

THE GRADUATE MINOR IN STATISTICS

Description and Learning Outcomes - The Minor in Statistics provides students seeking a PhD in another field at WSU with the training needed to perform research in their primary field of study, and enhances their marketability. This graduate minor is designed to lead the student to the following learning outcomes:

- Problem solving in area of research: Students are expected to possess skills to solve statistical problems arising in the area of their specialization.
- Ability to work individually or in groups: Students are expected to develop skills necessary to carry out modeling and analysis at the individual level and in a group environment.
- Communication skills: Students should develop good communication skills so that the interpretation and implications of the results obtained from analysis of a statistical model can be presented in an effective manner.

Application Process – To apply, PhD students must include a Department of Mathematics and Statistics faculty member on their doctoral committee, propose five statistics courses to take, and indicate the program addition on paperwork submitted to the Graduate School. All necessary forms must be signed by both the major and the minor department chairs, and the Minor in Statistics must be added before the student takes their Preliminary Doctoral Exam. There are two possible timelines for the process of adding the minor:

- If the student has not yet submitted a doctoral program of study, they should include the statistics faculty member as part of their advisory committee and incorporate the required statistics courses on that document. On the Program line, please indicate “[Primary Program Name] with Statistics minor”. The department chair of Mathematics & Statistics must also sign the program of study.
- If the student has already submitted the doctoral program of study, they should submit a Committee Change form to add a statistics faculty member to their established doctoral committee and a Program Change form to add the five statistics courses to their program of study. They must also submit an Add a Degree form to add the Minor in Statistics to their doctoral program.

Courses – A graduate minor in statistics requires a total of 15 credit hours, 12 of which must be at the graduate level. A student specializes in one of two areas: theoretical or applied statistics. Emphasis is on breadth, so credit toward the minor will only be given for courses that do not have a significant degree of overlap. The courses that are credited toward the graduate minor in statistics must be approved by the Department of Mathematics and Statistics faculty member who is appointed to the student’s doctoral committee.

Required Courses

Theoretical Statistics

Stat 443 Applied Probability (3 hours)

Stat 556 Introduction to Statistical Theory (3 hours)

Stat 530 Applied Linear Models **OR** Stat 575 Multivariate Analysis

Graduate Electives in Statistics (6 hours)

Applied Statistics

Graduate Electives in Statistics (15 hours at 500-level, which may include Stat 443)

Preliminary and Final Doctoral Examinations – The preliminary examination is intended to cover both major and minor disciplines. The minor portion of the examination may be written or oral or both, and can either be included in the major discipline's exam (standard procedure) or conducted separately. The committee member from the minor department shall vote with the major department/program. There is no separation into major and minor fields during the final examination of the dissertation; all examiners vote on the total examination.