

Spring 2022

Florida State University, Department of Statistics

Main office 214 OSB, phone 850-644-3218.

Course Information

- **Name:** Fundamental Business Statistics
- **Course Code:** STA 2023 Section: 0014
- **Credit-hours:** 3
- **Format:** F2F
- **Class Meeting Days, Times, Room:** Monday, Wednesday, and Friday from 8:00 – 8:50 AM, HCB 207
- **Final Exam Day & Time:** Monday April 25th from 3:00 – 5:00 PM.
- **Prerequisites:** 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 can be given credit for STA 2023.
- **Course website:** <https://canvas.fsu.edu>
- Please turn on the course notifications in Canvas by going to Account/Notifications and selecting the Notify immediately option for all of the items under Course Activities.
- Please check your FSU email and the course announcements every day.
- We will not use Honorlock.

Instructor Information

- **Name:** Ye Eun Bae
- **Email:** yb18c@my.fsu.edu
(You may expect a response from me within two work days in Fall/Spring, or one work day in Summer.)
- **Zoom Office Hours:** Tuesday at 9:00 – 10:00 AM or by appointment.

Grader Information

- **Name:** Chen Zhao
- **Email:** cz20x@my.fsu.edu

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.

Learning Objectives

This course has been approved to meet FSU's Liberal Studies **Quantitative and Logical Thinking** requirements and helps 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 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.

Required Materials

- A personal computer, reliable internet connection, and Chrome or Firefox browser.
- A TI-84 Plus or equivalent calculator. We will teach you how to use a TI-84 series calculator, but we cannot promise to be able to help with any other type of calculator.
- A textbook is not required for this class. The instructor will provide all required course notes and exercises. Please note that the materials provided by the instructor were put together for your individual use only. While you may share these materials with classmates, we ask that you do not share them with third parties who are not enrolled in this class. If you seek help outside of class, you may, of course, allow your helper to see the materials, but please do not allow them to make copies or in any other way take our material. We appreciate your co-operation in protecting our material. Thank you!

Additional Resource

The following free online textbook is an additional resource that you might find useful: Introductory Statistics from OpenStax, Print ISBN 1938168208, Digital ISBN 1947172050, www.openstax.org/details/introductory-statistics.

Lecture videos and/or other recordings provided by the instructor

Please note that the recorded lectures and/or other recordings are the property of Florida State University and are being made available only to the students enrolled in this class. Students are not permitted to share the

recorded lectures or other recordings with any person or entity outside of this class. Copyrights of the recorded lectures and other recordings are reserved by the instructor and Florida State University.

Note on Technology-dependent Assessments

This course is technology-dependent. While we will do our best to work with you on technology issues, please be aware that if you take 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 take assessments on Canvas, please use Chrome or Firefox.

Assessments and Grades

All the assessments are online on Canvas.

All the assessments are open book, which means you are permitted to use your own notes, calculator, and any material (e.g., notes, slides, emails, videos) I provide.

Assessments that are not submitted will receive a grade of zero. When a make-up is submitted, the zero will be replaced with the earned grade.

Assessment Type	Count	Weight
Quiz	5 (drop 1)	56%
Homework	4	20%
LSQA	1	10%
Final Exam	1	14%
Bonus	4	0–5%
Total	17	100–105%

1. There will be five Quizzes. **The lowest scored quiz among the first four quizzes will be dropped** at the end of the semester. The score of the last quiz (Quiz 5) will not be dropped even if you score lowest in the last quiz. Each quiz will cover exactly one topic. Collaboration and internet sources (except the course Canvas) will not be permitted. You must upload a scanned copy or photo of your answer to the assignment submission page on the Assignment tab within the course Canvas.
2. There will be four Homework assignments. Each homework will cover one topic and generally consist of multiple-choice questions. Collaboration and internet sources will be permitted and unlimited times will be allowed for each homework.
3. There will be one Liberal Studies Quantitative Assessment (LSQA), a university-mandated assessment covering one topic. Collaboration and internet sources (except the course Canvas) will not be permitted. LSQA cannot be dropped but two timed attempts are allowed.
4. There will be one Final Exam that covers Hypothesis Tests only. **The Final Exam is scheduled for April 25th (Mon) at 3:00 – 5:00pm (location TBA).** Collaboration and internet sources (except the course Canvas) will not be permitted. The format will be the same as the Quizzes, that is, you will be submitting a copy of your exam through Canvas.
5. There will be four Bonus assignments from which you will be able to get extra credit. Collaboration and internet sources will be permitted and unlimited times will be allowed. No late submissions or make-ups will be allowed for these assignments.

