

# STA 6207 – Regression Analysis – Fall 2018

**Instructor:** Dr. Larry Winner

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

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

Statistical Regression Analysis (Course Notes) Available at Target Copy

## 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) – September 28 – 26.67%
- (Tentative) Exam 2(7:00AM-8:25AM) – October 26 – 26.67%
- (Tentative) Exam 3(7:00AM-8:25AM) - Dec. 3 – 26.67%
- Homework - 20%

## Notes:

- Exams will be closed note. I will provide any formulas if necessary
- No make-up exams will be given. Do not plan on leaving town before Final Exam.
- Homework will be assigned on approximately a weekly basis and you will typically have 2-3 class periods to complete them. No late assignments will be accepted, and you must submit paper copies, not e-mail.
- Use e-mail sparingly. It is virtually impossible to answer technical questions via e-mail. E-mail is not a substitute for office hours/lecture.
- SAS and R code for examples in the text are available on class website.

### 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. Make-up exams will only be considered with documented medical event or conference attendance (graduate students). Early exams will be given under no circumstances. Assignments are to be handed in during class on the date the assignment is due in paper format. Electronic submission of assignments will not be accepted. Turn off cell phones during classes.

**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>.

### 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:**

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/>

Academic Resources: <http://www.ufl.edu/academics/resources/>

Disability Resource Center: <https://www.dso.ufl.edu/drc/>

Student Health Care Center: <http://shcc.ufl.edu/>