

Changes to the MS and PhD Qualifying Exam Procedures in Graduate Handbook  
Approved by Vote of the Graduate Faculty, UGA Department of Statistics on 5/21/2018

Below are excerpts from the department's Graduate Handbook. Changes appear in red. Other material from the Graduate Handbook regarding qualifying exams that is not reproduced and edited here will remain unchanged.

MS

### Examination Option

You must achieve at least a B average (3.0 GPA) in the First-Year Theory core courses (STAT 6510, 6520). This is not a requirement for attempting the Data Analysis Exam, but a requirement for graduation with the examination option.

The Data Analysis Exam is given twice every year, during January and August. The January exam is given prior to the beginning of Spring semester. The August exam is given prior to the beginning of Fall semester. The January and August exams are equivalent exams; that is, the January exam is not a "make-up" exam and the two exams have a similar level of difficulty. In August, both MS and PhD students attempt the Data Analysis exam concurrently. The same data sets may be assigned to both MS and PhD students, but the questions, time limit, report length, and grading expectations for students differ across the two degree programs. A student should declare himself/herself as a MS or PhD examinee before attempting the exam.

### *Parts, Scope and Time Allowed*

The Data Analysis exam tests students' data analysis skills based on the material covered in the core courses. It is a "take-home" exam with a 2-day time limit for completion. The exam will include 2 or 3 problems, each with a corresponding data set, from which each student must choose 1 problem to solve. The questions are open-ended, requiring the examinee to analyze the data in an appropriate way and draw conclusions about the scientific questions of interest. Each examinee will hand in a written report describing the analysis, why it was chosen for the problem, results, conclusions, etc. Exams will be evaluated on the quality of the analyses and the written report. English language usage is not a grading criterion *per se*, but effective communication is essential.

### *Grading*

Each Data Analysis exam is graded by at least two faculty members. The resulting scores will be averaged to determine the final exam score and a pass/fail grade will then be determined. In August, there may be two groups of faculty members grading the Data Analysis exam, one for MS students and the other for PhD students. Grading will be done blind to the identity of the examinee.

### *Rules for Taking and Re-Taking*

If a student does not pass the exam on the initial attempt, he or she may retake the exam. More than two attempts at the exam will not be allowed.

### *Faculty Responsibilities*

The Data Analysis Exam Committee has responsibility for setting the exam and administering it. Questions for the exam will be solicited from the membership of the committee as well as the broader faculty, who are encouraged, but not required, to contribute. The committee does not simply ask instructors of the core courses to formulate the exam. The committee is responsible for ensuring that the exam is appropriate and reasonably consistent from year to year. They also have the responsibility for grading the exam and making pass/fail recommendations to the entire Graduate Faculty of the Department, who will then vote on the results.

### **PhD Qualifying Examination**

The PhD Qualifying Examination (QEP) is given every year during August, approximately one week prior to the start of Fall semester. This exam is given only once per year.

A student taking the QEP for the first time must attempt both parts of the exam: Theory and Data Analysis. A student who passes the Data Analysis part of the QEP is eligible for an MS degree in Statistics, pending the completion of the appropriate coursework. See the previous chapter for more details.

An incoming PhD student with credentials supporting mastery of the First-Year PhD core course materials may request permission from the Graduate Coordinator to take the PhD Qualifying Examination (QEP) before beginning his/her first year in the PhD program. The Graduate Coordinator will review the student's credentials before granting permission to take the QEP. This attempt will be considered as the "zeroth attempt" and a student must take the Theory and the Data Analysis parts of the QEP. If the student does not pass both parts of the exam, then s/he will have two more chances to take the QEP. If the student fails one or both parts of the QEP on the zeroth attempt, then the student should address areas of weakness by taking relevant first-year core courses before proceeding to take the Second-Year core courses. The Graduate Coordinator will determine these First-Year remedial courses after reviewing the student's performance on the QEP and his/her prior training.

### Parts, Scope and Time Allowed

The QEP tests material covered during the First-Year core of the PhD program. However, the exam does not have separate sections for each course's material, but rather it tests this core material in a comprehensive way that will require students to synthesize material from all four courses. Students must complete all First-Year Core courses before attempting the QEP. A student who is on academic probation cannot take the QEP until s/he removes herself/himself from academic probation.

The exam will have two separate parts:

- Statistical Theory. This is an "in-class" exam which the students have 6 hours to complete. During that time, examinees may refer to books and notes but will not have access to a computer or the Internet. At the discretion of the Examination Committee, the Theory portion may include a take-home component.

- Data Analysis. This is a “take-home” format exam with a 4-day time limit requiring a written report focusing on the analysis of a data set or another applied statistical problem. The exam will include 2 or 3 problems, each of which will typically have a corresponding data set, and each student must choose 1 problem to solve. The questions will be open-ended, requiring the examinee to analyze the data in an appropriate way and draw conclusions about the scientific questions of interest. Each examinee will hand in a written report describing the analysis, why it was chosen for the problem, results, conclusions, etc. Exams will be evaluated on the quality of the analyses and the written report. English language usage is not a grading criterion *per se*, but effective communication is essential.

## Grading

The QEP consists of two parts: a Theory portion and a Data Analysis portion; the grading and pass/fail recommendations for these two parts are handled separately by two distinct faculty committees. Each committee ensures that every exam is graded by at least two faculty members and then makes recommendations to the Graduate Faculty of the Department, who then vote to determine the final results. Students must pass both parts of the exam to continue in the PhD program.

### **Recommendation on the QE Committees**

We recommend that the department form three separate committees (consisting of at least three members each) to administrate the QE:

QEP Theory Exam Committee: August

QEP Data Analysis Exam Committee: August

QEM Data Analysis Exam Committee: January and August

Each Committee might recruit other faculty members for grading purpose. QEM Data Analysis Exam Committee will decide whether to use the same QEP data sets or not in August.

### **Implementation**

The proposal will go in effect to students who enter into our program from Spring 2018 (excluding secondary MS students). The current exam format will be offered until January 2019, and the new exam will be offered in Summer 2019 for the first time.

A secondary student

- who plans to take the QEM for the first time in January 2019, will be guided in advance either to take it in August 2019 or to write a thesis.
- who fails one or both parts of the QEM before January 2019 but does not take the second attempt in January 2019 will be guided to write a thesis.
- who plans to take the QEM for the first time in August 2019 must achieve at least 3.0 in the First-Year Theory courses (STAT 6510 and STAT 6520) to graduate.