II. MASTER’S DEGREE PROGRAMS

The Department of Statistics and Probability offers two majors that lead to master's degrees: statistics and applied statistics. For the master's degree, a student may emphasize either theoretical or applied material. Your academic advisor coordinates the student's program of study; any exception to the written requirements must be approved by the chairperson of the department.

If a student chooses to write a thesis (Plan A) he/she must choose a faculty member who will direct the thesis. The student also must arrange for a guidance committee of at least three faculty members. The committee may be changed at any time, with the agreement of the department chairperson.

Each of the master's degree programs is described below.

IT IS ALWAYS THE STUDENT’S RESPONSIBILITY TO MAKE SURE THAT ALL UNIVERSITY AND DEPARTMENT REQUIREMENTS ARE SATISFIED. SEE “MASTER’S PROGRAMS” IN THE UNIVERSITY ACADEMIC PROGRAMS CATALOG.

II.1 Master of Science with a Major in Statistics (3875, MSU code)

The goal of the master's degree programs in Statistics is to provide students with a sound foundation in probability, mathematical statistics, and statistical methodology. The degree may be earned under either Plan A (with thesis) or Plan B (without thesis). Almost all students choose Plan B. To distinguish this degree from the degree in Applied Statistics, we refer to it as the "regular MS degree".

In addition to meeting the requirements of the University and of the College of Natural Science, students must meet the requirements specified below.

II.1.1 Admission: A good background in calculus and linear algebra at the senior undergraduate level is required for admission. At least one statistics and probability course at the post-calculus level (such as our STT 441-442 courses) is required.

II.1.2 Requirements for the Regular Master’s Degree:

1. At least 30 credits in courses in the Department of Statistics and Probability, or in a field of application of probability and statistics.

   MSU Courses outside STT which can be used for this degree are:
   CEP 921, CEP 923, CEP 934, CEP 935, CSE 881, EC 820a, EC 821a & b,
   EC 822a & b, EPI 920, GEO 866, MTH 421

2. Complete STT 861, 862, 863, 864. STT 802 is strongly recommended.
3. Electives: At least 9 additional credits in STT courses at the 800 level or higher. The other credits have to be in STT or in related fields. The elective courses in a student’s program must be approved by the student’s academic advisor.

4. Master’s Examination: Students who maintain a 3.25 GPA in the four core courses: STT 861, 862, 863, 864 will not have to take a master’s exam. The exam is given at about the middle of the Fall and Spring semesters. It may be either a written or oral examination, as determined by a department committee. It is strongly recommended that students who do NOT maintain a 3.25 GPA in the three core courses: STT 861, 862, 863, take the written/oral exam.

A student who is choosing to write a thesis (also known as Plan A) will do it under STT 899 with a minimum of 4 credits. The student will also have to pass an oral examination in defense of the thesis in front of a committee consisting of at least 3 MSU regular faculty members out of which at least 2 must be from the Department of Statistic and Probability. The oral exam is in addition to the master’s written/oral exam.

II.2 Master of Science with a Major in Applied Statistics (3871, MSU code)

The goals of the master's degree program in applied statistics is to provide students with a broad understanding of the proper application of statistical methodology and with experience in using computers effectively for statistical analysis. Special emphasis is placed on the concerns that an applied statistician must address in dealing with practical problems.

II.2.1 Admission

A good background in calculus and linear algebra at the senior undergraduate level is required for admission. At least one statistics and probability course at the post-calculus level is required. Any exception should be approved by the graduate director and/or chairperson.

II.2.2 Requirements for the Degree in Applied Statistics

An academic advisor works with the student to plan his/her program of study (any exception to the written program must be approved by the chairperson of the Department).

Requirements are:

1. At least 33 credits in courses in the Department of Statistics and Probability, or in a field of application of probability or statistics.

MSU Courses outside STT which can be used for this degree are:
BE 835, EPI 808, EPI 809, EPI 849, FW 850, MGT 914, MTH 421

2. Complete STT 441-2 or STT 861-2. Also complete STT 801, 802, and 863.
3. Electives: At least 9 additional credits in STT courses at the 800 or 900 level. We strongly recommend: STT 825, 844, 847, 864. The other credits have to be in STT or in a related field. The elective courses in a student’s program must be approved by the student’s academic advisor.

4. Master’s Examination: Students who maintain a 3.25 GPA in the five core courses: STT 861-2 or STT 441-2 and 801, 802, 863 will not have to take a master’s exam. The exam is given at about the middle of the Fall and Spring semesters. It may be either a written or oral examination, as determined by a department committee. It is strongly recommended that the students who do NOT maintain a 3.25 GPA in the four out of five core courses, take the written/oral exam.

II.3 Annual Progress Report for Master’s Students, both Regular and Applied

In May or June of each year the student must submit an "Annual Progress Report for Plan A (or B) Master’s Students." These forms are available from [http://grad.msu.edu/forms/docs/progressreportmastersplana.pdf](http://grad.msu.edu/forms/docs/progressreportmastersplana.pdf). Copies are included in the Appendix of this Handbook. The student’s advisor and the graduate director for the Department are responsible for completion of the second page of the report.

Graduate assistants and international master’s students on F-1 visas are expected to complete at least nine credits during each of Fall and Spring semesters, with the possible exception of the student’s last semester or because of medical exemptions. Other students, especially those holding jobs, may choose to take fewer than nine credits, keeping in mind the university requirement that all work be completed within a seven year period.