

Program Goals and Student Learning Outcomes

B.S. in Statistics

Department of Mathematics and Statistics

University of New Mexico

1 Broad Program Goals

Upon graduation the students of the Statistics concentration will have the following competencies:

- A. Proficiency in probability and statistical theory and methods.
- B. Ability to manipulate and visualize data and to compute standard statistical summaries.
- C. Skill in applying fundamental mathematical techniques.

2 List of Student Learning Outcomes (SLOs) for this Degree

- A.1 Correctly analyze and interpret the results from standard designed experiments, sample surveys, and observational studies, understand the limitations of the procedures and the appropriate scope of conclusions.
- B.1 Implement basic computer science skills needed for statistics, including a) data management tools, and b) use of a statistical software package for standard analyses.
- B.2 Demonstrate competence in data management, summarizing, and plotting using a high-level statistical programming language (such as R, SAS, or Stata).
- C.1 Demonstrate knowledge of basic mathematical skills needed for statistics, including a) probability and statistical theory, b) calculus foundations, c) symbolic and abstract thinking, and d) linear algebra.
- C.2 Solve probability problems, with discrete and continuous univariate random variables, and apply the Central Limit Theorem.