# STATISTICS, M.S.

The M.S. degree is designed to provide students with the necessary background for employment as a professional statistician in business, industry, or government and to build a solid foundation for students interested in the Ph.D. program. Considerable flexibility in program emphasis is possible through the selection of elective courses.

The profile of a successful M.S. applicant includes an average GRE verbal in the 65th or higher percentile and an average GRE quantitative ranking in the 80th or higher percentile with an undergraduate average GPA of 3.30 or higher. He/she will also have a strong math background including 3 semester sequence in calculus, linear algebra, and often real analysis.

## **Learning Outcomes**

- The M.S. recipient should have solid knowledge of the standard methods of statistical data analysis, including their implementation in standard statistical packages.
- The M.S. recipient should have solid knowledge of the foundational results of mathematical statistics at the level needed to utilize the standard statistical texts and applied journals.
- The M.S. recipient should have the ability to apply their statistical knowledge to substantial problems that extend beyond their course work.
- The M.S. recipient should have the ability to successfully communicate their statistical knowledge to statisticians and statistical consumers.

### **Degree Requirements (33 Hours)**

Students in the M.S. program may elect either the non-thesis or the thesis option. Both options require a total of 33 semester hours of approved course work built around a core of five three-credit courses. The remaining 18 credit hours are taken in electives.

#### **Core Courses (15 Hours)**

| Course             | Title                      | Credits |
|--------------------|----------------------------|---------|
| STAT 704           | Data Analysis I            | 3       |
| STAT 705           | Data Analysis II           | 3       |
| STAT 712           | Mathematical Statistics I  | 3       |
| STAT 713           | Mathematical Statistics II | 3       |
| STAT 714           | Linear Statistical Models  | 3       |
| Total Credit Hours |                            | 15      |

#### **Thesis Option**

Students who choose the thesis option may substitute 3 semester hours of thesis preparation for an elective.

| Course             | Title              | Credits |
|--------------------|--------------------|---------|
| STAT 799           | Thesis Preparation | 3       |
| Total Credit Hours |                    | 3       |

### **Additional Requirements**

Non-thesis M.S. students are required to obtain a "Masters Pass" or "Ph.D. Pass" on the Ph.D. Qualifying Examination. For thesis-option students, the examination will be the oral presentation and defense of the thesis.

#### Note

At least half of the elective credit hours satisfying the M.S. degree requirements must be at the 700-level or higher. Up to 9 credit hours may be taken outside of the STAT designator or transferred in from another accredited university with the approval of the Graduate Director.

Typically, the M.S. requires two full years (four major semesters) of study.