



# STA 2023: Fundamental Business Statistics

## Section 0017

Department of Statistics

Florida State University

Spring 2021

### COURSE INFORMATION

**Course Website:** <https://canvas.fsu.edu/>

**Class Time and Location:** The class will be taught remotely (no physical location) and asynchronously (no class timings).

**Instructor:** Sudipto Saha

- E-mail: [ssaha2@fsu.edu](mailto:ssaha2@fsu.edu)
- Office Hours: by appointment only

**Teaching Assistant:** Pengfei Lyu

- E-mail: [plyu@fsu.edu](mailto:plyu@fsu.edu)
- Office Hours: Monday, 9am – 10am (EST), or by appointment
- Office hours joining link: Pengfei's Office Hours (Zoom meeting on Canvas webpage)

### COURSE DESCRIPTION

**Credit Hours:** 3

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

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

**Required Materials:** TI-84 Plus (or equivalent) calculator. Textbook is not a required material for this course.

**Recommended Textbook:** Moore, D. S., McCabe, G. P., Alwan, L. C., & Craig, B. A. (2016). *The Practice of Statistics for Business and Economics* (Fourth ed.). New York, NY: Macmillan W.H.Freeman.

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.

**Lecture Videos:** As the course is asynchronous, no live lectures would be performed; instead, lecture notes and lecture videos will be uploaded. Watching the lecture videos is equivalent to attending class and listening to lectures. We acknowledge that the lecture videos are not short but remember that the class time would have been 50 or 75 mins – not short either. On the bright side, however, you may pause the video at any time and return to it later – you would not have been able to do that with live lectures. Therefore, we fully expect you to watch the lecture videos in their entirety. Pause whenever you need to, but always be sure to return and finish watching the video.

Please note that the recorded lectures are the property of Florida State University and are made available only to the students enrolled in this class. Students are not permitted to share the recorded lectures with any other persons outside of this class. Copyrights of the recorded lectures are reserved by the instructor and Florida State University.

## COURSE OBJECTIVES

This course has been approved to meet FSU's **Liberal Studies Quantitative and Logical Thinking** requirements and is designed to help you become a critical analyst of quantitative and logical claims.

In order to fulfill the State of Florida's College mathematics and computation requirement the student must earn a "C-" or better in the course.

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

1. Select and apply appropriate methods (i.e., mathematical, statistical, logical, and/or computational models or principles) to solve real-world problems.
2. Use a variety of forms to represent problems and their solutions.

*The above two competencies will be assessed in the Liberal Studies Quantitative Assessment (LSQA) for STA 2023, which includes a written summary of results.*

3. Use descriptive statistics and graphical methods to summarize data accurately.
4. Use inferential statistics to make valid judgments based on the data available.
5. Describe the goals of various statistical methodologies conceptually.
6. Apply statistical techniques in the context of business processes, everyday life, and further studies in their discipline.
7. Develop a healthy skepticism toward statistical studies and their results based on a sensible consideration of the techniques employed.

## E-MAIL AND COMMUNICATION

- Please **turn on the course notifications on Canvas** by going to “Account / Notifications /” and checking the “Notify me right away” option for all the items under Course Activities.
- Please **do not reply to "notifications@instructure.com"**. Use our **mentioned e-mail id** or **Canvas inbox** while replying us to any Canvas notifications.
- Always use your [@my.fsu.edu](mailto:@my.fsu.edu) e-mail id to communicate. Sending mail from personal e-mail id may not reach us due to filters. You may expect a response to your e-mail **within 2 working days**.
- Apart from conversation during office hours, we will communicate with you by sending e-mails to your [@my.fsu.edu](mailto:@my.fsu.edu) id and posting announcements on the course website. **Please check your e-mail and the announcements daily**.
- Please send assessment-related enquiries at least 24 hours before the assessment is due to begin.
- Always include your name when you e-mail us. If we need to know this information in order to answer your query and you have not provided it, you may not get a response.

## FIRST DAY ATTENDANCE AND DROP/WITHDRAWAL DEADLINE

- Although the class is remote, first day attendance is still mandatory per university regulations. I expect each of you to submit the “**First Day Attendance**” Quiz on the very first day of your class - January 6<sup>th</sup>. Students who register for this course after January 6<sup>th</sup>, need not to submit “**First Day Attendance**” Quiz.
- Drop and Withdrawal deadlines are given in the University’s academic calendar at <https://registrar.fsu.edu/calendar/>.

