Master of Science Degree in Statistics

There are several options for earning the Master of Science (MS) degree in Statistics. There are also several tracks for specialization in the MS degree. Each option features core training, elective courses, and a demonstration of mastery of statistical concepts.

A full-time student who is receiving financial assistance from the University must take a total of at least 12 credit hours. Supported students supplement their course load with STAT 7770 and/or STAT 8910-20 until their research begins. Other full-time students must take a total of at least 9 credit hours.

No credit from a previous degree program or institution may be transferred to use toward your degree program at UGA unless that course did not count toward any previous degree. You may transfer at most 6 credit hours which must be approved by the Graduate Advisor.

Note that the Graduate Advisor is your coursework advisor, unless you are taking the Thesis Option. Even under the Thesis Option, the Graduate Advisor is still your coursework advisor until you choose a research advisor.

Core Requirements

The core of the MS degree consists of training in linear models, mathematical statistics or probability & inference, and consulting. The five courses required to develop this mastery are:

Linear Models:
For students who entered in Spring 2018 or after: STAT 6420 and STAT 6430
For students who entered in Fall 2017 or before: STAT 6420 and STAT 8260

Mathematical Statistics/Probability & Inference:
Choose one sequence:
STAT 6510 and 6520
STAT 6810 and 6820

Consulting:
STAT 8000

Elective Requirements

You may choose either an Examination Option or a Thesis Option, which are described in more detail in the next section on demonstration of mastery. These choices have a direct effect on how many elective courses you may choose:

Thesis Option: Choose 4 electives.

Examination Option: Choose 6 electives.

At most 2 of the elective courses may be approved graduate courses from some discipline other than Statistics. At least 1 elective must be graduate-only.

Elective courses for the MS degree include all 6000- and 8000-level courses *except* STAT 6050, 6070, 6210, 6220, 6230, 6315; any 7000-level course; 8040, 8050, 8200, 8250, 8440; any other 6000- or 8000-level course aimed primarily at students who are not in Statistics; 8910 and 8920; and any 9000-level course.

Demonstration of Mastery

Thesis Option

Under this option, you will choose a research advisor (also called your major professor) and write a thesis under that person's direction. You are expected to choose your research advisor during the first semester of your second year.

The relationship between you and your advisor is one which both of you must agree to. It is, however, not set in stone, and either you or your advisor can terminate this relationship when it is not working out for whatever reason.

Once the thesis is written, your Advisory Committee will read your thesis, and you will present and defend your results to them.

The Graduate Bulletin contains more on the [Graduate School's requirements for a Master's thesis](). Of specific interest to you, and with some modifications for the Department's purposes, are the following items.

Program of Study

You must complete a Program of Study which constitutes a logical whole. The MS degree in Statistics requires a minimum of 33 semester hours. Under the Thesis Option, this means 9 courses plus 3 hours of STAT 7000 Thesis Research and 3 hours of STAT 7300 Thesis Writing. At least 12 credit hours of this course work must be open only to graduate students (exclusive of 7000 and 7300). You must use an asterisk (*) to designate 6000-level courses open only to graduate students. No grade below C will be accepted on the Program of Study. To be eligible for graduation, a student must maintain a 3.0 (B) average on the graduate transcript and a 3.0 (B) average on the Program of Study.

The typed Program of Study must be submitted on the [proper form](), with approval by your major professor, the Department Graduate Coordinator, and the Dean of the Graduate School. This step should be completed by Friday of the second full week of classes of the semester in which degree requirements are completed. Exception: If

degree requirements will be completed during summer term, the program of study will be due by Friday of the first full week of classes in that semester.

Advisory Committee

The Advisory Committee, in consultation with you, is charged with approving your Program of Study, reading and approving your thesis, and administering your final examination.

Before the end of your third semester of residence and upon the recommendation of the Department Graduate Coordinator, the Dean of the Graduate School appoints an Advisory Committee for you. The Master's Advisory Committee must consist of a minimum of three members, at least half of which must be from Statistics. The chair (who is your advisor) and at least one other member must be members of the Graduate Faculty of the University of Georgia.

The third member may be a member of the Graduate Faculty or a person with a terminal degree holding one of the following ranks at the University of Georgia: professor, associate professor, assistant professor, public service assistant, public service associate, senior public service associate, assistant research scientist, associate research scientist, or senior research scientist. A UGA employee who holds one of these ranks or who holds a terminal degree in his/her field may be appointed as a third member upon approval by the Department Graduate Faculty and the Dean of the Graduate School. The third member can also be a non-UGA faculty member with a terminal degree in his/her field of study. No more than one non-UGA committee member may be appointed as a voting member. If there are more than three members on the committee, a majority of Graduate Faculty members must be maintained, and a majority of Statistics faculty must be maintained. Co-major professors count as one Graduate Faculty member. The committee will be recommended to the dean of the Graduate School by the Graduate Coordinator after consultation with the student and faculty members involved.

When nominating a non-UGA committee member, the Graduate Coordinator must submit the nominee's current CV with the appropriate forms, along with a letter addressed to the Dean of the Graduate School explaining why the services of the non-UGA person are requested. The non-affiliated member must attend meetings associated with the appointment.

Thesis

Please refer to the Graduate School's Thesis Guidelines for more details than given here.

You must submit a thesis which shows independent judgment in developing a problem from primary sources. Your thesis shall be written under the direction of your major professor(s), but preparation of the thesis is your responsibility. Your thesis must be approved by the major professor, who will distribute copies to the remaining members of the Advisory Committee and schedule a final examination. The

committee members must have three weeks to read and evaluate the completed thesis. Written assent of two of the three committee members will be required before a thesis will be approved as ready for a final defense.

