



NORTHERN ILLINOIS UNIVERSITY

College of Liberal Arts and Sciences

Major: Applied Probability and Statistics

Degree: M.S.

Date Revised: 2019

Student Learning Outcomes and proposed Methods for collecting data (from assessment plan)

Student Learning Outcomes		Methods of Assessment
1	Formulation of statistical problems: Students should be able to formulate real-world applications within the proper statistical framework. This includes designing studies and experiments that will provide the proper type of evidence to prove or disprove a hypothesis, along with the proper theoretical statistical framework for providing reliable and logical conclusions based on the observed data from the experiment.	<ul style="list-style-type: none">• Comprehensive Examinations (1-4)• Theses (1-5)
2	Essential skills for statistical analysis: Students should be able to use data obtained from real world experiments to obtain the proper calculations and conclusions based on sound statistical practice and theory.	<ul style="list-style-type: none">• Exit Survey (1-5)• Alumni Survey (1-5)
3	Knowledge of data analysis: Students breadth of knowledge of statistical methodology should be broad enough so that they will be able to address a wide variety of statistical problems often encountered in real-world applications.	<ul style="list-style-type: none">• Skills in Statistical Consulting (1-5)
4	Effective oral and written communication skills: Students should be able to effectively communicate their results to those within the field of statistics, as well as to those who may only have very basic statistical training. Students should be able to effectively address how experiments are designed as well as how the results of a statistical analysis should be interpreted. In particular, students should be able to communicate what types of logical conclusions are permissible based on a statistical analysis.	<ul style="list-style-type: none">• Basic Skills in Statistical Analysis (1-5)• Entry into PhD Programs (2-4)
5	Working knowledge of popular statistical software: Students should be proficient in the most common types of statistical software used in industry and academics.	