

FLORIDA STATE UNIVERSITY
Department of Statistics
STA 2023: Fundamental Business Statistics
Spring 2018

Instructor: Jordan Schafer

Office: OSB 209E

E-mail: js17k@my.fsu.edu

Office Hours: TTh 09:30am - 10:30am (drop-in) or by appointment.

Class Meeting Time & Place:

Section	Room	Time	Days
14	Oceanography and Statistics Building (OSB) 110	08:00am - 09:30am	TTh

Prerequisites: None, but we recommend two years of high school algebra.

Credit Hours: 3

Special Note: High school students who earn a “3” or better on the AP Statistics exam will be given credit for STA 2023.

Course Description: The course covers statistical applications in business, involving graphical and numerical descriptions of data, data collection, correlation and simple linear regression, elementary probability, random variables, Binomial and Normal distributions, sampling distributions, and confidence intervals and hypothesis tests for a single sample.

The purpose of this course is to prepare students for further study and job preparation in the field of Business. It will emphasize understanding of data and interpretation of statistical analyses. It will require students to think of data, and report the results of their analyses, in context.

Course Objectives: By the end of the course, students will demonstrate the ability to:

- a. Select and apply appropriate methods (i.e., mathematical, statistical, logical, and/or computational models or principles) to solve real-world problems;
- b. Use a variety of forms to represent problems and their solutions;
The above two competencies will be assessed in the Liberal Studies Quantitative Assessment for STA 2023, which includes a written summary of results.
- c. Use descriptive statistics and graphical methods to summarize data accurately;
- d. Use inferential statistics to make valid judgments based on the data available;
- e. Describe the goals of various statistical methodologies conceptually;
- f. Apply statistical techniques in the context of business processes, everyday life, and further studies in their discipline; and
- g. Develop a healthy skepticism toward statistical studies and their results based on a sensible consideration of the techniques employed.

Course Materials:

- ◇ **Calculator:** TI-84 or equivalent. You may not use your phone as a calculator on exams.
- ◇ **Course Website:** Canvas—accessible through my.fsu.edu or at <https://fsu.instructure.com/>. Please check Canvas regularly for announcements, grades and other course materials.

LIBERAL STUDIES FOR THE 21st CENTURY

Quantitative and Logical Thinking

This course has been approved as meeting the Liberal Studies requirements for Quantitative and Logical Thinking and thus is designed to help you become a **critical analyzer of quantitative and logical claims**. In order to fulfill the State of Floridas College mathematics and computation requirement the student must earn a “C-” or better in the course.

Syllabus Change Policy: Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.

University Attendance Policy: Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Academic Honor Policy: The Florida State University Academic Honor Policy outlines the University’s expectations for the integrity of students’ academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to “...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University.” (Florida State University Academic Honor Policy, found at

<http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy.>)

Americans With Disabilities Act: Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center

874 Traditions Way

108 Student Services Building

Florida State University

Tallahassee, FL 32306-4167

(850) 644-9566 (voice) or (850) 644-8504 (TDD)

sdrc@admin.fsu.edu

<http://www.disabilitycenter.fsu.edu/>

Grading: Your grade in STA 2023 will be determined by the following components:

- ◇ Quizzes (15%)
- ◇ Midterm 1 (25%)
- ◇ Midterm 2 (25%)
- ◇ Final Exam (30%)

Note that these weights only add up to 95%. The missing 5% will be applied towards whichever component of those listed above that produces your highest score. Letter grades will be assigned according to the following table.

Grade	Score	Grade	Score	Grade	Score	Grade	Score	Grade	Score
		B+:	[87, 90)	C+:	[77, 80)	D+:	[67, 70)		
A:	[93, ∞)	B:	[83, 87)	C:	[73, 77)	D:	[63, 67)	F:	[0, 60)
A-:	[90, 93)	B-:	[80, 83)	C-:	[70, 73)	D-:	[60, 63)		

Quizzes and participation: Your active participation in class will help you to learn the material, and it will also produce a much more enjoyable learning environment for everyone.

Participating in class will typically involve contribution to discussions and working together on activities. Questions are strongly encouraged during class.

To both encourage and reward you for regular class preparation and attendance, I will collect and grade some portion of your work, formulated as a quiz, in many class periods. Days when we have a quiz will be unannounced, but typically these will happen during the last 10 minutes of class.

