

University of Nebraska-Lincoln Department of Statistics MS and PhD Requirements

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2016-7 academic year

1 Introduction

The UNL Office of Graduate Studies makes available the Graduate Bulletin at <http://www.unl.edu/gradstudies/bulletin> and a list for “Steps to Degree Completion” at <http://www.unl.edu/gradstudies/current/degrees>. These websites provide *general* details regarding graduate studies at UNL. *Specific* details for the Master of Science (MS) and Doctor of Philosophy (PhD) degree programs from the Department of Statistics are described in the document here.

2 Supervisory Committee

Faculty members of the Department’s Graduate Committee serve as temporary advisors for all new MS and PhD students. MS students can retain this Committee as their permanent Supervisory Committee throughout their studies or form a Committee on their own. The Department strongly encourages MS students to do this latter option to better match their desired goals with faculty who can best provide advice on how to achieve them. These student-chosen committees consist of an Advisor and at least two other faculty. MS students should decide on their Supervisory Committee by the end of their second semester in the program.

PhD students need to find their own Advisor and subsequently form a Supervisory Committee as described in the Graduate Bulletin. The Advisor (or a temporary sponsor) needs to be identified within one month after passing the PhD Qualifying Exam (see Section 4).

3 MS degree program

The Graduate Bulletin describes three options for a MS degree. In summary, “Option I” requires a thesis and at least 30 credit hours, “Option II” requires a minor and at least 36 credit hours, and “Option III” requires at least 36 credit hours without a thesis or minor. The majority of Statistics students pursue Option III. Those who do not pursue this option generally choose Option II.

For all three options, students need to complete the following core courses with a grade of B- or higher: 810, 821, 822, 823, 825, 850, 882, and 883. Students not obtaining the necessary grade level in a core course may need to re-take it. A student’s Supervisory Committee makes this decision.

In addition to coursework, students need to pass a MS Comprehensive Exam. Students may choose from one of three exam types:

- A. Oral explanation of their STAT 825 project
- B. PhD Qualifying Exam (see Section 4)
- C. Oral defense of a thesis

Students choosing exam type A will present a poster of their STAT 825 project at the department’s “STAT Day” celebration held in March/April of each year. An Examining Committee will ask each student questions about their project to evaluate a student’s communication and data analysis skills. This Committee will give a Pass/Incomplete/No Pass grade. Students who receive an Incomplete grade will be given an opportunity to present their project again to the Committee within 4 weeks after STAT Day; this Committee will give a final Pass/No Pass grade.

Students choosing exam type C will present their thesis research to the university in an open forum (e.g., a seminar advertised to the campus). This is followed by an oral defense conducted by the student’s Supervisory Committee. This Committee gives a Pass/No Pass grade.

Table 1 contains a typical timeline for MS students. In addition to the required core courses, this timeline includes STAT 892 (TA Prep) which is a Year 1 required course for all students with a teaching assistantship (TA).

4 PhD degree program

At least 90-credit hours need to be earned for a PhD degree. Most students will use their MS degree credit hours earned (from UNL or another university) to account for approximately 1/3 of these hours.

A typical PhD program will also include STAT 999 for approximately 1/3 of these hours. For the remaining credit hours, students need to complete at least the following core courses with a grade of B- or higher: 950, 980, 982, 983, and 984. Students may substitute 981 for 984 if desired. Students not obtaining the necessary grade level in a core course may need to re-take it. A student's Supervisory Committee makes this decision. Six additional credit hours from 900-level elective courses are required as well, excluding STAT 999.

In addition to coursework, students need to pass three exams: PhD Qualifying Exam, PhD Comprehensive Exam, and Final Oral Exam. The PhD Qualifying Exam is a written exam over the MS core courses that assesses preparedness for the PhD program. Students are allowed to take the exam if they have a GPA of at least 3.5 in their MS and PhD core courses taken, where a grade of B- or higher is needed in each course as well. This test is given in early January and in late May each year. A Pass/No Pass grade for the exam is decided upon by the PhD Qualifying Exam Committee. Students have two attempts to receive a Pass grade; a third attempt can be granted by a majority vote of the Department's faculty if extreme circumstances prevented a student from achieving a Pass.

The PhD Comprehensive Exam involves a dissertation proposal that is presented in an open forum. This is followed by an oral defense conducted by the student's Supervisory Committee. This Committee will give a Pass/No Pass grade. A portion of this exam needs to be in a written format to satisfy the requirements in the Graduate Bulletin. The exact written requirement will be decided upon by the Supervisory Committee. Commonly, this will consist of chapter drafts from a dissertation or handouts for the presentation. In addition to the dissertation proposal, the Supervisory Committee may incorporate other requirements for the exam.

The Final Oral Exam is a dissertation defense. For this exam, students present their dissertation research to the university in an open forum. This is followed by an oral defense conducted by the student's Supervisory Committee. This committee gives a Pass/No Pass grade.

