STA 3024 Introduction to Statistics II Spring 2021

Instructor: Maria Ripol Teaching Assistant: Tinting Wang email: mripol@stat.ufl.edu office hours and zoom link TBA in Canvas

zoom office hours: MWF 2:00 -3:00pm link and passcode will be posted in canvas

phone: (352) 273-2976 office: Griffin Floyd 117 C

Lectures: MWF 4th pd, 10:40 - 11:30 am

Students enrolled in class number 18911 are expected to attend the live lectures in WEIL 0234. Students enrolled in class number 26191 are expected to join the live lectures through Zoom and are NOT allowed in the live lectures because of social distancing rules in place due to COVID-19. All students will have access to the recordings of the lectures that will be posted in canvas about 30 minutes after the live class ends.

Course Description and Objectives

In this course, students learn how to summarize data, analyze it, and make appropriate decisions based on it. The sequence of courses STA 2023-3024 provides students with a firm foundation in the basics of applied statistical methods. The prerequisite for this course is STA 2023, which covered chapters 1-10 in the textbook (data collection, graphical and numerical summaries, probability and an introduction to statistical inference). Concepts from STA 2023 will be reviewed as needed.

The course focuses on the following four topics:

- 1. Analysis of Variance to compare three or more population means.
- 2. Simple Linear Regression and Multiple Regression to predict a quantitative response.
- 3. Analysis of Two-Way Tables to study the relationship between two categorical variables.
- 4. Nonparametric Statistics that do not require a Normal distribution of the response variable.

Materials

- 1. Required Lecture Notes: will be posted in Canvas for you to print or use electronically. They have an outline of the material, plus the computer output for the examples we will do together in class, so it is essentially your class notebook.
- 2. Required Scientific Calculator (around \$10 to \$15) that has some basic statistical functions like mean and standard deviation Graphing calculators are not allowed during the exams.
- 3. Recommended Textbook: Statistics, The Art and Science of Learning from Data, by Agresti, Franklin and Klingenberg, 4th edition, Prentice Hall. Can be purchased hardbound new or used, but most students who decide to get the *optional* textbook prefer the electronic version that is purchased through UF All Access (inside of Canvas) and includes MyLab and Mastering to do the *suggested* homework electronically.

Course Website in CANVAS: https://ufl.instructure.com/

This is the portal for UF's E-learning website. You log on using your gatorlink username and password to access the course materials, announcements, grades, online quizzes etc.

Online Quizzes

There will be approximately five online quizzes, administered through Canvas. You will have three tries for each quiz (with questions randomly generated) over a period of several days. Each quiz will be worth 20 points, and all together will count for 25% of your grade. Hopefully these quizzes will serve the purpose of improving your grade in the class, as well as be an important tool in learning the material for the course. Quiz details will be announced in class and the course website.

Suggested Homework Problems

The list of suggested homework problems from the textbook will be posted in Canvas. These problems will help you master the material but will not count towards your grade. You can also get the text as an ebook (using UF All Access inside of Canvas) and do the suggested homework through the MyLab and Mastering link on the course Canvas website.

Exams

There will be three exams given during the semester, each worth 100 points and 25% of your grade. They will take place during our regular class time, but will be **conducted online** and proctored electronically by the vendor determined by the university (**Honorlock** most likely).

In case of conflict or illness, if a student is unable to take an exam at the scheduled time, they must get in touch with the instructor **prior** to the exam time for any arrangements to be made for a makeup. Each case will be reviewed individually. Valid and detailed documentation is a prerequisite under such extenuating circumstances. A grade of zero is the minimum punishment of any type of dishonesty on an exam.

All exams are closed book, closed notes and closed internet. Use a wired connection, not wireless, if possible. A digital formula sheet will be provided for your use, including statistical tables. You may use a scientific calculator during the exam, but NOT a cell phone or any type of device that connects to the internet or other people. Accessing notes and formulas from the course during the exam is cheating. Accessing your cell phone or communicating with another individual during the exam is also considered cheating. It is an honor code violation to copy, take pictures or disseminate any of the exam questions anywhere, to anyone. For exam security reasons, all students must take the exam at the same time. Academic dishonesty on any exam will result in a *minimum* penalty of a grade of *zero* on that exam.