You should expect an average of 1 quiz per week, and each quiz will cover material we have recently covered. The rules for each quiz (individual or group, open- or closed- note, in-class or take-home, based on what we've done that day or from previous days) will vary and will be announced as we go. **Missed quizzes cannot be made up or excused, but you may drop your lowest *three* quiz scores, no questions asked.** If you have three or fewer quiz absences, they will be covered by these drops regardless of the reasons for your absences and regardless of whether you have documentation or not. One example of this would be if you miss two quizzes due to illness and one because you slept in, those are the three that will be dropped. Another example would be if you miss two quizzes due to travel but take all the rest. These two zeros would be dropped in addition your lowest score from among the quizzes you took.

Midterm Exams: We will have two midterm exams, held in class on Thursdays February 15 and March 29. On midterms, you may prepare and use one double-sided 8.5"x11" sheet of notes (handwritten or typed). The only restriction for these note sheets is that they must be your own creation (no creating collages of course handouts, no photocopying other student's sheets, no using sheets prepared by tutoring agencies, etc). Missed midterm exams can only be made up due to university excused absences with documentation. If you anticipate that you will miss one of the midterms, please let me know as soon as possible so we can make other arrangements.

Final Exam: The final exam will take place on **Wednesday, May 2nd from 10am-12pm**. On the final, you may prepare and use two double-sided 8.5"x11" sheets of notes (handwritten or typed). The same restrictions that apply on midterms apply to the note sheets for the final. The room is TBD and will be announced when we get closer to the end of the semester. Note that STA 2023 follows the block exam schedule, not the schedule for normal TTh classes. The final exam will be cumulative, but will focus *heavily* on material we cover after the second midterm.

Getting Help: You are strongly encouraged to attend office hours or tutoring sessions if you have questions about the course material in general. More information about tutoring will be posted to Canvas when it becomes available.

Tentative Pacing Schedule:

Week	Dates	Tuesday	Thursday
1	Jan 9 & 11	Introduction	Types of Data / Graphs
2	Jan 16 & 18	Sampling / Summary Stats	Summary Stats
3	Jan 23 & 25	Summary Stats	Probability
4	Jan 30 & Feb 1	Probability	Random Variables
5	Feb 6 & 8	Random Variables	Binomial
6	Feb 13 & 15	Binomial / Review	Midterm I
7	Feb 20 & 22	Correlation / Scatterplots	Correlation
8	Feb 27 & Mar 1	Simple Linear Regression	Simple Linear Regression
9	Mar 6 & 8	Empirical Rule / Norm. Dist'n	Normal Distribution
	Mar 13 & 15	SPRING BREAK	NO CLASSES
10	Mar 20 & 22	Normal Distribution / CLT	Central Limit Theorem (CLT)
11	Mar 27 & 29	CLT / Review	Midterm II
12	Apr 3 & 5	Confidence Intervals (CIs)	Confidence Intervals
13	Apr 10 & 12	Confidence Intervals	CIs / Hypothesis Testing (HT)
14	Apr 17 & 19	Hypothesis Testing	Hypothesis Testing
15	Apr 24 & 26	Hypothesis Testing	HT / Review

Final Exam: Wednesday May 2nd 10am-12pm

How to Be Successful in This Course:

- ◇ Attend EVERY class meeting. Pay attention, participate, and take notes. Ask questions!
- ◇ Be proactive! Try not to be complacent—material at the start of the course may be review for some of you. If you are in need of help, get it immediately. Attend my office hours or attend tutoring sessions.
- ◇ Expect more than number-crunching. Statistics is about much more than performing calculations. I also expect you to understand the concepts and interpret the results from applying the methods we will learn. Always pay attention to concept and be prepared to *think*.
- ◇ Study together! You will be allowed to work together on some quizzes, so perhaps these groups can form natural study groups.
- ◇ Be organized. Keep your notes, handouts, quizzes and exams as they can be invaluable resources later. Refer to them often.
- ◇ There is no extra credit in the course. Instead, focus your efforts on the points that are for credit.
- ◇ Finally, have fun! The reward for all your time and effort will be a solid foundation in statistics, which will be useful in almost anything you do in life.