STA2122 Introduction to Applied Statistics (3 credits)

A. Term: Fall 2025
B. Section: 0021
C. **Class Meeting Days, Times, Locations:** F2F / MWF10:40 AM-11:30 AM / MCH0301

D. Instructor Information
Name: Yufan Xiao
Contact Information: yx24d@fsu.edu
Office Hours: Monday 1pm-2pm
Office Location: OSB 410

E. Prerequisites or Co-requisites
Prerequisite: MAC 1105. Special note: No credit given for STA 2122 if a grade of "C-" or better is earned in STA 2171, STA 3032 or QMB 3200.

F. Course Description
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.

G. Course Objectives
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.
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.

H. CoreFSU Syllabus Language
This course has been approved to meet FSU's CoreFSU Quantitative and Logical Thinking requirements and helps 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.

I. Required Texts, Readings, and/or other Resources

~ A personal computer, reliable internet connection, and Chrome or Firefox browser.
~ A TI-84 Plus or equivalent calculator or app.
~ A textbook is not required. Notes and exercises will be posted on Canvas.

J. Tentative Course Schedule

Week	Dates	Topics
1	8/25 – 8/31	Preliminary Definitions, Summary Statistics
2	9/1 – 9/7	Summary Statistics
3	9/8 – 9/14	Summary Statistics
4	9/15 – 9/21	Normal Distributions
5	9/22 – 9/28	Central Limit Theorem
6	9/29 – 10/5	Confidence Intervals for Mu
7	10/6 – 10/12	Confidence Intervals for Mu
8	10/13 – 10/19	Hypothesis Tests for Mu
9	10/20 – 10/26	Hypothesis Tests for Mu
10	10/27 – 11/2	One-way Anova
11	11/3 – 11/9	Simple Linear Regression Basics
12	11/10 – 11/16	Simple Linear Regression Basics/Inference
13	11/17 – 11/23	Simple Linear Regression Inference
14	11/24 – 11/30	Chi-Square Tests
15	12/1 – 12/7	Chi-Square Tests
FE	**There is no final exam. The final individual-work quiz will be available on Canvas from 12:01am EST Monday Dec 8 to 11:59pm EST Wednesday Dec 10.**	

K. Grading/Evaluation

a.

Component / Category	Percentage Weight	Graded for	Help permitted	Number of submissions permitted	Done where
Daily Attendance	10%	Attendance	N/A	N/A	In class
Daily Comprehension	15%	Accuracy	Yes	1 each	In class
QLT Assessment	10%	Accuracy	No	2	Out of class, on Canvas
Quizzes, approx 1 per week	65%	Accuracy	No	2 each	Out of class, on Canvas
Total	100%	---	---	---	---

b. Letter grades will be selected from the table below after rounding the numerical course grade up to the next higher whole number.

A ≥93 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

c. The use of AI (artificial intelligence) and unsanctioned internet sources is not permitted on any of the assessments in this class. All internet sources (apart from the course Canvas) are considered unsanctioned unless the instructor specifically states in writing that a given source is sanctioned.

L. Syllabus Change Policy

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

M. University Policies and Syllabus Language

Visit link below to review

University Attendance Policy
Academic Honor Policy
Americans With Disabilities Act
Academic Success
Free Tutoring from FSU
Statement on Public Health Protocols

https://facsenate.fsu.edu/Curriculum-Resources/syllabus-language