One complete formatted copy of your thesis must be electronically submitted to the Graduate School no later than four weeks prior to graduation for a format check. All requirements for the thesis must be completed no later than two full weeks prior to graduation.

Final Examination

You must submit to a final examination on the contents of your thesis, and this must be an oral examination. The final examination will be administered by your Advisory Committee, with your major professor serving as chair. All members of the Advisory Committee must be present for the entire examination period. An abstention is not an appropriate vote for the defense of the thesis or the final exam. Thesis approval can have no more than one dissenting vote.

Submitting the Thesis and Final Clearance

The Graduate School must receive the Final Defense Approval form and an electronic submission of the corrected thesis no later than two weeks prior to graduation. All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation.

You must enroll for a minimum of 3 hours of credit during the semester in which you complete your degree requirements unless additional stipulations are required by other units of the university.

Time Limit

All requirements for the MS degree must be completed within six years beginning with the first registration for graduate courses on the Program of Study. An extension of time may be granted only for conditions beyond the control of the individual.

Timeline for Defense

Let T be your defense date, which must be at least 1 week before the final copy of your thesis is due to the Graduate School.

At T – 3 weeks you must give the next-to-final draft of your thesis to your Advisory Committee, allowing them sufficient time to read it.

Items to address will almost surely come up during the reading of the Thesis, the Final Defense and Final Examination, so you will be able to make the requested changes during the week before the final copy must be turned in to the Graduate School.

Graduation

An application for graduation must be filed with the Graduate School via Athena no later than Friday of the second full week (the first full week for summer) of classes in the semester of the anticipated graduation date. The application must be submitted online. The link is available from the Graduate School's web page for forms.

All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation. You must enroll for a minimum of 3 hours of credit the semester in which graduation requirements are completed.

To be eligible for graduation, you must maintain a 3.0 (B) average on the graduate transcript and a 3.0 (B) average on the Program of Study.

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, and 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 programs. A student should declare himself/herself as a MS or PhD examinee before attempting the exam.

You must complete all five core courses (STAT 6510, STAT 6520, STAT 6420, STAT 6430, and STAT 8000) before attempting the QEM.

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.

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.

Program of Study

You must complete a Program of Study which constitutes a logical whole. MS degrees in Statistics under the Examination Option require a minimum of 11 courses. At least 12 credit hours of this course work must be open only to graduate students, and you must use an asterisk (*) to designate 6000-level courses open only to graduate students. No grade below C will be accepted on the Program of Study. To be eligible for graduation, you must maintain a 3.0 (B) average on your graduate transcript and a 3.0 (B) average on your Program of Study.

The typed Program of Study must be submitted on the proper form with approval by the Department Graduate Coordinator and the dean of the Graduate School. This step should be completed by Friday of the second full week of classes of the semester in which degree requirements are completed. Exception: If degree requirements will be completed during summer term, the program of study will be due by Friday of the first full week of classes in that semester.

Advisory Committee

For the Examination Option, the Advisory Committee is just a formality. Three faculty members who satisfy the requirements of the Advisory Committee for the Thesis Option must sign your Program of Study. You may choose these faculty members yourself, or you may allow the Graduate Coordinator's Assistant to choose them.

Time Limit

Under the Examination Option, you should need no more than 4 terms to complete the requirements.

Graduation

An application for graduation must be filed with the Graduate School no later than Friday of the second full week (the first full week for summer) of classes in the semester of the anticipated graduation date. The application must be submitted online. The link is available from the Graduate School's web page for forms.

All requirements for the degree must be completed and reported to the Graduate School no later than one week prior to graduation. You must enroll for a minimum of 3 hours of credit the semester in which graduation requirements are completed.

To be eligible for graduation, you must maintain a 3.0 (B) average on the graduate transcript and a 3.0 (B) average on the Program of Study.

Doctor of Philosophy Degree in Statistics

The Doctor of Philosophy (PhD) program in Statistics is designed to prepare you to work on the frontiers of the discipline of Statistics, whether your career choice leads you into research and teaching or into leadership roles in business, industry and government.

The program is very flexible particularly in the choice of electives and of research topic. You may even choose to do research on the interface of Statistics and some other discipline, such as Computer Science, Genetics, Forestry, Bioinformatics, Economics, etc. The course requirements are designed to ensure that you have sufficient training in Probability, Statistical Inference, Computing, and Applications to prepare you for research on the cutting edge of Statistics.

The MS degree is not a prerequisite for the PhD program, but training equivalent to that specified in the MS program is necessary preparation for the PhD core courses. An incoming PhD student may waive the MS-level core with the appropriate equivalent training from another institution; however, a student who is missing any element of the MS-level core will be required to pass the PhD Qualifying Examination. Proficiency in mathematics, particularly in Real Analysis, and in computing is indispensable for successful completion of the PhD program.

Many items in this section, with some modifications for the Department's purposes, are taken from the [Graduate Bulletin](#).

A full-time student who is receiving financial assistance from the University must take a total of at least 12 credit hours. Supported students supplement their full course load with STAT 6811, STAT 6821, STAT 8261, STAT 7770 and/or STAT 8910-20 until research begins. Other full-time students must take a total of at least 9 credit hours.

No credit from a previous degree program or institution may be transferred to use toward your degree program at UGA if that credit counted toward any previous degree. You may transfer at most 6 credit hours which must be approved by the Graduate Coordinator.

Selection of Research Advisor

If you are earning your PhD degree, then you are expected to choose your research advisor while you are taking your PhD core, as part of the expectations of STAT 8910.

The relationship between you and your advisor is one which both of you must agree to. It is, however, not set in stone, and either you or your advisor can terminate this relationship when it is not working out for whatever reason.

The Graduate Coordinator is your coursework advisor, until you choose a research advisor.