

STA1013: Statistics Through Example

Section 0007/0010

Department of Statistics
Florida State University
Spring 2021

Course Information

Instructor: Hanwen Hu

- Email: hh19j@my.fsu.edu
- Office Hour: By appointment via email only. (We will do the scheduled appointment through the Zoom link on Canvas. Same below.)

Mentor: Shaokang Ren

- Email: sr17k@my.fsu.edu
- Office Hour: By appointment via email only.

Class Times and Location

This class will be taught remotely and asynchronously. Class videos will be posted on Canvas by 10 a.m. EST every Monday and Wednesday. The class provided each day is around 60 minutes. You will need access to a computer and a stable internet connection.

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 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.

Copyright Statement

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.

Email and 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.
- We will communicate with you by sending emails to your @my.fsu.edu account and posting announcements on the course website. **Please check your FSU email and the Canvas announcements every day.**
- When you email either me or the mentor, **please send from your @my.fsu.edu address.** You may expect a response to your email within two work days.

Academic Resources

The Office of Faculty Development and Advancement (FDA) has provided some useful academic resources on <https://fda.fsu.edu/academic-resources>.

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/>

Course Description

Prerequisites: None.

Credit Hours: 3.

Required materials

- A personal computer with reliable internet connection, and with Chrome or Firefox browser installed.
- TI-84 (or equivalent) calculator. (We will help you to learn 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. Instead, you will need to watch lecture videos and study the slides used in the videos.

Recommended materials

Lecture slides and relevant course materials will be posted on Canvas. Although we do not have a textbook for this class, you may turn to the following recommendation as a reference book:

Statistical Reasoning for Everyday Life (5th Edition 2018), by Bennett Briggs Triola.

This course provides students with a background in applied statistical reasoning. Fundamental topics are covered including graphical and numerical description of data, understanding randomness, central tendency, correlation versus causation, line of best fit, estimation of proportions, and statistical testing.

Statistical thinking, relevant ideas, themes, and concepts are emphasized over mathematical calculation. In this class students learn many of the elementary principles that underlie collecting data, organizing it, summarizing it, and drawing conclusions from it.

Learning 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:

- 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 1013, which includes a written summary of results.

- 3 Apply sound concepts of sample selection and experimental design in producing data.
- 4 Use statistical thinking in the context of work processes, academic endeavors, and everyday life.
- 5 Describe how inferential statistical methods are used to make valid judgments based on the data.

- 6 Evaluate the validity of statistical results with skepticism based on sensible considerations.

Assessments & grading

- All assessments should be completed on Canvas. Please use Firefox or Chrome browser to avoid technical errors, e.g. not able to see pictures in questions.

- All assessments will be "open-book", which means that the following resources may be used: class slides, personal notes (i.e. notes that you take while preparing/studying for quizzes), recommended textbooks.

Type	Count	Weight	Total Weight
Practices	13-3=10	3%	30%
Quizzes	6-1=5	12%	60%
LSQA	1	10%	10%
Bonus	1	5%	5%

- 1 There will be thirteen (13) practices, which occur every week and cover the lecture materials introduced in that week. The lowest three (3) grades will be automatically dropped.
 - Practices will be open from 10 a.m. EST of Wednesday to the upcoming Sunday midnight.
 - Unlimited attempts are provided, and 60 minutes are provided for each attempt. Students are allowed to collaborate.
- 2 There will be six (6) quizzes, which occur every two weeks and cover the materials occurring since the last assessment. The lowest one (1) grade will be automatically dropped.
 - Quizzes will be open from 10 a.m. EST of Thursday to the upcoming Sunday midnight. The final quiz will be arranged in the final week instead.
 - Two (2) attempts are provided, and 60 minutes are provided for each attempt. Students are **NOT** allowed to collaborate.
 - Resources that may not be used during quizzes: any and all people (including classmates etc.), the internet.
- 3 There will be one (1) Liberal Studies Quantitative Assessment (LSQA), which will cover the topics of Normal distribution and Central Limit Theorem. Tentatively, it will be held on the 9th week in this semester. Its settings are same as a normal quiz.
- 4 There will be one (1) bonus quiz, which will cover most lecture materials in the semester. This will be held in the final week, but as an optional quiz. Its settings are same as a normal quiz.

Grading appeals. If you believe a correct answer was counted as incorrect in your practice/quiz/LSQA, you must discuss it with me via email within one (1) calendar week after your grade has been posted. If I do not hear from you within this period, I will assume the grade is accepted. **Especially, no grading appeals will be allowed after the Last Day of Classes.**

Make-ups. If you are absent for a practice/quiz/LSQA, please email me immediately. The email must be no later than **Tuesday of the following week** to make up a missed assessment, unless you have a documented reason for being unable to do so. You will be allowed **three (3) make-ups** without providing documentation, but you must provide documentation for all other absences. The make-up period will usually be 24 hours after I reply you with the make-up permission. Assessments that are not submitted will receive a grade of zero (0). When a makeup is submitted, the zero (0) will be replaced with the earned grade.

No make-ups will be allowed after the Last Day of Classes. So if you are absent for the final quiz, you must email me immediately or there won't be any chance to make up. Note that you cannot make up the bonus quiz.

Gradings. Your overall numerical grade will be calculated according to the Assessment table above. **It will not be curved.** It will be then rounded up (i.e. the smallest integer greater than or equal to the grade) and used to determine your letter grade by:

Letter	Numerical	Letter	Numerical
A	≥ 93	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	< 60

(e.g., an overall course grade of 89.04 will be assigned an A-, since 90 is the smallest integer greater than or equal to 89.04.)

Tentative Schedule

Week	Date	Day 1 (Monday)	Day 2 (Wednesday)	Practice	Quiz
1	Jan 4-10	x	Introduction	x	x
2	Jan 11-17	Speak. of Statistics	Speak. of Statistics	P1	x
3	Jan 18-24	Speak. of Statistics	Measurement in Statistics	P2	Q1
4	Jan 25-31	Visual Displays of Data		P3	x
5	Feb 1-7	Summary Statistics of Data		P4	Q2
6	Feb 8-14	Probability & Random Variables		P5	x
7	Feb 15-21	Probability & Random Variables		P6	Q3
8	Feb 22-28	Normal Distribution & CLT		P7	x
9	Mar 1-7	Normal Distribution & CLT		P8	LSQA
10	Mar 8-14	One-sample Confidence Intervals		P9	x
11	Mar 15-21	O-S Conf. Intervals	O-S Hypo. Testing	P10	Q4
12	Mar 22-28	One-sample Hypothesis Testing		P11	x
13	Mar 29-Apr 4	Correlation & Causality		P12	Q5
14	Apr 5-11	Simple Linear Regression		P13	x
15	Apr 12-18	Simple Linear Regression		x	x
16	Apr 19-25	Q6, Bonus Quiz			

Course Policies

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.

Note on 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.**

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.

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>)

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.

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/>