

## Statistics

### The George R. Brown School of Engineering

#### Chair

Katherine B. Ensor

#### Professors

Bryan W. Brown (joint appointment: Economics)

Dennis Cox

Mahmoud El-Gamal (joint appointment: Economics)

Don H. Johnson (joint appointment: Electrical and Computer Engineering)

Marek Kimmel

Javier Rojo

David W. Scott

Robin Sickles (joint appointment: Economics)

James R. Thompson

Edward E. Williams (joint appointment: Jones Graduate School of Management)

Rick K. Wilson (joint appointment: Political Science)

#### Associate Professors

Steven Currall (joint appointment: Jones Graduate School of Management)

Rudy Guerra

David M. Lane (joint appointment: Psychology)

Barbara Ostdiek (joint appointment: Jones Graduate School of Management)

#### Assistant Professor

Quintus Jett (joint appointment: Jones Graduate School of Management)

#### Adjunct Professors

E. Neely Atkinson

Donald A. Berry

Barry W. Brown

Thomas D. Downs

Ralph F. Frankowski

Richard Heydorn

Dennis A. Johnston

Gary Rosner

Howard D. Thames, Jr.

Robert A. White

Stuart Zimmerman

#### Adjunct Associate Professors

Joaquin Diaz-Saiz

Kim-Anh Do

Carl S. Hacker

Kenneth Hess

#### Lecturers

L. Scott Baggett

Peter Olofsson

*Degrees Offered:* B.A., M.Stat., M.A., Ph.D.

Course work in statistics acquaints students with the role played in the modern world by probabilistic and statistical ideas and methods. Students grow familiar with both the theory and the applications of techniques in common use as they are trained in statistical research. The flexibility of the undergraduate program allows students to concentrate on theoretical or applied training, or they may link their studies in statistics to work in other related departments (see majors in economics, education, electrical and computer engineering, computational and applied mathematics, managerial studies, mathematics, political science, and psychology). Graduate study has concentrations in applied probability, bioinformatics, biomathematics, biostatistics, computational fi-

nance, data analysis, density estimation, epidemiology, image processing, model building, quality control, statistical computing, spatical processes, stochastic processes, and time series analysis. A joint M.B.A./master of engineering degree is also available in conjunction with the Jesse H. Jones Graduate School of Management.

### **Degree Requirements for B.A. in Statistics**

For general university requirements, see Graduation Requirements (pages 18–20). Students majoring in statistics normally complete the following:

- MATH 101/102 *Single Variable Calculus I and II*
- MATH 211 *Ordinary Differential Equations and Linear Algebra*
- CAAM 210 or 211 *Introduction to Engineering Computation*
- STAT 300 *Model Building*
- STAT 310 *Probability and Statistics*
- STAT 410 *Introduction to Statistical Computing and Regression*
- 5 elective courses from the statistics department (or other departments with approval from their adviser) at the 300 level or higher

Mathematically oriented students should also take MATH 212 *Multivariable Calculus* and MATH 355 *Linear Algebra* (or CAAM 335 *Matrix Analysis*).

### **Degree Requirements for M.Stat., M.A., and Ph.D. in Statistics**

For general university requirements, see Graduate Degrees (pages 62–67). Admissions applications should include scores on the Graduate Record Examination (GRE) in the quantitative, verbal, and analytical tests. Financial support is available for well-qualified doctoral students. Course work for all degree programs should be at the 400 level or above, although 2 approved 300-level courses may be accepted.

**Master's Programs.** Candidates for the nonthesis M.Stat. degree must complete 30 semester hours of approved course work. Candidates for the M.A. degree in statistics must complete 30 semester hours of approved course work as well as one of the following: (1) complete an original thesis and defend it in a public oral examination; or (2) perform satisfactorily on the second-year Ph.D. comprehensive examinations.

- Ph.D. Program.** Candidates for the Ph.D. degree in statistics must:
- Complete at least 90 semester hours of approved course work beyond the bachelor's degree and a minimum of 60 hours beyond a master's degree
  - Perform satisfactorily on preliminary and qualifying examinations
  - Complete an original thesis with a public oral defense

**See STAT in the Courses of Instruction section.**