If you believe that a correct answer was marked as incorrect, please email your TA about it within 24 hours after the grade has been made available to you. If no issues are raised during that 24-hour time frame, then it will be assumed that the grade is accepted and subsequent requests for a grade review may not be granted.

Grade Distribution (Letter & Overall Course Grades)							
	B+	[87, 90)	C+	[77, 80)	D+	[67, 70)	
A	[93, 105]	B	[83, 87)	C	[73, 77)	D	[63, 67)
A-	[90, 93)	B-	[80, 83)	C-	[70, 73)	D-	[60, 63)
					F	[0, 60)	

Tentative Pacing Schedule

#	Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	Jan 5 – Jan 7			First-Day Attendance		Introduction
2	Jan 10 – Jan 14	Introduction		Introduction	Bonus 1 Prereq Math	Summary Statistics
3	Jan 17 – Jan 21	MLK Jr Day. No Class.		Summary Statistics	Homework 1 Intro	Summary Statistics
4	Jan 24 – Jan 28	Probability		Quiz 1 Sum Stat		Probability
5	Jan 31 – Feb 4	Probability		Random Variables		Random Variables
6	Feb 7 – Feb 11	Random Variables	Homework 2 Prob	Normal Distribution		Normal Distribution
7	Feb 14 – Feb 18	Normal Distribution		Quiz 2 RV	Bonus 2 RV	Central Limit Theorem
8	Feb 21 – Feb 25	Central Limit Theorem	Homework 3 Normal Dist	Central Limit Theorem		Simple Linear Reg Basics
9	Feb 28 – Mar 4	Simple Linear Reg Basics		Quiz 3 CLT	Bonus 3 CLT	Simple Linear Reg Basics
10	Mar 7 – Mar 11	Binomial Distribution		Binomial Distribution		LSQA
11	Mar 14 – Mar 18	Spring Break. No Classes.				
12	Mar 21 – Mar 25	Binomial Distribution		Confidence Intervals		Confidence Intervals
13	Mar 28 – Apr 1	Confidence Intervals		Quiz 4 Binomial Dist		Confidence Intervals
14	Mar 4 – Apr 8	Hypothesis Tests		Hypothesis Tests		Hypothesis Tests
15	Apr 11 – Apr 15	Hypothesis Tests		Quiz 5 CI	Bonus 4 CI	Simple Linear Reg Inference
16	Apr 18 – Apr 22	Simple Linear Reg Inference	Homework 4 HT	Simple Linear Reg Inference		Final Review

Make-Up Policy

No make-ups will be allowed after the Last Day of Class.

Make-ups are for being unable to submit an assessment during its availability. Make-ups will not be given due to undesired performance on an assessment.

If you are unable to submit an assessment (except for any Bonus assignment) during its availability, then please email me immediately. You will be allowed three make-ups without providing documentation, but you must provide documentation for all further make-up opportunities.

If you are unable to submit the Final Exam during its availability, then you must email me immediately. After the final exam is over, the class will be absolutely and completely over. In particular, this means that all assessments will be completely over and absolutely no extensions will be granted.

If you do not complete a make-up according to the above guidelines, then the missed assessment will receive a grade of zero.

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/>), Counseling & Psychological Services (<https://counseling.fsu.edu/>), the Employee Assistance Program (<https://eap.fsu.edu/>), University Health Services (<https://uhs.fsu.edu/>), or pastoral counselors.

