth years—continued two day clinical placement in the third and fourth years or teaching assistantship in the department in either the third or fourth and two-day clinical placement in the other year.
• Satisfactory completion of listed courses (or equivalents) in the following categories.
  1. Foundations of Psychology: Biological Factors, Perception, Learning, Thinking, Motivation (513).
  2. Interviewing and Observation (558) and Laboratory (559).
  3. Research Practicum (509), 4 hours.
  4. Life-Span Development (512) or Developmental Psychology (511).
  5. Personality: Theory and Research (570) and Developmental Psychopathology (597).
  8. Psychological Assessment I and II (594-595) and Laboratory (596).
  9. Analysis of Variance for Social Sciences (521) and Multiple Regression for Social Sciences (522).
11. Field Placement in Clinical Psychology (695).
13. Psychometrics (555).
15. Psychodynamic Psychotherapy I and II (670-671) and Laboratory (673), 4 hours.
16. Doctoral Research and Dissertation (600), 24 hours.
   • Students who choose a teaching assistantship in the third or fourth year must have satisfactorily completed 528 College Teaching in Psychology.
   • Satisfactory completion of a one-year clinical internship at a site approved by the program.

COUNSELING PSYCHOLOGY CONCENTRATION

The counseling psychology program is based upon the scientist-practitioner model of training which stresses both research and practice. It is designed to enable students to become behavioral scientists skilled in psychological research and its application. Students are trained to work with people who have generally integrated or intact personalities, to focus on these individuals' strengths and assets, and to use relatively brief interventions to further enhance these strengths or to remediate deficiencies within them. While working with others, counseling psychologists tend to focus on the interactions of the personal, educational, and vocational environments of the individuals, groups, families, and organizations with whom they work.

Requirements

The counseling psychology program consists of a minimum of 107 hours of graduate credit. This includes 83 hours of coursework and 24 hours of dissertation research (see below).

Students are assigned a temporary faculty advisor upon admission to the program. By the end of their first calendar year, students are expected to have selected an advisory committee. Prior to taking their comprehensive examinations, students must form and meet with their doctoral committee, present an acceptable program of study to the doctoral committee, and have their research competency approved by the program's research review committee. The examinations cover the counseling psychology core and the student's cognate.

In addition to approving a student's program of study, the doctoral committee approves the student's dissertation proposal and verifies that the student's dissertation is acceptable for the doctoral degree. The doctoral dissertation is original research that is theoretically based and psychological in nature. It must fulfill the requirements and procedures as stated in the current University of Tennessee, Knoxville, Graduate Catalog.

The following are required of all students.

• Students must accumulate a minimum of 600 hours in practicum experience. Students are required to have three semesters of individual practicum and one semester of group practicum. Practicum sites include the University of Tennessee, Knoxville, Counseling Center; community agencies; the University of Tennessee, Knoxville, Career Resources Center; and area schools. Opportunities for additional practicum experiences exist in the community.
• In addition to coursework, students must demonstrate competency in research methodology and academic scholarship prior to the doctoral committee's approval of the student's dissertation proposal. The research project is to be initiated after the student has entered the counseling psychology program.
• Satisfactory completion of the following curriculum.
  A. Psychological Foundations – minimum of 21 hours.
     1. History and Systems of Psychology.
     2. Biological Bases of Behavior.
  4. Social Basis of Behavior.
  5. Individual Behavior – minimum of 6 hours.
  6. Life Span or Developmental Psychology.
  B. Quantitative and Research Skills – minimum of 15 hours.
     1. Statistics – minimum of 6 hours.
     2. Qualitative Research – minimum of 3 hours.
  C. Counseling Psychology Core – minimum of 39 hours.
     1. Prepracticum in Career Development.
     2. Vocational Theory and Practice.
     3. Practicum – minimum of 9 hours.
     5. Cross-cultural Counseling.
     7. Assessment – minimum of 6 hours.
     8. Group Counseling.
  D. Departmental Seminar.

• Students are also required to complete a 2000-hour internship prior to graduation. In consultation with the student and the student's doctoral committee chair, the training director approves the internship site, which must meet APA Guidelines.
• Students who wish to have experiences as a teaching assistant must first satisfactorily complete department's teaching practicum course.

EXPERIMENTAL PSYCHOLOGY CONCENTRATION

The PhD program in psychology with a concentration in experimental psychology is designed to allow students to select from a variety of specializations oriented toward careers in research, teaching, and application of psychology in academic, institutional, or industrial settings. The program is flexible, individualized, and emphasizes a professional apprenticeship model of training.