## ASSESSMENTS AND GRADING STRUCTURE

Assessments			
Type	Count	Weight	Total Weight
<b>Quiz</b>	6 (drop 1)	15%	75%
<b>LSQA</b>	1	10%	10%
<b>Homework</b>	3	5%	15%
		<b>Total:</b>	100%

1. All the quizzes will be online, through Canvas.
2. All the quizzes will have defined time limit, which will be communicated before each quiz.
3. There will be **6 quizzes** in total. The lowest scored quiz among the **first five quizzes** will be dropped at the end of the semester. The last quiz (Quiz 6) will not be dropped even if someone scores lowest in that one. Before each quiz, the topics covered for that quiz will be communicated.
4. There will be **1 Liberal Studies Quantitative Assessment (LSQA)**, which will cover only one topic. The topic covered will be communicated accordingly.
5. There will be **3 homeworks** in total. The topics covered will be communicated accordingly.

**Instructions:** Final instructions will be given prior to each quiz, but in general you must follow below instructions.

- TI-84 (or equivalent) calculator is allowed. You can also use the TI Emulator (software version).
- All the quizzes are open book, open material.
- Discussion or any kind of collaboration with other students for quizzes is **STRICTLY NOT ALLOWED**.
- You can use scratch papers to solve problems.

Discussion is allowed for homeworks. **Homeworks are required to be submitted individually and not in groups**, but you can discuss your homework with other students of your class. However, you should come up with your own solution. Please avoid plagiarism, it means, you can discuss a problem with your classmate, but your answer should not be exactly same with your classmate. You should have your own words to write an answer.

**Technology-dependent Assessments:** This course is heavily technology dependent. While we will do our best to work with you on technology issues, please be aware that if you submit an assessment but we can find absolutely no record of the fact, then we will not be able to give you credit for it. Please **DO NOT USE SAFARI** when you submit assessments on Canvas, please **USE Chrome or Firefox**.

#### Overall Course Grade:

Grade Distribution	
Letter Grade	Overall Percentage
A	93 – 100
A-	90 – 92
B+	87 – 89
B	83 – 86
B-	80 – 82
C+	77 – 79
C	73 – 76
C-	70 – 72
D+	67 – 69
D	63 – 66
D-	60 – 62
F	0 – 59

Your overall percentage will be calculated according to your assessment scores (reported as percentages) and the weights given to those assessments. Your letter grade will be assigned using the table above by rounding up the overall percentage to the smallest whole number greater than or equal to that (e.g., an overall percentage of 89.01% will be assigned an A- since 90% is the smallest whole number greater than or equal to 89.01%).

No make-ups, no extra credit assignments, no curving grade, and in general, no opportunities for grade improvement will be allowed after the Last Day of Class. So, please submit every assessment on time and do your best throughout the term. **Assessments that are not submitted will receive a score of zero.** These will be replaced with earned scores if make-ups of the same are submitted later.

**Assessment Grade Appeal:** During the term, if you believe that an assessment has been improperly graded, then you must e-mail me and discuss it with me **within 1 calendar week** after your grade for that assessment has been posted on Canvas. If you get an answer wrong in an assessment and believe that you may be right, you are able to send an e-mail to me and explain the question, the correct answer, and your justification. The problem will be reviewed and if you are correct, you will receive points back for that question. If I do not hear from you within 1 calendar week, I will assume the grade is accepted. **Assessment grade appeals will not be allowed after the Last Day of Class.**

**Missing Grade:** Please check your grades on the course website every day to make sure your latest grade has been posted; please do this even if you already know your grade. If a grade is not posted, **alert me immediately via e-mail**. It is important that you alert me via e-mail so that there will be a record of the fact that you reported the matter. If you report a missing grade **within 2 working days** after the assessment took place, I will do my best to locate the missing grade.

**Receiving a grade of “Incomplete”:** A request for a grade of “Incomplete” will

- **NOT be granted** if you have completed the coursework, including the final quiz (Quiz 6).
- **be granted** only if both of the following conditions are satisfied:
  - a) the only assessment that you have yet to submit is the final quiz (Quiz 6), and
  - b) your overall percentage excluding the final quiz (Quiz 6) is a passing grade (70% or above).

