

DEPARTMENT OF STATISTICS

STA 2023 FUNDAMENTAL BUSINESS STATISTICS

3 credit hours



QUANTITATIVE AND LOGICAL THINKING

Instructor: Ms. Radha Bose

Email: bose@stat.fsu.edu

Office Location: Rm 210C OSB

Office Hours: Every week, I will announce

my office hours for the next week. If you cannot make my announced hours, I will

try to meet you at a different time, please

email me to set up an appointment.

Classes meet

Aug 27th to Dec 7th

MON & WED at 12:20am-1:10pm in HCB 0101

FRI recitations: see below

Final Exam

TUE Dec 11th at 12:30—2:30pm

location to be announced

Course website (Canvas): https://fsu.instructure.com/.

The following documents, located in the Syllabus Documents module on our course website, are part of this syllabus, please be sure to read them too: Make-up Policies, Tentative Pacing Schedule, Expectations.

FRIDAY RECITATIONS

SECTION	START	END	ROOM
STA 2023/0009	8:00 AM	8:50 AM	HCB 0213
STA 2023/0010	9:05 AM	9:55 AM	HCB 0214
STA 2023/0002	9:05 AM	9:55 AM	HCB 0212
STA 2023/0005	10:10 AM	11:00 AM	HCB 0213
STA 2023/0003	10:10 AM	11:00 AM	MCH 0222
STA 2023/0012	11:15 AM	12:05 PM	HCB 0208
STA 2023/0004	11:15 AM	12:05 PM	HCB 0213
STA 2023/0006	1:25 PM	2:15 PM	HCB 0208
STA 2023/0011	2:30 PM	3:20 PM	HCB 0208
STA 2023/0007	2:30 PM	3:20 PM	HCB 0314
STA 2023/0008	3:35 PM	4:25 PM	HCB 0207
STA 2023/0013	3:35 PM	4:25 PM	HCB 0309

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.

- ~ The syllabus is intended to be an agreement between you (student) and us (instructor & TAs).
- ~ The presence of your name on your section roster after drop/add ends indicates that you have read and understood <u>all</u> of the information in the documents posted in the Syllabus Documents module on our course website, you have had your questions about it answered, and you accept and will abide by our policies.
- \sim Please understand that we deal with hundreds of students each term, and in the interests of fairness, we will not do for one student what we cannot do for all students who are likely to request the same.
- ~ Bear in mind that the opportunities presented in this class are made equally available to all students in the class and it is up to each individual to make the best of them.

LIBERAL STUDIES FOR THE 21st CENTURY:

Quantitative and Logical Thinking

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.

COURSE OBJECTIVES

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 STA2023, 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.

COURSE DESCRIPTION:

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.

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.

REQUIRED MATERIALS

A textbook is not required for this class. However, you will need to read each set of <u>completely</u> <u>filled in</u> class notes carefully after we cover them in lecture and before the quiz/LSQA that follows. We will fill in the class notes during lectures.

Class notes: You will need to print out class notes from our course website and bring them to class on a regular basis, so please budget some money for printing. The current estimate of your printing costs for the entire term is \$80.00 (about 400 pages @ 20 cents/page).

Writing materials: Notepaper and sharpened pencils.

Calculator: TI-84 Plus or equivalent.

ATTENDANCE, ABSENCE AND DROP/WITHDRAWAL

- ~ We fully expect to see you at every class meeting. First-day attendance will be taken electronically via the course website but we still expect to see you in class on the first day.
- ~ Drop and Withdrawal deadlines are given in the University's academic calendar at https://registrar.fsu.edu/registration_guide/fall/academic_calendar/.
- ~ If you miss class, we expect you to keep up-to-date with the lessons, activities and announcements by reading the Class Log on our course website, coming to office hours to get any missed notes, and managing any make-ups appropriately (see the Make-up Policies document).
- ~ If you miss lecture, you may get the notes from your recitation TA or Radha during our office hours. We will let you copy down notes two times only, so do not make a habit of missing class. We will not re-teach entire lessons, but after you have studied the material that you copied down and attempted the relevant exercises, we will help you with specific questions you may have.

- ~ If you miss a Friday recitation, see the Make-up Policies <u>and</u> email your recitation TA immediately <u>and</u> go to her/his office hours ASAP (do not wait for a response to your email, just go to the office hours ASAP).
- ~ If you miss the final exam, email Radha immediately 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.

EMAIL & COMMUNICATION

- ~ please check the Class Log on our course website every day to keep yourself informed about what happens in class
- ~ please check your <a>@my.fsu.edu email every day for emails from us
- ~ please check the announcements on our course website every day
- ~ please always do the above three before you email us
- ~ if you email us with an enquiry that was already addressed in the Class Log, in a class email, in a course announcement or in one of our syllabus documents, you may not get a response
- ~ if you email us, please send from your <a>@my.fsu.edu account
- ~ always **include your name and your recitation TA's name** when you email Radha, 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
- ~ send assessment-related questions at least 24 hours before the assessment is due to begin
- \sim be aware that email sent from outside the FSU domain may not get through to us, so if you send an email and you don't get a response within two working days, please try to meet us in person before class or after class or during office hours
- ~ in general, if you email us and you don't get a response within two working days, and if you are still attending classes and are not confined off-campus, please talk to us in person before class or after class or during office hours

ASSESSMENT AND GRADING

WE WILL ALLOW ABSOLUTELY NO MAKE-UPS, NO EXTRA CREDIT ASSIGNMENTS, AND IN GENERAL, NO OPPORTUNITIES FOR GRADE IMPROVEMENT, AFTER THE LAST DAY OF CLASS, SO PLEASE DO YOUR BEST DURING THE TERM.

