

UNIVERSITY OF TENNESSEE, KNOXVILLE

DEPARTMENT OF STATISTICS,  
OPERATIONS, AND MANAGEMENT  
SCIENCE,

**STATISTICS PROGRAM  
MS HANDBOOK**

August, 2007

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## PROGRAMS OFFERED

### ***Undergraduate Program in Statistics***

The Statistics major is designed for students interested in applying statistical methods in business, government, and industry. All majors complete a set of courses designed to provide a general understanding of statistical methods that prepares them for the work force or for graduate school in statistics or in a discipline that uses statistics. Those students who plan to go to graduate school are encouraged to take as much math as possible. There are also students who contemplate double majors in statistics and another functional field, or a major in statistics with a minor in another discipline.

Undergraduate Statistics majors can come from the College of Business Administration or from Arts and Sciences. Students may also minor in Statistics through Arts and Sciences.

For more information, please see [http://bus.utk.edu/soms/statug/st\\_ug.html](http://bus.utk.edu/soms/statug/st_ug.html)

### ***Master of Science in Statistics***

**The Program:** The Department of Statistics, Operations, and Management Science offers a program leading to the MS degree in Statistics. The program requires 6

hours of course work in Theoretical Statistics, 3 hours of Regression Analysis, and 3 hours in Experimental Design. To complete the requirements (33 credit hours) for the degree, students choose from among various elective courses such as Industrial Statistics, Analysis of Lifetime Data, Data Mining, Multivariate Analysis, Categorical Data Analysis, Time Series, and Statistical Modeling. Since the program is applied, involvement in computing begins early in the program. Students are required to do an Independent Study or write a thesis and are also strongly encouraged to complete an internship between the first and second year. Students normally begin in August and complete the program in 16 - 21 months.

Graduate students in other disciplines can earn a joint MS degree or a minor in Statistics through the Intercollegiate Graduate Statistics Program (IGSP). See "Programs Associated with the Department of Statistics, Operations, and Management Science" below.

**MS Program Leadership:** The Statistics MS Program Committee has oversight responsibility for the Statistics MS Program. The MS Program Chair coordinates the work of the MS Committee. The committee is responsible for

- Recommending to the Department curricular and policy changes (e.g., adding new courses, modifying degree requirements)
- Corresponding with applicants

- Reviewing MS applications and recommending admission and financial report
- Conducting fall semester orientation and advising for first-year students
- Arranging for Theory and Methods Comprehensive Examinations
- Coordinating the ST 587 Seminar for MS students
- Nominating students for awards

Various departmental faculty and staff are responsible for other matters pertaining to the MS program such as advising, internships, and job placement. The MS Program Chair can either answer students' questions or direct students to the appropriate faculty or staff member.

The Department welcomes feedback regarding every aspect of its graduate students' experiences at UT. Students are encouraged to make suggestions at any time to the MS Program Chair or to the Department Head.

### ***Graduate Certificate in Applied Statistical Strategies***

Successful completion of four 3-credit, graduate-level applied Statistics courses at the level of ST 566 or higher may be recognized by obtaining the Graduate Certificate in Applied Statistical Strategies. The Certificate may be earned through a combination of traditional on-campus courses, on-line courses and/or an

intensive three-week short course (see *Practical Strategies for Process Improvement* under Associated Programs below). The Certificate program is open to all students enrolled in the Graduate School. It can be earned entirely in distance-learning courses.

For additional information, see <http://www.bus.utk.edu/stat/certificate/>

<http://www.bus.utk.edu/stat/distancecourses/>

### ***Doctoral Degree with Concentration in Statistics***

The Department offers a Ph.D. in Business Administration with a concentration in Statistics. This program is designed to meet the needs in business and industry for broadly trained statisticians.

Persons entering the Ph.D. program must have grounding in the basic business disciplines and prior advanced education in Statistics which is equivalent to a Master's in Statistics. (In some instances, deficiencies in these areas may be removed by additional coursework at UTK.)

Required Ph.D. courses are:

- Computational methods in Statistics (ST 662)
- Theory for developing new tools (ST 663, 664)
- Two more advanced courses selected from process improvement (ST 666), design of experiments (ST 673), data

mining (ST 674), or multivariate statistics (ST 679).