Table 2 contains a typical timeline for those students earning a MS in Statistics at UNL and then continuing on for a PhD. Table 3 contains the same information but tailored for those students coming to UNL with a MS in Statistics (or in a closely related area) from another university. In addition to the required core courses, these timelines include STAT 892 (TA Prep) which is a Year 1 required course for all students with a teaching assistantship (TA).

5 Minimum academic performance

A minimum cumulative GPA of 3.0 is required to graduate with a MS or PhD in Statistics. A student who does not maintain a minimum cumulative GPA of 3.0 for two consecutive semesters is placed on probationary status by the Graduate Committee. Probation can be removed only by raising the GPA to 3.0 or above. Courses may be retaken for a better grade to increase GPA. If a student does not meet the necessary GPA levels after one semester on probation, the Graduate Committee may remove a student from the program.

6 MS and PhD minors

MS students (under Option II) and PhD students may complete a minor in another area of study. Specific requirements vary by area, so students need to contact the corresponding minor department for more information. General details are also provided in the Graduate Bulletin.

Students majoring in an area other than Statistics may obtain a minor in Statistics at the MS or PhD levels. For a MS minor in Statistics, students are required to earn 9 credit hours of 800/900 level courses from the Department (excluding STAT 801). Interested students need to contact the Chair of the Graduate Committee for approval of their course selections. For a PhD minor in Statistics, students are required to earn 16 credit hours of 800/900 level courses from the Department (excluding STAT 801) and to include a faculty member from the Department on their PhD Supervisory Committee. This faculty member may also include other requirements for the minor. For both MS and PhD minors, courses

taught by Department of Statistics faculty are expected to be used when fulfilling the credit hours requirement.

7 Joint PhD degree programs

The Department of Statistics has joint PhD degree programs with Agricultural Economics, Agronomy/Horticulture, Animal Science, Economics, and Natural Resources. Specific details for these degrees are available from the department's website and the Graduate Committee.

Table 1. MS degree typical timeline. See “Steps to Degree Completion” at <http://www.unl.edu/gradstudies/current/degrees> for degree forms and their deadlines.

Year	Fall	Spring
1	STAT 810: Alpha Seminar STAT 821: Statistical Methods I STAT 850: Computing Tools for Statisticians STAT 882: Mathematical Statistics I STAT 892*: TA Prep	STAT 822: Statistical Methods II STAT 883: Mathematical Statistics II Elective Form Supervisory Committee
2	STAT 823: Statistical Methods III STAT 825: Principles of Statistical Consulting and Inter-disciplinary Collaboration Elective	Electives MS Comprehensive Exam

*Required course for TAs only

Table 2. PhD degree typical timeline for those students earning a MS in Statistics at UNL and then continuing on for their PhD. See “Steps to Degree Completion” at <http://www.unl.edu/gradstudies/current/degrees> for degree forms and their deadlines.

Year	Fall	Spring
1	STAT 810: Alpha Seminar STAT 821: Statistical Methods I STAT 850: Computing Tools for Statisticians STAT 882: Mathematical Statistics I STAT 892*: TA Prep	STAT 822: Statistical Methods II STAT 883: Mathematical Statistics II Elective
2	STAT 823: Statistical Methods III STAT 825: Principles of Statistical Consulting and Inter-disciplinary Collaboration Elective	Electives PhD Qualifying Exam in January
3	STAT 950: Computational Statistics I STAT 980: Advanced Probability Theory I Elective Form Supervisory Committee	STAT 984**: Asymptotics and Applications Electives
4	STAT 982: Advanced Inference STAT 999: Doctoral Dissertation Elective	STAT 983: Statistical Learning STAT 999: Doctoral Dissertation Elective PhD Comprehensive Exam
5	STAT 999: Doctoral Dissertation	STAT 999: Doctoral Dissertation Final Oral Exam

*Required course for TAs only

**Students may substitute STAT 981: Advanced Probability Theory II

Table 3. PhD degree typical timeline for those students coming to UNL with a MS in Statistics (or in a closely related area) from another university. See “Steps to Degree Completion” at <http://www.unl.edu/gradstudies/current/degrees> for degree forms and their deadlines.

Year	Fall	Spring
1	800-level courses needed for PhD Qualifying exam STAT 982: Advanced Inference STAT 892*: TA Prep	800-level courses needed for PhD Qualifying exam STAT 983: Statistical Learning PhD Qualifying Exam in May
2	STAT 950: Computational Statistics I STAT 980: Advanced Probability Theory I Elective Form Supervisory Committee	STAT 984**: Asymptotics and Applications STAT 999: Doctoral Dissertation Elective
3	STAT 999: Doctoral Dissertation Electives	STAT 999: Doctoral Dissertation Electives PhD Comprehensive Exam
4	STAT 999: Doctoral Dissertation	STAT 999: Doctoral Dissertation Final Oral Exam

*Required course for TAs only

**Students may substitute STAT 981: Advanced Probability Theory II