## COURSE POLICIES

### Make-up Policy:

Make-ups will not be allowed due to undesired performance on an assessment. Make-ups of any quiz or LSQA are allowed only if you have a **religious holiday** fallen on the assessment days or a **genuine reason** for not submitting that assessment in the timely manner. If you could not be able to submit a quiz or LSQA for some reason, **let me know within the next two working days post the deadline** and I would assign you a make-up only if your reason is genuine and if you can show proper documentation. If you could not submit a quiz or LSQA for any medical reason, then a medical certificate or similar document needs to be sent to me **before the make-up date**. A missed make-up will receive a score of zero.

### Final Exam Rescheduling Policy:

You may not take the final exam before final exams week. Individual students who need to reschedule the final exam for a different time during final exams week will need to:

- 1) talk to me about it first and get my permission to reschedule,
- 2) fill out the “Request to Reschedule Final Examination” form at <https://artsandsciences.fsu.edu/students/undergraduate/forms-requiring-deans-approval/rescheduling-final-examination> and get it approved by the Dean of Arts and Sciences office, and
- 3) let me have the approved form by the last day of classes.

If you experience a documented emergency that prevents you from observing the above deadline, contact me as soon as you are able to, and we’ll take it from there.

### Grade Appeal Policy:

If you are not satisfied with your final course grade, then please e-mail me within **3 calendar weeks** after your final grade has been posted on Canvas and we will discuss.

**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.

**Sexual Misconduct and Title IX Reporting:**

As an instructor, I am obliged to report all instances of sexual misconduct that I become aware of to the University's Title IX Director; I cannot hold such information confidential. If you would like to discuss your situation in confidence, you may contact the Victim Advocate Program (<https://dos.fsu.edu/vap/>), the University Counseling Center (<https://counseling.fsu.edu/>), the Employee Assistance Program (<https://eap.fsu.edu/>), University Health Services (<https://uhs.fsu.edu/>), or pastoral counselors.

**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/Academics/Academic-Honor-Policy>)

**Americans with Disabilities Act:**

Students with disabilities needing academic accommodation should:

- 1) register with and provide documentation to the Office of Accessibility Services; and
- 2) request a letter from the Office of Accessibility Services to be sent to the instructor indicating the need for accommodation and what type; and
- 3) meet (in person, via phone, email, skype, zoom, etc.) with each instructor to whom a letter of accommodation was sent to review approved accommodations.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Office of Accessibility Services 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:

Office of Accessibility Services  
874 Traditions Way  
108 Student Services Building  
Florida State University  
Tallahassee, FL 32306-4167  
(850) 644-9566 (voice)  
(850) 644-8504 (TDD)  
[oas@fsu.edu](mailto:oas@fsu.edu)  
<https://dsst.fsu.edu/oas/>

**TENTATIVE PACING SCHEDULE**

<b>Week</b>	<b>Holiday</b>	<b>Topics Covered</b>	<b>Assessments due</b>
<b>Jan 6 – Jan 8</b>		Prerequisite Math Skills	
<b>Jan 11 – Jan 15</b>		Introduction	
<b>Jan 18 – Jan 22</b>	Martin Luther King Jr. Day on Jan 18	Summary Statistics	Quiz 1 due on <b>Jan 21</b>
<b>Jan 25 – Jan 29</b>		Summary Statistics	
<b>Feb 1 – Feb 5</b>		Probability	Quiz 2 due on <b>Feb 4</b>
<b>Feb 8 – Feb 12</b>		Probability	
<b>Feb 15 – Feb 19</b>		Random Variables	Quiz 3 due on <b>Feb 18</b>
<b>Feb 22 – Feb 26</b>		Simple Linear regression	Homework 1 due on <b>Feb 25</b>
<b>Mar 1 – Mar 5</b>		Simple Linear regression	
<b>Mar 8 – Mar 12</b>		Binomial Distribution	LSQA due on <b>Mar 11</b>
<b>Mar 15 – Mar 19</b>		Normal Distribution	Quiz 4 due on <b>Mar 18</b>
<b>Mar 22 – Mar 26</b>		Central Limit Theorem	Homework 2 due on <b>Mar 25</b>
<b>Mar 29 – Apr 2</b>		One Sample Confidence Interval	Quiz 5 due on <b>Apr 1</b>
<b>Apr 5 – Apr 9</b>	Homecoming on Apr 9	One Sample Hypothesis Test	Homework 3 due on <b>Apr 8</b>
<b>Apr 12 – Apr 16</b>		One Sample Hypothesis Test	
<b>Apr 19 – Apr 23</b>		<b>Last Week - No Lectures</b>	Quiz 6 due on <b>Apr 22</b>