- Graduate seminar in design of experiments, modeling, process control, regression, or reliability (student selects one topic prior to the dissertation proposal).

The dissertation must be in business/industrial applications-driven research. Nine hours of collateral coursework in business, engineering, or science are also required. The area of this coursework is to support either the dissertation or the long-term work interests of the student.

An internship is required; however, those who have had sufficient prior work experience may elect to take an additional statistics course instead.

Please see <http://bus.utk.edu/soms/statg/phd/statphd.html>

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## **PROGRAMS ASSOCIATED WITH STATISTICS**

### ***The Intercollegiate Graduate Statistics Program***

*(for students in other departments)*

The Intercollegiate Graduate Statistics Program (IGSP) was established by the Graduate School

to enable graduate students in other departments to earn a minor or MS degree in Statistics. Students with strong interest in quantitative methods can enrich and add breadth to their graduate degree programs through the IGSP. The Program is open to graduate students in all departments which have an approved minor and/or MS joint major curriculum offered through the Program. Specific course requirements are selected from a menu of possible beginning, intermediate, and advanced courses, subject to the approval of the IGSP Executive Committee.

Successful completion of the statistics program is noted on the student's transcript. Additional information concerning the IGSP may be obtained from the Chair of the IGSP Executive Committee, or from [www.bus.utk.edu/stat/igsp](http://www.bus.utk.edu/stat/igsp).

### ***Lean Enterprise Systems Design Institute***

*(in association with the Center for Executive Education)*

### ***Institute for Statistical Engineering***

The newly established Institute for Statistical Engineering (ISE) promotes, performs, and disseminates research on statistical thinking for improving business processes and systems. Statistical engineering is defined as the integration of statistical and engineering analysis concepts. The institute will develop tools that can

be used to analyze the operation of complex manufacturing processes. Although the Institute will focus on process improvement in all manufacturing industries, initial efforts will focus on the continuous process industries (chemical, petrochemical, pharmaceutical, food, etc.) that consist of batch, semi-batch and continuous unit operations connected in complex configurations.

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## **FACULTY AND STAFF**

### ***The Department***

Faculty members of the Department of Statistics, Operations, and Management Science have frequently received College and University awards for excellence in teaching and research. Most have experience in consulting in business and industry, and also in such diverse fields as medicine, agriculture, and transportation, to mention a few. Departmental faculty members are key participants in various programs offered by the Center for Executive Education. These programs have brought national and international recognition to the University of Tennessee in the area of quality management and improvement.

### ***Statistics Faculty***

**Halima Bensmail**, Ph.D.  
(Paris, France)  
*Director, Ph.D. Program*

Data mining and knowledge discovery, classification and neural networks, Bayesian analysis, mixture modeling for continuous and mixed data, and imputed data  
(on leave 2006 – 2007)

**Charles M. Cwiek**, MS  
(Tennessee)  
Industrial statistics, quality management

**Hamparsum Bozdogan**, Ph.D.  
(Illinois at Chicago)  
*Ph.D. Committee*  
Informational complexity, model selection and model selection criteria, model-based clustering and classification, multivariate statistical modeling, interactive symbolic statistical computing

**Frank M. Guess**, Ph.D.  
(Florida State)  
*MS Program Committee*  
Reliability, lifetime modeling, censored/incomplete data, strengths of materials, nonparametrics, mean residual life, Bayesian statistics

**Mary G. Leitnaker**, Ph.D.  
(Kentucky)  
Applied probability, reliability, industrial statistics

**Ramón León**, Ph.D.  
(Florida State)  
Robust design, statistical process control, industrial statistics, reliability, quality, Bayesian methods

**Robert W. Mee**, Ph.D.  
(Iowa State)  
*Five-year Undergraduate/Masters Degree Coordinator and Advisor*

Design of experiments, robust design, calibration, statistical intervals

**Adam Petrie**, Ph.D.  
(Rensselaer Polytechnic Institute)

**William L. Seaver**, Ph. D.  
(Texas A & M)  
*Statistics 201 Coordinator*  
Fuzzy methods for multivariate analysis, regression analysis, robust methods, sampling, nonparametrics, time series

**James L. Schmidhammer**, Ph.D.  
(Pittsburgh)  
Multivariate and categorical data analysis, industrial statistics, data mining

