

STA 6207 – Regression Analysis – Fall 2021

Instructor: Dr. Larry Winner

Office: 228 Griffin/Floyd

Phone: (352) 273-2995

E-Mail: winner@stat.ufl.edu

Office Hours: TBA (Will be posted on class Canvas webpage)

TA: Michael Kim e-mail: michaelkkim@ufl.edu (Office hours will be on Canvas)

Text: Statistical Regression Analysis (Course Notes)

Supplementary Text: *Applied Regression Analysis, 2nd. Ed.* by Rawlings, Pantula, Dickey (e-book for UF Students)

Course Description:

This course provides a survey of theory and applications in linear regression analysis. A full treatment of the linear regression model is covered, focusing on results from mathematical statistics making use of matrix algebra. Computational methods will be used to analyze datasets based on "canned routines" as well as a matrix language.

Tentative Topics (Course Notes Sections) [RPD Sections]:

- Intro to Probability Distributions and Inference (Chapter 1) [N/A]
- Simple Linear Regression in Scalar Form (Chapter 2) [Chapter 1]
- Simple Linear Regression in Matrix Form (Chapter 3) [Chapter 2.1-2.8]
- Distributional Results, Analysis of Variance and Quadratic Forms (Chapter 4) [Chapters 3,4]
- Model Diagnostics and Influence Measures (Chapter 5) [Chapters 10, 11]
- Multiple Regression (Chapter 6) [Chapters 3,7,8,9.6,9.7,12]
 - Model Building: Selection of Independent Variables [Chapter 7]
 - Polynomial Models [Chapter 8]
 - Models with Class Variables [Chapter 9.6-9.7]
 - Transformations [Chapter 12]
- Intro to Nonlinear Models (Chapter 7) [Chapter 15.1-15.3]
- Random Coefficient Regression Models (Chapter 8) [Chapter 18.3]
- Alternative Regression Models (Chapter 9) [N/A]

Tests and Grading:

- (Tentative) Exam 1 (7:00AM – 8:25AM) – Friday, October 1 – 25%
- (Tentative) Exam 2 (7:00AM – 8:25AM) – Monday, November 1 – 25%
- Exam 3 (7:00AM – 8:25AM) – Monday, December 6– 25%
- Homework - 25%

Notes:

- In-class Exams are closed note. I will provide any formulas if necessary
- No make-up exams will be given except under extreme circumstances. Early exams will be given under no circumstances.
- Homework will be assigned on approximately a bi-weekly basis and you will typically have 4-5 class periods to complete them. No late assignments will be accepted, and you must submit them to UF Canvas. The grader will grade a sample of the assigned problems.
- R code for examples in the Course Notes are available UF Canvas.

Course Grade Cut-offs:

A	A-	B+	B	B-	C+	C	C-	D	E
93	88	83	75	65	50				

Attendance/Exam/Assignment Policies: While attendance is not taken, students are expected to attend lectures and participate in class.

Academic Accommodations: If you have a documented disability and wish to discuss academic accommodations with me, please contact me as soon as possible.

University Grading Points:

A	A-	B+	B	B-	C+	C	C-	D	E
4	3.67	3.33	3	2.67	2.33	2	1.67	1	0

Online Course Evaluations: The University has an online course evaluation system. Late in each semester (after final withdrawal date), students can go to the GATORRATER portal and evaluate courses. The website is located at: <https://evaluations.ufl.edu/evals/Default.aspx>.

Zoom Lecture Disclaimer (In case of Zoom being used): Our class sessions may be audio-visually recorded for students in the class to refer back to 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 orally are agreeing to have their voice 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 by students or any other party is prohibited.

In-Class Recording:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code

University Policies:

Academic Dishonesty: All members of the University Community share the responsibility to challenge and make known acts of apparent academic dishonesty. Acts of academic dishonesty will not be tolerated and will be referred to the Student Honor Council.

Campus Resources:

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu , 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the [Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the [Student Health Care Center website](#).

University Police Department: Visit [UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the [UF Health Emergency Room and Trauma Center website](#).

Academic Resources

E-learning technical support: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the [Student Honor Code and Student Conduct Code webpage](#) for more information.

On-Line Students Complaints: [View the Distance Learning Student Complaint Process](#)