

STA 1013: Statistics Through Example

Fall 2021 – Section 14

Course Information

Instructor: Wanjing Wang

Email: ww18b@my.fsu.edu

Office Hours: Thursday, 3:30 pm - 5:30 pm or by appointment

Office Location: on Zoom

Class Times and Locations: MW, 15:05 - 16:20, TUL B001 (or FLEX)

This is a FLEX class, you can choose to attend class in person or via zoom, The zoom link can be found in Canvas

Required Course Resources

Textbook: A textbook is not required for this class. The instructor will provide all required course notes and exercises.

Computer: A personal computer, reliable internet connection, and Chrome or Firefox browser.

Calculator: A scientific calculator is required. The ideal model is TI-84 Plus CE from Texas Instrument. In class, I will teach only this model on how to do the computation. You will need to learn by yourself if you decide to use other type of calculators. Cell phones are not permitted as calculators during exams and quizzes.

A free 90-day trial version can be downloaded from

[https://urldefense.com/v3/https://education.ti.com/en/software/details/en/FFEA90EE7F9B4C24A6EC427622C77D09/sda-ti-smartview-ti-84-plus;!!Epnw_ITfSMW4!5APmku9mVC8mX8Gajcr2bvQ1GEgFhLRzvLNRuHHVL2Mzmaca3xA7AgCBMVs25subdGI\\$](https://urldefense.com/v3/https://education.ti.com/en/software/details/en/FFEA90EE7F9B4C24A6EC427622C77D09/sda-ti-smartview-ti-84-plus;!!Epnw_ITfSMW4!5APmku9mVC8mX8Gajcr2bvQ1GEgFhLRzvLNRuHHVL2Mzmaca3xA7AgCBMVs25subdGI$).

It would be possible to extend the 90 days to cover the entire semester if you uninstall the Emulator when you're studying a chapter that doesn't require special statistical functions, and reinstall it when you need special statistical functions. FYI, if you have the emulator uninstalled for at least 20 days between Aug 23rd and Dec 10th inclusive, then it should last you the entire semester, including finals week.

Course Description

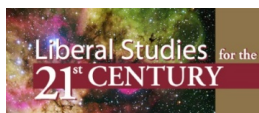
Prerequisite: None

Credit Hours: 3

This course provides students with a background in applied statistical reasoning.

Tentative Topics:

1. Terminology/Initial Ideas: statistical study process, population, sample, parameter, statistic, categorical, quantitative
2. Sampling: simple random sampling, systematic sampling, stratified sampling, cluster sampling, convenience sampling
3. Graphs: histograms (sketch and interpret), stemplots (sketch and interpret), bar charts (sketch and interpret), pie charts (interpret)



4. Summary Statistics: mode, mean, quartiles, range, standard deviation, five-number summary, boxplot
5. Empirical Rule
6. Normal Distributions: forward problems (finding area under the curve/percentage of data)
7. Central Limit Theorem: sampling distributions of \bar{x} , features of the distributions and implications when using a larger/smaller sample to estimate μ , forward problems (finding probabilities)
8. Probability: random processes, four rules, probability models, addition rule for mutually exclusive events
9. Random Variables: definition, expected value
10. One-sample mean: obtain and interpret z-intervals, carry out and interpret results of z-test, interpret P-value
11. One-proportion: z-intervals and z-tests
12. Correlation: what the sign and absolute value of r imply, correlation does not imply cause-and-effect
13. Simple Linear Regression: read scatterplots, given equation make prediction, interpret R-squared

Schedule

week	date	topic
1	8/23 – 8/29	1, 2, 3
2	8/30 - 9/5	3, 4
3	9/6 - 9/12	Quiz 1, 5, no class on Monday
4	9/13 - 9/19	6
5	9/20 - 9/26	7
6	9/27 - 10/3	Quiz 2, 8
7	10/4 - 10/10	8, LSQA on weekend
8	10/11 - 10/17	9
9	10/18 - 10/24	Quiz 3, 10
10	10/25 - 10/31	10
11	11/1 - 11/7	11
12	11/8 - 11/14	Quiz 4,
13	11/15 - 11/21	12
14	11/22 - 11/28	13, Only have class on Monday
15	11/29 - 12/5	13
16	12/6 - 12/12	Final review

Grades

Quizzes (50%): There will be 4 quizzes during the semester, which add up to 50% of the final grade. The quizzes are equally weighted (i.e., 12.5% for each of the 4 quizzes). Each quiz may contain some extra credits for you to work on. Quizzes that are not submitted will receive a grade of zero. When a makeup is submitted, the zero will be replaced with the earned grade.