**Mary Sue Younger**, Ph.D.  
(Virginia Tech)  
*Chair, MS Program Committee*  
Linear and nonlinear models, applied statistics

**Russell Zaretski**, Ph.D.  
(Cornell)  
*MS Program Committee*  
Statistical theory, likelihood and asymptotics, empirical likelihood, forecast evaluation, applications to finance and insurance

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## **ADMISSION REQUIREMENTS FOR THE MS IN STATISTICS**

### ***Minimal Requirements for Admission***

Admission to the Graduate School requires a Bachelor's degree from an accredited college or university (or the international equivalent). The Graduate School requires a minimum grade point average of 2.7 out of a possible 4.0, or a 3.0 during the senior year. If an applicant has previous graduate work, the GPA for that coursework must be at least 3.0 out of 4.0. The equivalent of a minimum B average is required for international students. (Students not meeting these requirements are referred to the *Graduate Catalog* regarding admission with provisional status.) Students may be admitted to the Graduate School prior to completion of their undergraduate degrees, but the degree must be awarded prior to registration in the Graduate School.

We stress that these are *minimal* requirements, and are exceeded by most students.

### ***Admission to the Statistics MS Program***

Admission to the MS program in Statistics requires that students, in addition to fulfilling the minimal requirements of the Graduate School, also have completed at least two years of college-level mathematics, including matrix algebra and the calculus of several variables. Applicants should also be proficient in computer usage. Applicants whose native language is other than English must submit TOEFL scores unless they have received a degree from an

accredited U.S. institution within the past two years. Most international students admitted have TOEFL scores on the paper test exceeding 620. Telephone or in-person interviews are used to verify strong spoken and listening English skills.

### ***Application Procedures***

Please refer to:

<http://bus.utk.edu/soms/statg/master/admission.html>

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## **FINANCIAL AID**

### ***Types of Assistantships***

#### **Graduate Teaching Assistants**

work under the direct supervision of a regular faculty member to gain experience in teaching and understanding of the discipline. Activities include helping to prepare lectures, teaching class discussion sections, conducting laboratory exercises, grading papers, and keeping class records.

**Graduate Teaching Associates** are experienced graduate students who may be assigned primary responsibility for teaching undergraduate courses, including the assignment of final grades. The Southern Association of Colleges and Schools requires that teaching associates must have earned at least 18 graduate semester hours in their teaching field.

#### **Graduate Research Assistants**

pursue a research and study program. These assistants are generally financed through gifts, grants, or contract funds.

The Department typically supports 10 – 12 MS students in each year of the program. Work assignments are usually on a one-fourth or a one-half time basis. The normal work week for a quarter-time appointment should not exceed 10 hours, and the student should be enrolled for 9 – 13 semester hours. For a half-time appointment in the Statistics Department, the normal work week is 20 hours, with registration for 9 – 11 semester hours. The complete policy for the administration of graduate assistantships is published in the *Graduate Catalog*. Appointments for more than half time are forbidden by University policy.

### ***Parameters of Financial Support***

The Department of Statistics, Operations, and Management Science offers 10-hour, 15-hour, and 20-hour graduate assistantships. Students with assistantships receive a monthly stipend plus waiver of tuition and some fees. They also receive a scholarship from the Department as long as they

- Maintain a GPA of at least 3.0
- Enroll in a minimum of 9 approved credit hours per semester
- Fulfill assigned duties

Graduate assistants are evaluated by the faculty members under whose supervision they are working.

Faculty members discuss their written evaluations with each of their graduate assistants. Written evaluations are then signed by the students and placed in their files.

Assistantships are offered for one year. Provided the student fulfills the responsibilities listed above, the Department's policy is to extend the assistantship for another year. In no case is an MS student supported for more than two years.

### ***Health Insurance***

The University of Tennessee offers medical insurance to students who are enrolled for six or more undergraduate credit hours or three or more graduate credit hours. Insured persons must actively attend class for at least the first 31 days after the date for which the coverage is purchased. Eligible insured students enrolled in the program may also insure their dependents. Except in emergency situations, insured students must use the services of the Student Health Center on campus, and either receive care there or be referred by the Health Center to other sources of care.

