



FLORIDA STATE UNIVERSITY DEPARTMENT OF STATISTICS SPRING-2021

STA-2122: INTRODUCTION TO APPLIED STATISTICS SECTION: 0018 & 0033

COURSE INFORMATION

Instructor: Avizit Chandra Adhikary

Email: aa19bi@my.fsu.edu

Office hours: Thursday 3-4 pm.

Course duration: January 6th to April 16th, 2021.

Class time: MoWeFr 10:40AM – 11:30AM.

Final exam: April 19th-23rd, 2021.

Course drop date without getting any grade: February 19th, 2021.

Teaching method: remotely, asynchronously.

COURSE DESCRIPTION

Prerequisite: A grade of “C-” or better in MAC 1105 College Algebra (or equivalent).

Credit Hours: 3

Special Note: Subsequent credit for STA 5126 is not permitted. No credit given for STA 2122 if a grade of “C-” or better is earned in STA 2171, STA 3032 or QMB 3200.

The course covers Normal distributions, sampling variation, confidence intervals, hypothesis testing, one-way and two-way analysis of variance, correlation, simple and multiple regression, contingency tables and chi-square tests, non-parametric statistics.

The purpose of this course is to prepare students for further study and job preparation in the field of Natural Sciences. 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

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 for STA-2122, 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) Select the appropriate statistical tools to analyze a particular problem.

(6) Describe the goals of various statistical methodologies conceptually.

(7) Develop a healthy skepticism toward statistical studies and their results based on a sensible consideration of the techniques employed.

COURSE MATERIALS

1. Calculator: TI-84 Plus or equivalent calculator.

2. Course Website: Canvas is accessible at <https://my.fsu.edu> or at <https://fsu.instructure.com/>. Please check Canvas regularly for class notes, announcements, grades and other course materials.

3. Textbook: Not required. Simply follow the provided/filled-in Class Notes.

4. Study Material: Lecture notes will be provided on-line. Any additional (or changes to) lecture notes/slides will be added on the Canvas website so it is important that you check daily for updates via announcements.

CLASSROOM POLICIES

Lecture videos will be uploaded on Canvas for each class following the pacing schedule (given at the end of the syllabus). Watching the lecture videos is equivalent to attending the classes and listening to the lectures. We acknowledge that the lecture videos are not short but remember that 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.

EMAIL & COMMUNICATION

Please turn on the course notifications in Canvas by going to Account / Notifications / and checking the Notify me right away option for all of the items under Course Activities. You may expect a response to your email within two working days. If you email me, **please send from your @my.fsu.edu account**. Be aware that email sent from outside the FSU domain may not get through to us. Please, remember to mention your **Section Number**. If you email with an enquiry that was already addressed in the class log, in a class email, in a course announcement or in one of the syllabus documents, you may not get a response.

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/Academics/Academic-Honor-Policy>)

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 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**. We will use **No Honorlock** for any assessments in this course.

GRADING POLICY

Late submission will not be accepted unless prior confirmation has been given by the instructor. Unless due to a documented emergency situation, **each late submission (exams, quizzes) will be penalized 20% of the total marks in that submission each day**. 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. Assessments that are not taken, and assignments that are not submitted, will receive a grade of zero. When a missed assessment/assignment is made up, the zero will be replaced with the earned grade.

Your overall course grade will consist of the following:

5% + 3% + 2% for the top 3 out of 5 Online Quizzes (total 10%),
16% each for top 5 out of 6 Online Timed Tests (total 80%),
10% LSQA (Liberal Studies Quantitative Assessment).

All the exams/quizzes will be open book. Collaboration is permitted only for the quizzes, but not for the Tests. You may need a calculator to solve the problems. **Usually, each online quiz/test will be published on Friday at 2pm and due by next Tuesday at 2pm, unless any exception announcement is made.** This means, 4-day timeline from the publishing date-time and at most 2 attempts will be given for submission of each quiz/test. Highest mark of the two attempts will be retained.

GRADE DISTRIBUTION

A: 93 or above, 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: 59 or below

Round your overall course grade UP to the next higher whole number before matching it to a letter grade. **Please, don't pay any attention to the final grades shown in the Canvas as they are not calculated according to our grading policy.**

GRADING APPEAL POLICY

If you get an answer wrong on a submission and believe that you may be right, you can **email me about it with your justification within one week** from date when the grade of that submission is published to the class. Although you will be notified when the grades are posted, it's the student's responsibility to keep an eye for grades on the CANVAS to get notified as soon as possible. **No grades will be adjusted after April 16th, 2020.**

GRADE APPEAL POLICY

If you think that, the assigned letter grade is not correct, you can apply for grade re-check after the final grade is published by following the procedures set by the university.

MAKE-UP POLICY

- Regarding missed exams/LSQA: You must contact the instructor **within TWO days** after the exam deadline, submit the proper documentation for your absence within **ONE week** of it and make up the assessment on the rescheduled timeline.
- If you suspect that you will miss an assessment due to a religious holiday, you must submit a self-written-and-signed letter to the instructor about it no later than **ONE week BEFORE** the holiday informing that you will be absent due to the religious holiday. You must also contact the instructor within **TWO days** after the missed assessment to reschedule it for a make-up. Documentation for absence is not required in this case.
- You are not allowed to retake any exam.
- If you report a missing grade more than **FIVE working days** after the grades are posted, we will not be able to help you and the missing grade will have to remain as a zero grade.

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, (i) talk to me

about it first and get my permission to reschedule, (ii) 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 (iii) 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.

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) bring a letter to the instructor indicating the need for accommodation and what type.

This can be accomplished by logging in to the AIM system and electing to receive academic accommodations in this class so that an email notification will be sent to the instructor. 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)

sdrc@admin.fsu.edu

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

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>

University Counseling Center

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/>

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/>), or University Health Services (<https://uhs.fsu.edu/>).

TENTATIVE PACING SCHEDULE

<i>Week</i>	<i>Materials to be covered</i>	<i>Friday 2 pm - Tuesday 2 pm</i>
1	Syllabus Overview, Introduction	
2	Summary Statistics	QUIZ 1
3	Summary Statistics	TEST 1
4	Normal Distributions	QUIZ 2
5	Central Limit Theorem	TEST 2
6	One-sample Confidence Intervals	QUIZ 3
7	One-sample Hypothesis Tests	LSQA (10%)
8	One-sample Hypothesis Tests, One-way Anova	QUIZ 4
9	One-way Anova, Two-way Anova	TEST 3
10	SLR Basics, SLR Inference	QUIZ 5
11	SLR Inference, Multiple Regression	TEST 4
12	Chi-Square Tests	
13	Nonparametric Tests	BONUS TEST 5*
14	Discussion Week/Additonal Topic	
15	Discussion Week/Additonal Topic	
16	TEST 6	
SPRING-2021 TENTATIVE PACING SCHEDULE for STA 2122-0018&0033. This schedule is only tentative, please check the Class Log on our Canvas course website every day for actual class progress. *Topic for BONUS TEST 5 will be announced later.		