We reserve the right to impose a penalty on your assessment grade if you violate any of the guidelines below.

Guidelines		Liberal Studies				
	Activities (10%)	Quantitative	Quizzes	Final Exam		
		Assessment (LSQA)	(50%)	(30%)		
		(10%)				
	You will be asked to sign the roster at every activity, the LSQA, every quiz					
Signing in	and the final exam. Please make sure you sign the roster before you leave					
	the classroom every time!					
Type of work	Group	Individual				
		45 mins: please com	2 hours			
Time allowed	45 mins	5 mins early, we will				
Time anowed		giving out papers 5 r				
		before the period sta				
Communication	is permitted and	is not normitted				
in class	encouraged	is not permitted				
Communication						
with persons	is not advised	is not permitted				
outside of the	is not auviseu	is not permitted				
classroom						

During the LSQA, the quizzes and the final exam, if we believe that you or persons sitting near to you are engaging in academic dishonesty or have previously engaged in academic dishonesty, we will ask you to move to a different seat. This will be a subjective judgment on our part. In such situations you should move to the indicated seat as quickly and as quietly as possible in order to keep distraction to a minimum during testing.

Number of times		
Number of times		
you may take the	ONE	
assessment		
		calculator, writing materials, notesheet(s)* and a
		watch to keep track of time because you may not
	the filled-in class notes	look at your phone
Materials that	and worked exercises,	You MUST bring your own calculator — sharing of
you need to bring	scratch paper, calculator,	calculators is not permitted. You may not use
	writing materials	someone else's calculator during the LSQA, the
		quizzes or the final exam — not even after they
		have turned in their paper.

- * you may use ONE $8\frac{1}{2}$ "x11" self-planned self-handwritten back-and-front original sheet of notes during the LSQA and each quiz
- * you may use TWO 8½"x11" self-planned self-handwritten back-and-front original sheets of notes during the final exam

Each sheet must be labeled with your name and the assessment for which it is used, for example, "Jane Doe Quiz 3". The sheet(s) will be collected with your question paper.

Please do not bring typed up sheets, photocopies of any sort, electronically copy-pasted collages or hard-paper cut-and-pasted collages. Please do not bring cheat sheets provided by a tutor or tutoring agency, or any other person or organization.

Materials that are		course materials such as class notes, extra					
		exercises, activity papers, etc; cell phones and					
		other remote communication devices; extra note					
	nothing	sheets					
not permitted		You may not use a phone for any purpose					
		whatsoever, not even as a calculator. Your phone					
		must be stored out of view and I	oe silent for the				
		entire period.					
	For <u>each activity</u> you will						
	earn one of the three						
	grades below.						
	Absent — 0%						
	Present — 50%		Graded question				
	Present and Participating	Graded question by question.	by question.				
	- 100%	Graded papers will not be	Graded papers				
Earned grade	Coming to class more	returned to you. If you wish to	will not be				
Larried grade	than 15 mins late, or	see your paper, please visit	returned to you.				
	leaving class more than	your recitation TA's office	If you wish to				
	15 mins early without	hours.	see your paper,				
	completing the assigned		contact Radha.				
	work, counts as lack of						
	participation, so you will						
	receive 50% if you do						
76	so.						

If you are present for an activity but fail to sign in your attendance, you will get a zero grade. Since we deal with large numbers of students, it will be difficult for us to recall if you were present or not, so please do not ask us to give you credit for an activity if you failed to sign in.

Please note that possession of an activity paper will not serve as proof that you were present because we freely give out the activity papers and we do not keep track of them.

		The LSQA, all of the quizzes and the final exam				
		will include a few question types that were <u>not</u>				
	Questions that require	previously presented in the class notes or				
	you to perform an	exercises, but these question types will cover				
	activity, or work through	material that was definitely previously presented.				
Types of question	exercises, which will aid	This means that you should aim to learn the				
Types of question	your understanding of	concepts and not just learn how to answer				
	statistical concepts.	particular types of questions. The LSQA questions				
	Activities may be	and quiz questions may be cumulative, so you will				
	cumulative in nature.	need to be up-to-date with all of the material				
		covered up to that point. The final exam will be				
		cumulative.				
		For each question, follow the instructions provided				
	Follow the instructions	and, unless otherwise stated,				
	provided with the	~ show detailed work to receive credit;				
	activity. Discuss the	~ write your answers in the context of the "story"				
How to answer	material with your group	wherever applicable;				
the questions	members and other	~ algebra, computation, logic, correct application				
the questions	classmates. Ask your	of appropriate statistical formulas and methods,				
	recitation TA for	and answers given in context will be graded, not				
	clarifications or help if	just final numerical answers.				
	necessary.	You may not ask your recitation TA, or anyone				
		else inside or outside of the classroom, for help.				