### ***Payroll Information***

The University of Tennessee payroll is distributed on the last working day of the month. Statements will be left in student mailboxes. Students must have their checks deposited directly. Forms for direct deposit of

paychecks are available from the Departmental office.

### ***Tax Obligations***

Scholarship assistance that exceeds tuition and fees required (including books, equipment and supplies required for courses of instruction) for enrollment or attendance at an educational institution is considered taxable income. Any money to cover additional expenses – including room, board, travel and incidental expenses – is taxable and must be reported each year to the Internal Revenue Service.

Universities normally are not required to report to the IRS on scholarships or fellowships provided to students. However, scholarship and fellowship recipients are advised that they may have federal tax liabilities. It is the responsibility of the recipient to determine whether the funds received were used for qualified tuition and related expenses and to report all taxable income.

### ***Other Sources of Support***

The Graduate School can provide a list of scholarships that are available. One scholarship of particular interest to statistics MS students is the American Statistical Association's Gertrude M. Cox scholarship for women in graduate statistics programs. This scholarship is

typically advertised in the *Amstat News* early each year, with an application deadline of April 30, with awards made in August.

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## **DEGREE REQUIREMENTS**

### ***Credit Requirements***

A minimum of 33 credit hours must be completed for the Master's degree. Students must complete a minimum of 21 hours in approved graduate statistics courses, exclusive of consulting, internship, independent study, or thesis hours. Each MS candidate is also required to complete either a thesis (6 hours credit) or an independent study project (3 hours credit minimum).

### ***Required Statistics Courses***

- ST 563: Introduction to Mathematical Statistics (3 cr.)
- ST 564: Theory of Statistical Inference (3 cr.)
- ST 572: Applied Linear Models (3 cr.)
- ST 573: Design of Experiments (3 cr.)

As a prerequisite to ST 572 and ST 573, most students also take ST 571: Statistical Methods (3 cr.)

For students without previous graduate Statistics coursework, the four courses above are required.

However, in recognition that some students may enter the program with previous graduate coursework in Statistics, the Graduate Catalog simply states that students must have at least 6 hours of statistical theory and at least 6 hours of statistical methods courses. Any student with a satisfactory grade in a course comparable to one of the courses listed above is not required to repeat the similar course.

Considerable flexibility exists in the selection of courses to satisfy the remaining requirements for the MS in Statistics. In addition to the 12 hours listed above, students typically take 4 – 6 additional courses. These credit hours, plus the student's choice of an independent study or thesis topic, permit programs to be fitted to individual students' interests.

### ***Maintaining a Satisfactory GPA***

Upon completion of nine hours of graduate coursework, a graduate student will be placed on academic probation if his/her cumulative GPA falls below 3.0. A student will be allowed to continue graduate study in subsequent semesters if each semester's GPA is 3.0 or greater. Upon achieving a cumulative GPA of 3.0, the student will be removed from probationary status.

### ***Internship***

#### **Overview**

The Internship program offers students the opportunity to obtain

valuable, practical experience in applying statistical methods and concepts in a realistic environment. Consequently, internship experience gives students a definite competitive edge and increased salary when seeking full-time employment upon graduation. While the Department provides a great amount of contact information and assistance, it is ultimately the responsibility of the student to secure an internship. Sources of information include the department's Graduate Seminar (ST 587), the Internship Manager, the UT Career Services Center, the *Amstat News*, and the Worldwide Web. Students should prepare resumes to supply to the Internship Manager during Fall Semester of Year 1. The Internship Manager and Career Services offer students assistance in writing effective professional resumes.

**Academic Credit** (required)

Students (excepting IGSP students) should register for ST 592 (1 hour) during the semester following their internship. In order to receive credit for internships, students are expected to make a brief oral report in the Graduate Seminar (ST 587) and submit a brief written report. The report needs to be only two or three pages long, but should be a professional document in content and appearance. It should have the following numbered sections: 1. Company description and contact person (with address and phone number), 2. Assigned responsibilities or projects, 3. Statistical techniques used, 4. Accomplishments, and 5. Evaluation of the internship

experience (both positives and negatives).

The final copy should be submitted to the Chair of the MS Program Committee. One copy of the report will be placed in the student's file and another will be available for public inspection in the Statistics Department.