LSQA (10%): Note that, STA 1013 has been certified as one of FSU's Liberal Studies Quantitative and Logical Thinking courses. As a requirement, administer the appropriate Liberal Studies



Quantitative Assessment (LSQA) during the semester. This will be a common assessment (not final exam). Time length will be about 50 mins (one lecture time).

Final Exam (30%): The final exam will be a zoom exam. Everyone should open the camera to show your face.

Attendance (10%): **Attendance will be checked randomly.**

Grades will be posted on Canvas.

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.

Final exam is 3:00 p.m. – 5:00 p.m. on Thursday, Dec 9, 2021.

The grading scale for the course is as follows:

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

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.

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 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/sites/g/files/upcbnu321/files/2020-09/Request_to_Reschedule_revised.pdf

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.



Policy Information:

Make-up Policy:

- If you have missed a quiz and want to make up, you need to contact me within **TWO** calendar days after the quiz day or inform me in advance, and provide university approved documentation, which includes: documented illness, deaths in the family and other documented crises as approved by the Dean of Students office, active military or jury duty, and official University activities. Please note that the FSU University Health Services 'Verification of Visit' does not constitute a documented absence. Unexcused absence from a quiz will result in a zero. The make-up quiz will be given within one week of the original quiz date. I will discuss the detail time and location with you after receiving the documentation.
- If you have missed an attendance check and do not want it to be count as one missing class, same as the policy for the quizzes, you can contact me within **TWO** calendar days after the day that you missed the class or inform me in advance, and provide university approved documentation.
- If you are going to miss the final exam, you must notify me and Radha Bose (rbose@fsu.edu) in advance at the same time.
- If you are going to miss a quiz or an attendance check due to religious holiday, please send me an email informing me the details of the holiday with your name in the end via your FSU email account within **TWO** calendar days after the day you missed or in advance. No other documentation will be required. Otherwise no make-up quiz or attendance will be given.
- All the make ups should be done before the final exam week.

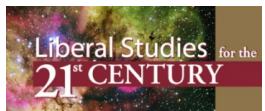
Classroom Conduct: You are expected to act professionally in the classroom. You should arrive on time and prepared for the class. If you do arrive late or have to leave early, please do so in a manner that does not disturb the others. No food is allowed and please stay seated during the lecture. If you have any emergency, please raise your hand to let me know first. Discussion is allowed but please keep your voice level low so that others will not be disturbed.

Email and Canvas: I will send announcements to your FSU email account (@my.fsu.edu) or on Canvas. You are responsible for all information sent via email or put on Canvas website, so check your FSU email account and Canvas website frequently (at least one time a day). When emailing me regarding this class, please put STA1013-0014 in the subject line, sign your full name in the end and use your FSU email account. **Emails not from FSU email account will not be replied.** I will respond to all email within two business days, which do not include weekends, holidays or weekdays after 7 pm. Asking me early, do not expect me to save you in the last minute!

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/academic-resources/academic-integrity-and-grievances/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. 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 Student Disability Resource Center 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:

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)

sdrc@admin.fsu.edu

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

Syllabus Change Policy

Except for changes that substantially affect implementation of the grading statement, this syllabus is a guide for the course and is subject to change with advance notice.

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,

Room 4100, (850) 644-7161,

Available 24/7/365,

Office Hours: M-F 8-5

<https://dsst.fsu.edu/vap>

Counseling & Psychological Services

Askew Student Life Center,

2ndFloor,



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Department of Statistics
Florida State University

942 Learning Way
(850) 644-8255
<https://counseling.fsu.edu/>
University Health Services
Health and Wellness Center
(850) 644-6230
<https://uhs.fsu.edu/>

Free Tutoring from FSU

On-campus tutoring and writing assistance is available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of on-campus tutoring options –see <http://ace.fsu.edu/tutoring> or contacttutor@fsu.edu. High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

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.

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.