Online Exam 1	Fri February 19	10:40 – 11:30 am	Ch 10 and 14	Comparing Groups
Online Exam 2	Fri March 26	10:40 – 11:30 am	Ch 12 and 13	Regression
Online Exam 3	Wed April 21	10:40 – 11:30 am	Ch11 and 15	Chi Squared and Nonparametrics

Grades

Grade Structur	e:	Grading S	cale:				
Exam 1	25%	Α	90% to	100%	C+	74% to	76%
Exam 2	25%	A-	87% to	89%	С	70% to	73%
Exam 3	25%	B+	84% to	86%	C-	64% to	69%
Quizzes	25%	В	80% to	83%	D	60% to	63%
		B-	77% to	79%	Ε	59% an	d below
					(N	o D+ or [)- given)

UF Grading Policies: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

Course Policies

Email to Instructor – will be answered within one working day in most cases. Please be aware that statistical questions should be answered in person (in class or during office hours) since they often require pictures and formulas that make it very hard to communicate through email.

Privacy Policy - Student records are confidential. Only information designated "UF directory information" may be released without your written consent.

Classroom Safety Policies - In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing <u>COVID-19 symptoms</u>, please use the UF Health screening system and follow the instructions on whether you are able to attend class.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work, according to UF's attendance policies.

Privacy in Zoom Live Lectures: Our class sessions will be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited. Note that this policy does not apply to proctored tests administered by Honorlock and ProctorU, which require full audio and video presence.

Privacy in Zoom Office Hours: The TA's office hours are open to all students to discuss course material. Any student who joins can listen in on your questions, as they would in the in-person tutoring room. However, the instructor's office hours will only admit one student at a time, with any others being placed in a waiting room. Students can discuss any personal issues or problems with the instructor during office hours with the guarantee of confidentiality. None of the office hours will be recorded.

Students with Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://disability.ufl.edu/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which will be sent to the instructor. Students with disabilities should follow this procedure as early as possible in the semester, and need to do this every semester. Accommodations will not be made retroactively, but only forward from the day that the letter was received. Special circumstances should be discussed with the instructor.

University's Honesty Policy: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

Grading: Grades will be changed only when an error has been made; negotiation is not appropriate.

Incompletes are only assigned when extraordinary circumstances (such as an accident, or extended hospitalization), arising after the date for dropping the course, prevent the student from completing the course requirements. Having a failing grade in the course is not a valid reason for requesting an Incomplete. Information on Medical Withdrawal can be found at https://umatter.ufl.edu/ Information on how to Drop a class can be found in UF's Academic Catalog https://catalog.ufl.edu/

Instructor / Course Evaluations: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals or in their Canvas course menu under GatorEvals.

Other University Services

U Matter, We Care: If you or someone you know is in distress, or needs information on services offered at UF, please contact them: 352-392-1575 umatter@ufl.edu https://umatter.ufl.edu/

Student Health Care Center: 352-392-1161 https://shcc.ufl.edu/

University Police Department, 352-392-1111 (or 9-1-1 for emergencies) http://www.police.ufl.edu

E-learning technical support – contact the UF Computing Help Desk: http://helpdesk.ufl.edu/ phone: 352-392-4357 e-mail: helpdesk@ufl.edu.

Weekly Schedule (Subject to	STA3024 Spring 2021				
Monday	Wednesday	Friday Continue Review Stats 1			
Intro / Start Review Stats 1	Review Ch 7-10 CI and SigTests				
No Class – MLK Day	Continue Review Stats 1	Continue Review Stats 1			
1/25 More + Ch 4 Designing Experiments Q1 starts	Ch 10 – ANOVA Formulas	One-Way ANOVA examples Q1 end			
2/01 Multiple Comparisons	Bonferroni 2	More One-Way ANOVA examples			
One/ Two-Way ANOVA Q2 starts	Two-Way ANOVA	Two-Way ANOVA Q2 ends			
Review 2/15	Review 2	EXAM 1			
Review Ch 3 – SLRegression	Ch 12- Regression Analysis	Continue Inference Reg			
3/01 Continue Inference Reg Q3 starts	Continue Inference Reg	Ch 13 Multiple Regression Basics Q3 ends			
3/08 Regression with Dummy Variables	More Reg. with Dummy Vars	Quadratic Regression 3/1			
3/15 More Regression Examples Q4 starts	More Regression Examples	More Regression Examples Q4 end			
Review 3/22	Review 3	224 EXAM 2			
Ch 11 Contingency Tables	Contingency Tables	Contingency Tables 4/03			
4/05 Sec 13.6 Logistic Regression Q5 starts	Ch 14 Nonparametric Methods	Nonparametric Methods Q5 ends			
Nonparametric Methods ECQ starts	Nonparametric Methods	Review ECQ ends			
Review 4/19		721			