**Comprehensive Examinations**

The Comprehensive Theory Exam is a four-hour open-book exam covering ST 563 – 564 topics. It is given during the week preceding the Wednesday beginning of the Fall semester. The exam is jointly written by two faculty members and jointly graded by two faculty members.

The Comprehensive Methods Exam is a four-hour open-book exam covering ST 572 and ST 573 topics. (IGSP students may substitute a course for ST 573 with the approval of the MS Committee.) This exam is given during the week preceding the Wednesday beginning of the fall semester. The exam is jointly written by two faculty members and jointly graded by two faculty members.

Both exams typically require computer work.

A score of 70% is required to pass the Theory exam and 70% is required to pass the Methods exam. If a student earns less than 70% on just one part, the MS Committee may give the student a Conditional

Pass and specify additional work to be done to be given a passing grade, or the Graduate Committee may require the student to retake that part. If the student earns less than 70% on each part, the student must retake the exam. Normally, retakes will be scheduled for the next time the exam is offered, which is expected to be at the beginning of the following semester.

The Graduate School rules state that a student failing the comprehensive exam twice is terminated from the program.

### ***Independent Study or Thesis***

Each Statistics MS student (except those participating through the IGSP) must complete ST 593: Independent Study (3 cr.) or ST 500: Thesis (6 cr.) under the direction of his/her Major Professor. A Graduate Seminar (ST 587) is offered in Fall Semester to assist students in the selection of a topic and a Major Professor.

The Independent Study culminates with oral and written presentations. It is expected that both oral and written presentations be of the highest professional quality; many result in publications in professional journals. Recent written reports are available in the Statistics Department.

A copy of the written Independent Study report must be given to the Chair of the MS Program Committee.

### ***MS Committee***

In consultation with his or her Major Professor, a student also chooses one or more additional faculty members to serve as second readers of the Independent Study report. This set of faculty members constitutes the student's MS Committee. The MS Committee should be formed at least one semester before graduation.

### ***Time Limit***

Candidates for the MS degree have six calendar years from the time of their enrollment in the Graduate School to complete their degrees. Students who change degree programs during this six-year period may be granted an extension after review and approval by the Graduate School. In any event, courses used toward a Master's degree must have been taken within six calendar years of graduation.

### ***Recommended Program of Study***

The following represents a course of study which is applicable to students interested in working in business, government, or industry upon graduation. This program may be altered, with the approval of the student's MS Committee, to fit the student's particular needs and interests.

### **Undergraduate Background**

An undergraduate degree in engineering or science is highly desirable. A BS degree in Computer Science, Mathematics, Economics, or Statistics is also very appropriate. A strong background in matrix algebra and calculus is required.

### Graduate Training

#### ***Fall Semester, Year 1***

- ST 587: Graduate Seminar (to assist students in resume construction and identifying Internship opportunities)\*
- ST 563: Introduction to Mathematical Statistics
- ST 566: Statistical Techniques in Industrial Processes
- ST 571: Statistical Methods
- Purchase laptop computer for use in courses and internship (strongly recommended)

#### ***Spring Semester, Year 1***

- ST 564: Theory of Statistical Inference
- ST 572: Applied Linear Models
- ST 573: Design of Experiments
- Select internship position\*

#### ***Summer, Year 1***

- Internship\*
- Review course materials for Comprehensive Exams

#### ***Fall Semester, Year 2***

- Take Comprehensive Exams immediately prior to the beginning of fall semester
- ST 587: Graduate Seminar (to assist students in the selection of an Independent Study topic)\*
- Prepare and deliver oral and written reports on the Internship experience\* (register for ST 592)
- Nine hours of elective graduate courses in Business, Science, Engineering and Statistics (can include 400-level courses outside of Statistics – see below). Fall Statistics electives typically include
  - ST 567: Analysis of Life Data
  - ST 579: Multivariate Methods
  - ST 662: Computational Methods in Statistics (even years)
  - ST 663: Advanced Statistics Theory I (odd years)
  - ST 673: Advanced Design of Experiments and Linear Models (even years)
  - ST 677: Statistical Modeling (odd years)

#### ***Spring Semester, Year 2***

- At least six hours of elective graduate courses. Spring Statistics offerings typically include
  - ST 574: Data Mining
  - ST 575: Time Series
  - Stat 578: Categorical Data Analysis
  - ST 664: Advanced Statistics Theory II (even years)

- ST 666: Advanced Statistical Process Control (odd years)
- ST 674: Advanced Data Mining (odd years)
- ST 679: Multivariate Statistical Modeling (even years)
- Present results of Independent Study (register for ST 593)\* or Thesis\* (register for ST 500)

\*Not required of IGSP students

### ***Ongoing Experiences***

- Attend Stat Club meetings and field trips, Department Colloquia CEE presentations and discussions, etc.

