



Department of Statistics

STA 2122/0003 Introduction to Applied Statistics

2019 Summer / 3 credit hours

Instructor: Yi Luo

Email: yl16f@my.fsu.edu

Office Hours: every Monday 14:00--15:00 / by appointment OSB 209H

Class Meet: MTWRF 12:30pm--1:45pm OSB 0110

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.

Course Description

Prerequisite: A grade of "C-" or better in MAC1105 College Algebra(or equivalent).

Special Note: No credit given for STA2122 if a grade of "C-" or better is earned in STA2171, STA3032 or QMB3200.

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.

Required Materials

A textbook is not required for this class. However, you will need to read each set of *completely filled in* class notes carefully after we cover them in lecture and before the next assessment. 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.

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 Objective

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 STA2122, 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.

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 @my.fsu.edu email every day for emails from me
- ~ please check the announcements on our course website every day
- ~ **please always do the above three before you email me**
- ~ if you email me 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 me, please send from your @my.fsu.edu account
- ~ always *include your name when you email Yi*, if I 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
- ~ be aware that email sent from outside the FSU domain may not get through to me, so if you send an email and you don't get a response within two working days, please try to meet me in person before class or after class or during office hours
- ~ in general, if you email me 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 me in person before class or after class or during office hours.

Pacing Schedule (tentatively schedule in brief)

Week	Course Coverage (# of topics)	quizzes & activities
1 st week, May 13 – May 19	Simple random sample (1), histograms (1), segmented bar charts (1), summary statistics (2), empirical rule (1)	Friday in-class quiz, in-class exercises
2 nd week, May 20 – May 26	Normal distributions (2), central limit theorem (2)	Friday in-class quiz, in-class exercises

3rd week, May 27 – June 2 No class on May 27, Memorial Day	One sample mean (5)	Friday in-class quiz, in-class exercises
4th week, June 3 – June 9	Type I & II errors (1), one-way ANOVA (1), two-way ANOVA (1), correlation (1), some of simple linear regression	Friday in-class quiz, in-class exercises
5th week, June 10 – June 16	Simple linear regression (4)	Friday in-class quiz, in-class exercises
6th week, June 17 – June 21	Multiple linear regression (1), chi-square test of independence (1), Nonparametric tests (1)	Friday in-class quiz, in-class exercises

Assessment and Grading

I will allow absolutely 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 will receive a zero grade. Your overall course grade will consist of the following:

- | | |
|---|--------------------------------|
| 10% Attendance | 60% In-class Quizzes |
| 10% LSQA (Liberal Studies Quantitative Assessment) | 20% In-class Activities |

Attendance (10%)

For the first three absences, you do not need to contact me, and you do not need to submit documentations. However, if you have documentation then save it in case you incur further absences.

For our class, you will need to sign on the roster for each class and test; please make sure you do so.

LSQA (10%)

Review contents & practice before the test; it will not be dropped. This test maybe cumulative.

In-class Quizzes (60%)

On every Friday, they will not be dropped. These quizzes are not cumulative. Each quiz is 50 mins.

In-class Activities (20%)

After each class, I would upload the activity file on the course website with an all-blank-filled version.

I will collect Monday's activity sheets. If you miss one of Monday's classes, the only way of make-up is to hand in another activity sheets of that week right after the class which your activity sheets are associated with.

Class Policy

~The location of in-class quizzes is OSB 110.

Any change of the day, time, location of tests and LSQA will be announced via your online account and @my.fsu.edu email before. On any of these test days, please come to class 5 mins early, I will begin giving out papers 5 mins before the period starts.

~The questions in our tests will include a few question types that were not previously presented in the class notes or exercises, but these question types will cover material that was definitely previously presented. This means that you should aim to learn the concepts and not just learn how to answer particular types of questions.

~For the in-class quizzes, you may use ONE 8½"x11" self-planned self-handwritten back-and-front original sheet of notes.

~Each sheet of notes must be labeled with your name and the assessment for which it is used, for example, "Yi Luo 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.

~You may use a TI-84 Plus or equivalent calculator. You must bring your own calculator because sharing of calculators is not permitted. You may not use someone else's calculator, not even after they have turned in their paper.

~You may not use a phone for any purpose whatsoever, not even as a calculator. Your phone must be stored out of view and be silent for the entire period.

~You will need to sign the roster every time; please make sure you do so. Only one sitting is allowed. Re-taking a paper that you took before is not permitted.

~Graded papers are not returned, but you may view your papers in my office hours.

~If I believe that you or persons sitting near to you are engaging in academic dishonesty or have previously engaged in academic dishonesty, I may 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.

~I reserve the right to impose a penalty on your grade if you violate any of the guidelines above.

Test Question Security & Academic Honesty

The following pledge and affirmations will be printed on most assessments (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.