Requirements

• 12 hours of statistics and research (521-522 or Statistics 531-532 or equivalent and 6 additional hours in research methods or design).
• 15 hours in experimental psychology (555 or equivalent and four courses from the following – 510, 511 or 512, 513, 543, 546 or 547, 550, 560, and 570 or 571).
• 6 hours of research practicum (509).
• Psychology 528 – preparation for college teaching.
• Two 600-level graduate seminars.
• 6 hours of graduate level courses outside the Psychology Department.
• A pre-dissertation research project involving the collection of original data or the original analysis of existing data, reported in publishable form and accepted by the student's advisory committee.
• A comprehensive examination, determined and evaluated by the student's doctoral committee. This examination is comprised of an integrative review or theoretical paper and an oral exam or additional questions.
• 24 hours of dissertation research (600).
• An original piece of research in the form of a doctoral dissertation, proposed, conducted, and defended.
Admission

- Acceptable scores on the general Graduate Record Examination (verbal, quantitative, and analytical) are required.
- Overall undergraduate grade point average (GPA) of 3.00 or higher.
- Three letters of recommendation (forms may be obtained from the department).
- Completion of the appropriate previous degree (baccalaureate, preferably with a major in one of the social sciences, for the MA program; master’s degree in one of the social sciences for the doctoral program).

MASTER OF ARTS

SOCIOLOGY MAJOR

Requirements

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 504, 505, or 560. Sociology 534, 622, and Statistics 532 are recommended. A student’s plan of study should follow one of these approaches.

- Plan 1 – 6 hours in one of the department’s concentrations and 6 hours in a second area, including areas outside the department, subject to the approval of the student’s committee.
- Plan 2 – 12 hours in a special area of study approved by the student’s committee and the department’s Programs and Curriculum Committee. Students are encouraged to prepare a paper synthesizing their knowledge of the concentration(s). Students who incorporate supervised field experience in their programs are encouraged to prepare a report based on those experiences that demonstrates their understanding of research, theory, and report writing. All students must take final written and oral examinations that include questions on their general coursework in theory and methods and on their special areas of study.

Subject to approval by the student’s committee, up to 12 hours may be taken in courses outside the department for either program. Sociology courses at the 400 level may also be taken with the approval of the student’s committee.

DOCTOR OF PHILOSOPHY

SOCIOLOGY MAJOR

Requirements

Twenty-four hours of coursework beyond the master’s degree are required (exclusive of Satisfactory/No Credit credits). Twelve hours of course credit in Sociology at the 600 level are required. Students who enter the program without the courses required for the MA (521, 531, Statistics 531) or their equivalents must take them as remedial work, which does not apply to their residence. Students must complete Sociology 622; 534, 633, or 636; and Statistics 532 or another advanced course in statistics. Completion of 9 hours in each of two concentrations is encouraged. A student who cannot achieve his/her educational goals within the department’s concentrations may construct an individualized course of study subject to the approval of the student’s doctoral committee and the Curriculum Committee. Sociology courses at the 400 level may not be taken without the consent of the student’s advisor and the Curriculum Committee. Six hours may be
taken in related fields without petitioning for approval. The student’s program may include a minor or cognate field.

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

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

Environmental Policy Minor
The department participates in a program designed to give graduate students an opportunity to develop an interdisciplinary specialization in environmental policy. See Department of Political Science for program description.

Intercollegiate/Interdisciplinary Gerontology Minor
Graduate students in the Department of Sociology may pursue an intercollegiate/interdisciplinary minor in gerontology. The gerontology minor gives the student an opportunity for combining knowledge about aging in American society with his/her major concentration.

Core courses and a practicum are offered by the College of Social Work and selected departments within the Colleges of Education, Health, and Human Sciences and Arts and Sciences. A cross-listed seminar between contributing programs is designed to integrate experiences from different sources and to demonstrate the multi-faceted nature of working within an aging society. Please refer to the College of Education, Health, and Human Sciences for specific requirements.

DEPARTMENT OF THEATRE
http://theatre.utk.edu Calvin MacLean, Head

Professors
Black, W.R., MFA .................................................. Illinois
Custer, M., MFA ..................................................... Wisconsin
MacLean, C., MFA .................................................. Massachusetts

Associate Professors
Diamond, J., MFA .................................................. New York
Van den Berg, K., PhD ............................................ Indiana
Weber, T., MFA ...................................................... Alabama

Assistant Professors
Campelli, J., MFA .................................................... Penn State
Pickart, C., MFA .................................................... Penn State
Sams, J., MFA ......................................................... Penn State
Yeager, K., BFA ...................................................... Penn State

MAJOR DEGREE

THEATRE MAJOR

Requirements
At least 12 hours each of 520, 523, and 525. Coursework in this concentration is conducted in a conservatory environment. In the third year, students are expected to intern with either the resident professional Clarence Brown Theatre Company or another regional professional theatre.

DESIGN CONCENTRATION
Required courses are at least 12 hours of Theatre 580 and at least 6 hours in the projects courses. Theatre 503 is required in the first year of residence.

DRAMATURGY CONCENTRATION
Required courses include Theatre 430, 510 (9 hours), 512, 585 (12 hours), 6 hours in theory and literary criticism, plus electives from music, film, art, and business. Dramaturgy students must also satisfy a foreign language requirement (proficiency in one language or reading knowledge of two).

REQUIREMENTS FOR A 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 Arts and Sciences, 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.