



University of California, Santa Barbara
Program Learning Outcomes

B.S. in Statistical Science or Actuarial Science

Students graduating with a B.S. in Statistical Science or a B.S. in Actuarial Science should be able to:

1. Demonstrate a working knowledge of the core concepts in probability and statistics. In particular,
 - i. Use basic mathematical skills needed for probability and statistics.
 - ii. Employ the basic computer skills used in statistics.
 - iii. Explain the fundamentals of probability theory and its role in the construction of modern statistical theory.
 - iv. Draw on a strong foundation in statistical reasoning and inferential methods.
 - v. Describe, interpret and conduct an exploratory analysis of data by graphical and other means.
 - vi. Use some statistical programming packages.
2. Communicate statistical results effectively. Students will understand that statistical concepts are applied to many fields.
3. Use the most common statistical methods: inferential methods, nonparametric estimation techniques, Bayesian methods, regression, etc.
4. Combine statistical modeling concepts with computational skills to analyze data.

In addition, students graduating with B.S. in Actuarial Science should be able to:

5. Apply probabilistic and statistical concepts in a risk management context.
6. Show awareness of career opportunities in actuarial science.