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### ***Examples of Non-Statistics Electives***

The following are examples of possible elective courses in other fields. Most have prerequisites presumably satisfied by the student's previous interest in the field.

#### Agricultural Economics

- AE 542: Econometric Methods in Agricultural Economics

#### Animal Science

- AS 572: Least Squares Analysis

#### Chemical Engineering

- CE 505: Engineering Analysis
- CE 507: Application of Linear Algebra in Engineering Systems

#### Computer Science

- CS 530: Systems Organization
- CS 560: Software Systems
- CS 580: Foundations

#### Economics

- EC 581: Mathematical Methods in Economics
- EC 582 - 583: Elements of Econometrics I, II

#### Industrial and Organizational Psychology

- IO 569: Applied Measurement for Industrial/Organizational Psychology
- IO 627: Structural Equation Models in Organizational Research

#### Industrial Engineering

- IE 514: Advanced Information Systems Analysis and Design
- IE 517: Reliability Engineering

#### Management Science

- MS 532: Stochastic Models in Management Science
- MS 533: Computational Mathematical Programming
- MS 551: Leveraging Information through Descriptive and Descriptive Modeling

#### Marketing

- MK 612 – 613: Research Methods I, II
- MK 616: Measurement

#### Mathematics

- MT 411: Mathematical Modeling
- MT 445: Advanced Calculus
- MT 471: Numerical Analysis
- MT 472: Numerical Algebra
- MT 523 – 4: Probability
- MT 526 – 6: Statistics
- MT 527: Stochastic Modeling

#### Nuclear Engineering

- NE 579: Advanced Monitoring and Diagnostic Techniques
- NE 585: Process System Reliability and Safety
- NE 653: Theory of Information Processing

Political Science

- PS 610: Special Topics in Empirical Theory and Methods

Psychology

- PSY 554: Laboratory in Psychometrics
- PSY 555: Psychometrics
- PSY 607: Seminar in Applied Psychometrics

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## **DEPARTMENTAL AMENITIES AND ENRICHMENT EXPERIENCES**

The Department offers a variety of social and professional enhancement activities and provides resources and services for the benefit of both faculty and students.

### ***Colloquia***

Colloquium talks are presented by faculty members and visitors from other Colleges or other Universities. These colloquia serve the important purpose of providing a forum in which new ideas in applied statistics are exchanged and examined. Additionally, they help Department faculty and students to get to meet statisticians from other departments or other universities, and allow them to likewise get to know us.

Faculty and graduate students are expected to attend these colloquia. Suggestions for speakers are always

welcomed by the Colloquium Coordinator.

### ***Stat Club***

All graduate and undergraduate majors, plus any other students interested, are invited to join the Stat Club. The club sponsors informal, student-oriented presentations several times each semester. Typical presenters are second-year students reporting on their internship experiences, professional statisticians invited in from government or industry, placement personnel who advise students on how to write resumes, apply for positions, and so on.

Additionally, the Stat Club sponsors field trips to nearby sites such as Eastman Chemical in Kingsport, Alcoa Aluminum in Alcoa, Nippondenso and Schlegel in Maryville, and Saturn in Spring Hill, TN. Statisticians at these sites conduct a plant tour and explain how they use statistics in their work.

The Stat Club is a social club, as well as a professionally-oriented one. Students enjoy each other's company on hikes in the mountains, trips to Dollywood, Halloween parties, and of course, football games.

### ***Bulletin Boards, Mailboxes, Computers***

A departmental bulletin board, located on the third floor of Stokely Management Center, displays postings of interest to graduate students from the department, the Graduate School, and other graduate schools. Graduate students are provided with mailboxes in the Department, as well.