Receiving a Grade of “Incomplete”

A request for a grade of “Incomplete” will

~ NOT be granted if you have completed all the coursework, including the final exam.

~ be granted only if both of the following conditions are satisfied:

(1) you have completed the LSQA and all the quizzes, and

(2) your overall average is a passing grade.

Overall Course Grade

Please ignore the grade totals or averages that you may see on the course website; they are not correct. In this class, we only store and display individual assessment grades on the course website, we do not do grade calculations 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) In-class Quiz Average = average of all the In-class Quiz percentages (omitting the lowest one);

(ii) Overall numerical course grade = $0.1 * \text{Attendance} + 0.1 * \text{LSQA percentage} + 0.6 * \text{In-class Quiz Average} + 0.2 * \text{In-class activities}$;

(iii) Letter grade selected from the table below after rounding the above numerical grade UP to the next higher whole number.

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

Missing Grades

~ be sure to attend in-class quizzes and hand in your paper in that class properly

~ 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 Yi immediately via email**, it is important that you alert me via email so that there will be a record of the fact that you reported the matter

~ if you report a missing grade within two weeks after the assessment took place, I will do my best to locate your missing grade

~ if you report a missing grade more than two weeks after the assessment took place, I will not be able to help you and the missing grade will have to remain as a zero grade

Grading Appeals

During the course of the term, if you believe that a paper was improperly graded, go to office hours to see your paper and discuss it with me.

Attendance, Absence and Drop/Withdrawal

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

~ You are expected to attend every class meeting. First-day attendance will be taken electronically via the course website, but you are still expected to be in class on the first day.

~ Lack of future planning, or mismanagement of time and other resources, are not acceptable reasons for being absent.

~ 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 most of these opportunities.

~ Since I will deal with many students each term, in the interests of fairness, I will not do for one student what I cannot do for all students who are likely to request the same.

~ Documentation for absences will not be accepted after the Last Day of Class.

~if you miss in-class quiz or the LSQA:

First three absences (3 quizzes, or 2 quizzes + LSQA)

These first three absences will be covered by the two make-ups and the drop regardless of the reasons for your absences and regardless of whether you have documentation or not. **Please save these three allowances for emergencies and do not use them for reasons that can be avoided.** I do not promise any further help with low quiz grades.

3 quizzes scenario: you will make up two quizzes of your choice on the two make-up days; the other quiz will be dropped.

2 quizzes + LSQA scenario: you will make up the LSQA and one quiz of your choice; the other quiz will be dropped. The LSQA cannot be dropped.

Fourth and subsequent absences

At the time of the fourth absence, inform Yi within one week. You will be allowed two makeups and one drop as mentioned above. **You will need to provide documentation for the first three absences in addition to** the fourth and any subsequent absences before I allow you any additional make-ups beyond the two mentioned above. Additional make-ups will be done in my office hours. It will be your responsibility to make time in your schedule to visit my office hours. **All make-ups must be completed by the Last Day of Class.**

More details:

Every following Tuesday and Monday are make-up days for the last Friday's in-class quiz, one who missed last Friday's in-class quiz should at least choose one of two to do the make-up. The make-up days are fixed, it is your responsibility to be present on those days if you missed the LSQA and/or any in-class quizzes.

Assessments that are not taken, or not make up, will receive a zero grade.

Absolutely no make-ups are allowed after the last day of class;

Absolutely no documentation will be accepted after the last day of class. Please submit any documentation by the end of deadlines mentioned in the table below.

Absences type	activities	Quizzes & LSQA -- first 3 absences	Quizzes & LSQA -- 4th & subsequent absences
Contact me	Within one week	No need	Within one week
Submit Documentation	Within one week	No need – but keep your documentation in case I need it late.	Within one week. At the time of the 4 th absence, you will need to submit documentation for ALL absences up to and including the 4 th , within one week of the 4 th absence.
Make up the missed assessment	Within one week. You 'll hand in another activity sheets of that week right after the class which your activity sheets are associated with.	You'll make up two of them on the make-up days and drop one.	Three of them will be covered by the two make-ups and one will be dropped.

***if you miss one class, please read the notes yourself or come to my office hour.**

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; 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/>).

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, I will need to know that you require special accommodations, so **please email your accommodations letter to me in the same email** ASAP. It is not appropriate for me to disclose your disability-related information to anybody else, and it is not appropriate for some other people to disclose your disability-related information to me, that is why I need you to send the letter to me in the same email. That way I will know that you are a student with a disability and then I can coordinate my actions to serve you better.

Special accommodations will be provided as soon as possible after I get your letter. **We cannot provide testing accommodations in the classroom**, so you must take your in-class 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 (Yi) about it first. Please do not schedule any of these assessments for a different day without first clearing it with me (Yi). If you choose to take any 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.

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/>