department does specify certain minimum course requirements. Ph.D. students will be expected to select a minor area.

A full-time graduate student will usually need three semesters to complete a Master's degree. It may be possible to complete it in a calendar year if related courses are available in the summer. The doctorate requires at least three years of study beyond the baccalaureate. Few students will be able to complete all course and thesis requirements in less than four years.

### **Financial Assistance**

The Department plans to award fellowships, traineeships or assistantships to beginning and advanced students.

Fellowships and traineeships: NDEA, NSF, industrial and university: \$2,400 to \$3,400 for twelve months plus tuition.

Assistantships: \$2,700 to \$3,100 for the academic year. Eligible for in-state tuition rates.

# How To Apply

Further information regarding the Statistics graduate program, graduate fellowships and assistantships, and the necessary application blanks can be obtained from the Dean of the Graduate School or from the Chairman of the Statistics Department. Prospective graduate students should submit two official transcripts of all previous college courses and a written application at least a month before anticipated entrance. Applications for fellowships should be received by February 1 and for assistantships by April 1; applicants should request at least three letters of recommendation.

### The University of Kentucky

The University of Kentucky is the landgrant institution for the state and consists of the Colleges of Arts and Sciences, Agriculture, Engineering, Law, Education, Business and Economics, Pharmacy, Medicine, Nursing, and Dentistry, plus the Schools of Home Economics, Architecture, Library Science and Natural Resources. The College of Arts and Sciences has six schools in addition to the School of Mathematical Sciences. Doctoral programs are available in 38 areas of study.

#### **Facilities**

The University has pursued a policy of providing adequate computing facilities for the staff and graduate students, regardless of the availability of research grant funds. The Computing Center has an IBM 360, Model 50, with 512 K memory; a Digitek Optical Scanner; a Calcomp Plotter; an IBM 1410, plus necessary peripheral equipment. The College of Engineering has two TR-48 analog computers and the Medical Center has three IBM machines 1130,1440, and 1800. The University expects to have an IBM 360, Model 65 by September, 1969.

Offices and a library for the School of Mathematical Sciences will be located in a new 19-story building, which is now being completed. The central library is also located near this new building. The University of Kentucky libraries house over a million volumes.

The University has efficiency, one-bedroom and two-bedroom apartments for married students; also apartment-type facilities for single graduate students. Graduate students may also live in the undergraduate residence halls. Information regarding rental arrangements can be obtained from the University Housing Office, which also maintains a list of private housing in Lexington.

### The Community

The University of Kentucky is located in Lexington, in the heart of the Bluegrass Country. The city of Lexington and its surrounding areas has a population of over 165,000. The municipal airport is served by four airlines. Numerous cultural activities, a highly-rated school system, over 500 industries, a variety of sport and recreation facilities and one of the South's leading medical and hospital centers make Lexington a pleasant community in which to live.

The Graduate School of the University of Kentucky

Announces

the Establishment of

Masters' and Doctoral

**Programs** 

in

**Statistics** 



Department of Statistics
University of Kentucky
Lexington, Kentucky 40506

## The Statistics Graduate Program

Recognizing the need to develop a coordinated program of teaching, research and consulting in Statistics, the University of Kentucky established a Department of Statistics on July 1, 1967. This department joined the existing Departments of Mathematics and Computer Science to form the School of Mathematical Sciences in the College of Arts and Sciences.

A doctorate in Mathematics was first authorized at the University of Kentucky in 1927. The Statistics Department is now authorized to accept major students to study for the degree of Master of Science (with or without a thesis) and Doctor of Philosophy (both Experimental and Mathematical Statistics). Minor and co-major programs will be developed for associated areas.

The Statistics Department is developing in conjunction with other departments an interdepartmental graduate program in Operations Research.

### **Graduate Courses**

Graduate courses include: Basic Probability, Statistical Inference and Statistical Analysis; \* Linear Models and Design and Analysis of Experiments and Surveys; \* Design and Analysis of Variance Component Models; Advanced Experimental Design and Response Surface Techniques; Mathematical Programming; Econometrics; Statistical Genetics; Stochastic Processes; Multivariate Inference; Non-parametric Inference; Advanced Probability; Estimation Theory and Hypothesis Testing.

## Faculty

- R. L. Anderson, Professor and Chairman, Ph.D., Iowa State (1941); design and analysis for variance components; use of prior information in regression analysis and selection of predictors; misclassification problems; time series.
- **F. B. Cady,** Professor and Director of Statistical Services for the Agricultural Experiment Station, Ph.D., North Carolina State (1960); experimental design; estimation of response functions; biological experimentation.
- **Z. Govindarajulu**, Professor, Ph.D., Minnesota (1961); non-parametric inference; distribution problems; theory of estimation and hypotheses-testing; large-sample theory.
- **R. T. Leslie,** Professor, Ph.D., Melbourne (1958); stochastic processes; design and analysis of experiments; non-parametric inference.
- V. P. Bhapkar, Associate Professor, Ph.D., North Carolina (1959); multivariate analysis; categorical data; non-parametric inference.
- **D. M. Allen,** Assistant Professor, Ph.D., North Carolina State (1968); multivariate analysis; linear and non-linear models; variance components.
- W. O. Thompson, Assistant Professor, Ph.D., Virginia Polytechnic Institute (1968); response surface designs; stochastic models; multivariate analysis.
- H. H. Hall, Assistant Professor (joint with Agricultural Economics), Ph.D., Iowa State (1969 expected); linear and non-linear programming; input-output analysis.
- **D. D. Kratzer,** Assistant Professor (joint with Animal Science), Ph.D., Iowa State (1965); computer techniques for statistical analysis and variance components; animal behavior.

Negotiations are in process to obtain faculty members specializing in Probability, Decision Theory, Information Theory, Stochastic Processes and Time Series, Sequential Analysis and Operations Research.

The University is rapidly expanding its research capability in many associated areas, including Biological and Engineering Systems, Quantitative Genetics, Computer Science and Econometrics

## **Academic Requirements**

A graduate of a fully accredited institution of higher learning, who has an undergraduate grade-point standing of 2.5 on a basis of 4.0, may apply for admission to the Graduate School. A student with a grade-point average of less than 2.5, or a graduate of a non-accredited institution, may be admitted only after a Graduate Record Examination, or other evidence, acceptable to the Dean of the Graduate School and to the Department, indicates that he is capable of doing satisfactory graduate work. All applicants for fellowships or assistantships are advised to take the Graduate Record Examination.

In general, statistics applicants will be expected to have a minimum of one year of Calculus and at least a B-average in previous mathematics and statistics courses. Students with an undergraduate major in an applied field, as well as majors in statistics or mathematics, are urged to apply.

An over-all average of B on all work taken as a graduate student, as well as a B average on all work carrying graduate credit, must be obtained before an advanced degree may be awarded. Statistics majors can obtain a Master's degree with or without a thesis and with or without a reading knowledge of one foreign language. Doctoral candidates must have a reading knowledge of one foreign language.

A student intending to pursue graduate work in Statistics should obtain previously as much Mathematics as possible. One course in Advanced Calculus and one in Matrix Algebra are basic prerequisites for the first year's graduate courses in Statistics. If possible, Mathematics deficiencies should be corrected during the summer prior to entering the Graduate School. Students proceeding to the doctorate will need additional courses in Real and Complex Analysis.

Thirty semester hours are required for a Master's degree without thesis (six less if a thesis is written). There are no specified hour requirements for the doctorate. However, the

<sup>\*</sup> Starred courses (21 semester hours) are required of all graduate students in Statistics.