A bank of recent model computers is provided on the third floor of SMC for the exclusive use of statistics graduate and undergraduate students. (Check with the Department's Office Manager for the password.) The University provides all students with Internet access and e-mail accounts. Students enrolled in enough hours to be assessed the Student Technology Fee are able to obtain copies of the most popular statistical software packages free or at minimal cost. The University is equipped with wireless Internet access in every building.

### ***Professional Societies***

The UTK Department of Statistics, Operations, and Management Science maintains close association with the major professional societies in the field.

#### **American Statistical Association**

The American Statistical Association (ASA) is the largest society of professional statisticians in the United States. Most statisticians in business, industry, government, and academia are ASA members. The ASA conducts several national and

regional meetings yearly and published several journals of interest to professional statisticians and magazines aimed at a student audience. The Department purchases Student Memberships in the ASA for graduate students who pass their Comprehensive Examinations.

#### **American Society for Quality**

The American Society for Quality (ASQ) is the largest society of quality professionals in the USA. In fact, the membership of the Statistical Methods section of the ASQ is as large as the total membership in the ASA. ASQ conducts national and regional meetings annually – the Knoxville local chapter is quite active. On its own and also in conjunction with the ASA, the ASQ publishes several journals of interest to statisticians and other quality professionals.

## **UNIVERSITY SUPPORT FACILITIES**

### ***Bibliographical Resources***

The Hodges Library, conveniently located across the street from the Glocker building and Stokely Management Center, houses the University's science holdings, including statistics. It subscribes to most statistical journals and also holds a large number of statistics books. Among the many references available are the *Science Citation Index*, *Current Index to Statistics*, and the *Encyclopedia of Statistical Sciences*, *Web of Science*, and *jstor*.

### **Computing Resources**

The Statistical Consulting Center is located on the second floor of Stokely Management Center and enjoys a close, if unofficial, relationship with the Statistics Department. Payment of the Student Technology fee entitles students to several hours of free consulting each term on questions ranging from use of statistical software in their classes to appropriate techniques for conducting research in a wide variety of applications.

The SCC provides assistantships as statistical consultants to one or two Statistics graduate students each term.

All major statistical software packages are supported by the SCC.

### **Publications of Interest to Graduate Students**

The **Graduate Catalog** is published annually by the Office of Graduate Admissions and Records and represents the current educational programs, course offerings, and requirements of the Graduate School.

**Hilltopics** is the student handbook published annually by the Office of the Dean of Students. It contains information on student rights and responsibilities, academic conduct, and guidelines for faculty and students.

The **Graduate Student Handbook** is published annually by the Office of

Graduate Admissions and Records and is designed to acquaint newly admitted graduate students with Graduate School procedures and resources in the University community.

The **Timetable of Classes** is published each term by the Computer Assisted Registration Service. It includes registration instructions and course information for the term.

**Graduate School News** is published each term by the Office of Graduate Admissions and Records and is available during registration. It includes specific registration and graduation deadlines for the term as well as a University calendar and notices of changes in procedures and policies that affect graduate students.

**GRADSOURCES** is published annually by the Office of Graduate Admissions and Records. It is designed to assist graduate students in identifying sources of financial support and includes information on reference materials, university and department programs for graduate support, and financial aid.

**Deadline Dates for Graduation** is published each term by the Office of Graduate Admissions and Records. It includes information on the deadlines for graduation.

**Guide to the Preparation of Theses and Dissertations** is a basic source of information for thesis and dissertation preparation at the University of Tennessee, Knoxville. It

includes information on technical parameters, formatting conventions, electronic submission, and other information to assist students in manuscript preparation. It is available at the University Center Book and Supply Store.

Information is available from <http://gradschool.utk.edu/default.shtml>

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## **ACADEMIC STEPPING STONES**

### ***Advising Sessions***

Advising sessions are vehicles for assisting students in course selection, curriculum planning, and finding internship and job openings. They are also opportunities for faculty to encourage students, respond to questions, verify progress, and solicit suggestions for program improvement. Initially, new MS students are advised by a member of the MS Program Committee. First-year students may choose a permanent advisor in October. It is not unusual for students to change their permanent advisor to their Major Professor when a thesis or independent project is selected.

