

STA 2122: Introduction to Applied Statistics

Section Number: 0030 and 0037

Meeting Place and Time: HCB 0314 or HCB 0212, 4:50 – 5:40 MWF (optional)

Teacher: Michael Wilson

Email: mwilson5@fsu.edu

Office: Zoom

Office hours: Zoom (4:50 – 5:40 MWF, or by appointment)

Final Exam:

Due by Apr 23, 11:59pm

Required Materials:

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

TI-84+ or equivalent calculator

No textbook required (Khan Academy is a good resource)

Grade Structure:

Participation: 5%

Homework: 20%

Quizzes: 55%

LSQA: 10%

Final 10%

Dates	Topics	Due:
Jan 6 – Jan 22	Introduction / Summary Statistics	2 HW/ 2 Quiz
Jan 25 – Jan 29	Normal Distributions	1 HW/ 1 Quiz
Feb 1 – Feb 5	Z-distribution and t-distributions	1 HW
Feb 8 – Feb 12	Central Limit Theorem	1 HW/ 1 Quiz
Feb 15 – Feb 19	Confidence Intervals	1 HW/ LSQA
Feb 22 – Feb 26	One-sample Hypothesis tests	1 HW/ 1 Quiz
Mar 1 – Mar 19	Linear Regression	3 HW/ 3 Quiz
Mar 22 – Apr 2	ANOVA	2 HW/ 2 Quiz
Apr 5 – Apr 9	Chi-squared test	1 HW/ 1 Quiz
Mar 12 – Apr 16	Final Review	
Apr 19 – Apr 23	Finals Week	Final

2 quiz make-ups will be allowed at the end of the semester, but if the LSQA is missed a student must make up the LSQA before making up any other quizzes.

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.

A = [93, ∞), A- = [90, 93), B+ = [87, 90), B = [83, 87), B- = [80, 83), C+ = [77, 80), C = [73, 77), C- = [70, 73), D+ = [67, 70), D = [63, 67), D- = [60, 63), F = [0, 60)

Homework assignments are open note, and collaboration is encouraged.

Quizzes are open note, but collaboration is not allowed.

Grade appeal policy: Student can request a regrade up to 1 week after assignment returned.

EMAIL & COMMUNICATION

~ Please turn on the course notifications on 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.

~ If you email us, please send from your @my.fsu.edu account.

~ Please send assessment-related enquiries least 24 hours before the assessment is due.

~ You may expect a response to your email within one work day. But if you email us with an enquiry

that was previously addressed in the syllabus, in a class email or in a course announcement, you may not get a response.

Lectures

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. Please note that the recorded lectures are the property of Florida State University and are made available only to 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.

Course Description:

Recorded lectures are FSU properties and only available to students enrolled in your class. Students are not allowed to share the recorded lectures to any other people outside the class. Copyright of the recorded lectures are reserved by the instructors and FSU.

Credit Hours: 3

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

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.

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 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.

1. 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.

2. 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>)

3. 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) request a letter from the Office of Accessibility Services to be sent to the instructor indicating the need for accommodation and what type; and
- (3) meet (in person, via phone, email, skype, zoom, etc...) with each instructor to whom a letter of accommodation was sent to review approved accommodations.

This syllabus and other class materials are available in alternative format upon request.

For the latest version of this statement and 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/>

4. 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."

5. 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 work days.

6. Grades:

Assessments that are not submitted will receive a grade of zero. When a makeup is submitted, the zero will be replaced with the earned grade.

7. 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.

8. 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.

9. 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.

10. Required Materials:

TI-84 Plus or equivalent calculator.