During the LSQA and the quizzes, you will be given a paper only if your name is on the section roster, and you will be asked to sign the roster. This means that you MUST attend the section in which you are enrolled. If you attend a different section then you will not be given a paper.

Test Question Security & Academic Honesty

The following pledge and affirmations will be printed on the LSQA, every quiz and the final exam (wording may vary slightly). We regret to say that if you do not sign the pledge and affirmations, we will not grade your paper and your grade will be zero. Please bear in mind that academic dishonesty and question disclosures reduce the worth of the academic qualification that you are working toward.

I pledge that I will never disclose the questions herein to anyone, and I will not discuss them with anyone other than my course instructor or my recitation TA. I understand that if I break this pledge at any time, the grade that I earn on this paper will be reduced to zero and my overall numerical course grade will be calculated, or re-calculated, accordingly, and my course letter grade will be demoted if necessary.

I affirm that I did not receive help with this assessment and I affirm that I did not help anyone with this assessment.

Missing Grades

- ~ be sure to attend the recitation section in which you are enrolled to avoid missing grade issues
- ~ please do not attend a recitation led by a different TA than the one assigned to your section
- ~ check your grade on the course website **every week** 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 your recitation TA immediately via email**, it is important that you alert us via email so that there will be a record of the fact that you reported the matter
- \sim if you report a missing grade within two weeks after the assessment took place, we will do our best to locate your missing grade
- \sim if you report a missing grade more than two weeks after the assessment took place, we will not be able to help you and the missing grade will have to remain as a zero grade

Overall Course Grade

We do not do grade calculations on the course website at all, we only use the grade center to store and display individual assessment grades. Please ignore the grade totals or averages that you may see there. All grades will be recorded as percentages, and these percentages (not points) will be used in your overall course grade calculation as follows:

- (i) calculate the average of your Activity percentages, this is your Activity Average,
- (ii) calculate the average of your Quiz percentages (omit the lowest one), this is your Quiz Average,
- (iii) overall numerical course grade = 0.1*Activity Average + 0.1*LSQA percentage +
- 0.5*max(Quiz Average, Final Exam) + 0.3*min(Quiz Average, Final Exam),
- (iv) round your overall numerical course grade UP to the next higher whole number before matching it to a letter grade from the table below.

Letter	Num.grade	Letter	Num.grade	Latter	Num.grade	Letter	Num.grade	Letter	Num.
Letter	Nulli.grade	Letter	Num.grade	Letter	Num.grade	Letter	Num.grade	Letter	grade
FSU does	s not award A+	B+	87 – 89	C+	77 – 79	D+	67 – 69		
Α	≥93	В	83 - 86	С	73 – 76	D	63 – 66	F	≤59
A-	90 - 92	B-	80 - 82	C-	70 – 72	D-	60 - 62		

Grading Appeals

During the course of the term, if you believe that a paper was improperly graded by your recitation TA, go to their office hours to see your paper and discuss it with them. If the matter is not resolved after that discussion, then email me (Radha) and ask me to re-grade your paper – I must receive your email within two weeks after the grades for that paper are posted on the course website.

Receiving a grade of "Incomplete"

A request for a grade of "Incomplete" will

- ~ NOT be granted if you have completed all of the coursework, including the final exam.
- ~ be granted only if <u>both</u> of the following conditions are satisfied:
 - (1) you have completed the LSQA and all of the guizzes and activities, and
 - (2) your overall average excluding the final exam is a passing grade.

AUDITING

If you are auditing this course you will need to show me your approved audit registration form. After I see your form, I will add you to the course website.

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 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.

In order to meet your needs in this class, your TA and I will both need to know that you require special accommodations, so please email your accommodations letter to both your TA and me in the same email ASAP. It is not appropriate for me to disclose your disability-related information to your TA, and it is not appropriate for your TA to disclose your disability-related information to me, that is why we need you to send the letter to both of us in the same email. That way each of us will know that the other has been informed that you are a student with a disability and then we can coordinate our actions to serve you better.

Special accommodations will be provided as soon as possible after I get your letter. We cannot provide special accommodations in the classroom, so you must take your quizzes, the LSQA and the final exam at the SDRC testing center. You must take them on the same day as the other students take them in class but the time of day is up to you, and you will not come to class on those days. If you need to take one of these assessments on a different day, please talk to me (Radha) about it first. Please do not schedule one of these assessments for a different day without first clearing it with me (Radha). If you choose to take one of these assessments in the classroom, or in our office hours, or at some other location, then you will not receive special accommodations and you must comply with the rules that the other students follow.

You may choose to complete the activities in class or at the SDRC testing center. Please note that some activities are designed to be group efforts, so you may not fully grasp the learning objectives if you do them on your own. In my experience, however, students with disabilities have always elected to complete the activities in class and have not had significant problems doing so. Classmates are generally co-operative and willing help.

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) (850) 644-8504 (TDD)