For full-time MS students, there are five formal advising sessions: three in the first year and two in the second. The first of these sessions is generally with a member of the MS

Program Committee. Its purpose is to assist entering students in the selection of courses for the fall semester and to answer questions they have regarding degree requirements. Sessions 2 – 5 are with the student's permanent advisor. Advisors will obtain students' files from the departments records so that results of prior advising can be reviewed and current information and suggestions may be recorded. Purposes of subsequent advising sessions:

- Session 2: To discuss how students are doing in their first semester, remind them that three required courses are taught spring semester, and to encourage students to prepare cover letters for application to summer internships
- Session 3: To record information or discuss options about summer internship, plan coursework for fall semester, and verify that students will be taking the comprehensive exams before fall classes begin.
- Session 4: To verify the next step in passing comp exams (if necessary), record student decisions about independent study topic, and select courses for spring semester.
- Session 5: To discuss employment or future graduate work decisions. To solicit suggestions from students in program or policies.

For part-time MS students and those earning the MS through the Intercollegiate Graduate Statistics Program, the advising sessions are less frequent and less formal, but the

objectives stated in the *Advising Record* still apply.

### ***Dates to Remember***

#### **Advising Session 1**

Before registration Fall Year 1

#### **Advising Session 2**

By October 15, Year 1

#### **Advising Session 3**

By March 15, Year 1

#### **Comprehensive Examinations**

Immediately prior to Fall Semester, Year 2

#### **Advising Session 4**

By October 15, Year 2

#### **Admission to Candidacy form to the Graduate School**

<http://registrar.tennessee.edu/graduation/graduate/forms/macandinteractive.pdf>

At least one full semester prior to the date the degree is to be conferred

#### **Graduation Application**

[http://registrar.utk.edu/graduation/graduate/forms/gradu\\_app\\_interactive.pdf](http://registrar.utk.edu/graduation/graduate/forms/gradu_app_interactive.pdf)

Mid-February, Year 2

#### **Payment of Graduation Fee**

Mid-February, Year 2

#### **Advising Session 5**

By April 1, Year 2

#### **Removal of Incompletes**

Not later than 1 week prior to Commencement

For other important dates, see "Summary of Procedures for Masters and Specialists in Education Degrees" in the *Graduate Catalog*. See also the *Graduate School News*.

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## **EXPECTATIONS AND PROBLEM RESOLUTION PROCEDURES**

### ***Honor Statement***

Each student is responsible for his or her own personal integrity in academic life as defined and set forth in *Hilltopics*. Faculty members are expected to maintain an atmosphere conducive to academic integrity. It is the responsibility of each faculty member, GTA, and staff member to act upon any violation of the Honor Statement.

The Honor Statement declares that, "An essential feature of the University of Tennessee, Knoxville is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."

### ***Grievance Procedures***

The student handbook, *Hilltopics*, published and distributed annually, contains statements of UTK's standards of conduct and of all disciplinary regulations and procedures. Normally, grievances should be handled at the departmental level through the student's advisor or the department or program head. Further appeal may be made to the Dean of the

respective college, the Dean of the Graduate School, the Graduate Council, and the Chancellor. Any individual may ultimately appeal to the President of the University.

A copy of the appeals procedure is available in the Office of Graduate Admissions and Records.

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Tennessee, 1840 Melrose Avenue, Knoxville, Tennessee 37996-3560, or telephone (865) 974-2498 (V/TTY available) or telephone (865) 974-2440. Requests for accommodation of a disability should be directed to the ADA Coordinator at the Office of Equity and Diversity (OED), 1840 Melrose Avenue, Knoxville, TN 37996-3560.

## **EQUAL OPPORTUNITY POLICY**

EEO/Title IX, Section 504  
Statement/ADA

The University of Tennessee does not discriminate on the basis of race, sex, color, religion, national origin, age, disability, or veteran status in provision of educational programs and services or employment opportunities and benefits. This policy extends to both employment by and admission to the University.

The University does not discriminate on the basis of race, sex or disability in the education programs and activities, pursuant to the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990.

Inquiries and charges of violations concerning the Title VI, Title IX, Section 504, ADA or the Age Discrimination in Employment Act (ADEA) or any of the other above referenced polices should be directed to the Office of Equity and Diversity (OED), The University of

## NOTES