

Syllabus

Course Description

Graphical representations of data; measures of center and spread; elementary probability; sampling distributions; correlation and regression; statistical inference involving means, proportions, and contingency tables; odds ratio and relative risk.

Course Learning Outcomes

In this course, we will:

1. Develop skills in using statistical software tools (e.g., SPSS and spreadsheets).
2. Determine the correct procedures to use in a given situation.
3. Explain how the Central Limit Theorem applies in inference.
4. Interpret the meaning of confidence intervals in context.
5. Interpret the results of hypothesis tests.
6. Make an informed decision, based on the results of inferential procedures.

Course Schedule

The course has been designed to follow a weekly schedule in which students complete one lesson per week. You are expected to complete all of the learning activities for each lesson in the order they are listed for each lesson. The instructor may shift the order of completion for some assignments, and may even extend the deadlines on a few assignments if circumstances warrant it for the whole class. However, for most assignments and quizzes, you are expected to have them all completed by Friday at 5:00 P.M. each week. At that time, all access will be removed to the quizzes and assignments for that week's lesson. In addition, any assignments or quizzes submitted after that time will receive zero points. That will also be the time that you will be given access to the learning activities for the next week's lesson. This is done so that you will be able to work on that lesson over the weekend if you choose to do so.

On average, it takes approximately 9 hours to complete all the learning activities for each lesson. This includes the time for the online class meeting, which are usually 60 minutes long. So, you will usually have over 8 hours of "homework" that you will need to put into this course each week, including any weeks with holidays. With these online classes, there is no "time off" for those holidays like you might get in face-to-face classes. Consequently, you should make sure to arrange your study schedule so that holiday activities do not keep you from completing learning activities.

Lesson Schedule

Week	Date	Lesson Title
Week 01	Start Date -End Date	Course Introduction

Week 02	Start Date -End Date	Lesson 01: Descriptive Statistics for Quantitative Data
Week 03	Start Date -End Date	Lesson 02: Probability and the Normal Distribution
Week 04	Start Date -End Date	Lesson 03: Central Limit Theorem and Sampling Distributions
Week 05	Start Date -End Date	Lesson 04: Introduction to Hypothesis Testing
Week 06	Start Date -End Date	Lesson 05: Inference for Means, Part I
Week 07	Start Date -End Date	Lesson 06: Inference for Means, Part II
Week 08	Start Date -End Date	Lesson 07: Descriptive Statistics for Bivariate Data
Week 09	Start Date -End Date	Lesson 08: Inferential Statistics for Bivariate Data
Week 10	Start Date -End Date	Lesson 09: Descriptive Statistics for Categorical Data
Week 11	Start Date -End Date	Lesson 10: Inferential Statistics for Categorical Data
Week 12	Start Date -End Date	Lesson 11: Modules
Week 13	Start Date -End Date	Lesson 12: Review
Week 14	Start Date -End Date	Course Conclusion

Required Texts

The following materials are required for this course. ISBN numbers are provided so that you can make sure you have the correct textbook. Because the department has worked out a special deal for you to get these materials at a discounted price, it is highly recommended that you get these books from the BYU-Idaho bookstore.

Statistics: Informed Decisions Using Data
ISBN: 978-0-321-56802-1

SPSS version 17. This is bundled with the textbook that you purchase at the BYU-Idaho bookstore.

Grading

Grades will be based on a percentage of the total number of points students may earn from assignments and quizzes, participation in online class meetings, and completion of any other learning activities assigned by the instructor. Grades will be determined as follows:

- A = 100%-90%
- B = 89%-80%
- C = 79%-70%
- D = 69%-60%
- F = 59-0%

There will be no awarding of plus (+) or minus (-) grades. Students may check their total number of points for all assignments and quizzes at any time using the My Grades link on the course menu.