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 should talk to me about it first to get my approval and then fill out and follow the instructions on the "Request to Reschedule a Final Examination" form at https://artsandsciences.fsu.edu/sites/g/files/upcbnu321/files/2022-01/Request_to_Reschedule_01032022.pdf. The form needs to be submitted to the College of Arts and Sciences before 5pm on 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.

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.

Drop and Withdrawal deadlines are given in the University's academic calendar at <https://registrar.fsu.edu/calendar/>.

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>)

Academic Success

Your academic success is a top priority for Florida State University. University resources to help you succeed include tutoring centers, computer labs, counseling and health services, and services for designated groups, such as veterans and students with disabilities. The following information is not exhaustive, so please check with your advisor or the Department of Student Support and Transitions to learn more.

Americans with Disabilities Act

Florida State University (FSU) values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. FSU is committed to providing reasonable accommodations for all persons with disabilities in a manner that is consistent with academic standards of the course while empowering the student to meet integral requirements of the course.

To receive academic accommodations, a student:

- (1) must register with and provide documentation to the Office of Accessibility Services (OAS);
- (2) must provide a letter from OAS to the instructor indicating the need for accommodation and what type; and,
- (3) should communicate with the instructor, as needed, to discuss recommended accommodations. A request for a meeting may be initiated by the student or the instructor.

Please note that instructors are not allowed to provide classroom accommodations 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
<https://dsst.fsu.edu/oas>

Academic accommodations will be provided as soon as possible after verification is received. Academic accommodations are not retroactive, so they will not apply to lectures/lessons and assessments that took place before verification was received.

Confidential Campus Resources

Various centers and programs are available to assist students with navigating stressors that might impact academic success. These include the following:

Victim Advocate Program
University Center A, Rm. 4100
(850) 644-7161
Available 24/7/365
Office Hours: M-F 8-5
<https://dsst.fsu.edu/vap>

Counseling and Psychological Services
Askew Student Life Center, 2nd floor
942 Learning Way
(850) 644-8255
<https://counseling.fsu.edu/>

University Health Services
Health and Wellness
Center
(850) 644-6230
<https://uhs.fsu.edu/>

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.

Public Health Protocols

In our classroom, I will expect everyone to wear a proper, well-fitting mask. As our President has informed the university community, FSU expects everyone on campus to use face-coverings. In regions where virus rates are high, the CDC recommends that even vaccinated individuals wear masks in public indoor spaces, like classrooms, especially where social distancing is not possible. Florida infection and hospitalization rates are greater now than they were at the height of the 2020 surge due to the Delta variant, a more infectious and easily transmissible version of the COVID-19 virus. The best way to protect against serious illness is to be fully vaccinated, but not everyone among us can be. Because the Delta variant can infect even vaccinated individuals and can be spread by them to others, it poses a special threat to members of the community with underlying health conditions and children at home who are too young for vaccination.

For these reasons, FSU expects each member of the community to comply with the public health protocols our President set forth on August 9, 2021, including (1) wearing masks in public indoor spaces, (2) getting fully vaccinated, (3) being tested for the virus if you have symptoms, and (4) staying home and away from others if you are sick. Please remember that you should NOT attend class in person if you have tested positive for COVID-19 or are quarantining after exposure. Finally, please bear in mind that the COVID-19 situation is fast-moving, and that university guidance on the issue may change at any time.

Classes Subject to HB233 Recording

In this class, consistent with state law and university policy, students are permitted to make recordings of class lectures for personal use only. As noted, sharing, posting, or publishing classroom recordings may subject you to honor code violations and legal penalties associated with theft of intellectual property and violations of other state law. Moreover, students and educators have expressed concern that recording classroom activities may negatively impact the learning experience for others, especially in classes that involve questions, discussion, or participation. To protect a learning environment in which everyone feels free to experiment with ideas, we ask you refrain from recording in ways that could make others feel reluctant to ask questions, explore new ideas, or otherwise participate in class. Students must monitor their recording so that they do not include participation by other students without permission. Students with disabilities will continue to have appropriate accommodations for recordings as established by the Office of Accessibility Services.