

## II.1 Master of Science or Arts 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.

**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. Students without these prerequisite courses will generally have to take them as preparatory courses in their first year, with no credit toward the requirements for the degree. Any exception should be approved by the Graduate Director and/or Chairperson.

### 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.
2. Complete STT 861, 862, 863, 864. STT 801 & 802 are 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 at the graduate level. **The student's academic advisor must approve the elective courses in a student's program.** Some of the currently accepted elective courses for the STT MS degree from other departments are CEP 921, 923, 935; CSE 802, 847, 881; EC 820 a & b, 822 a & b; EPI 920; FW 850( cannot be used by students with credit in STT 843) ; GEO 866; MTH 850. The department updates this data regularly. For inquiries about other courses as possible electives, please contact the Graduate office, C415 Wells Hall, or email [vollmer@msu.edu](mailto:vollmer@msu.edu)
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 Masters of Science or Arts 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. The graduate director and/or chairperson should approve any exception to the above-required background.

### **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.
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. Strongly recommended: STT 825, 844, 847, 864. The other credits have to be in STT or in a related field. Some of the currently accepted elective courses for the applied STT MS degree from other departments are BE 835; CEP 921, 923, 934, 935; CSE 802, 847, 881; EC 820 a & b, 822 a & b; EPI 809; FW 849 ; GEO 866; MTH 850. The department updates this data regularly. For inquiries about other courses as possible electives, please contact the Graduate office, C415 Wells Hall, or email [vollmer@msu.edu](mailto:vollmer@msu.edu)
4. Master's Examination: Students who maintain a 3.25 GPA in the five core courses: STT 861-2 or STT441-2 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 an 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.