

## STA 4203/5207: Applied Regression Methods Fall 2019

**HCB 208 TuTh 3:35-4:50**

**Instructor:** Dr. Justin Shows

Email: [jhshows@stat.fsu.edu](mailto:jhshows@stat.fsu.edu)

Office: OSB 104A

Office Hours: 2:00-3:00 p.m. TuWeTh or by appointment

### **COURSE OBJECTIVES**

This course provides an introduction to the basic principles of regression. Upon successful completion, a student will be able to confidently carry out a regression study using the SAS system.

**Prerequisite:** One of STA 2122, 2171, 3032, 4322, 5126, 5354, or QMB 3200

**Credit Hours:** 3

**Topics:** Estimation, Inference, Hypothesis testing, Regression diagnostics, Collinearity, Generalized least squares, Weighted least squares, Robust regression, Transformations, Variable selection, Shrinkage methods, Principal component regression

### **Certificate in SAS Programming and Data Analysis:**

This course satisfies one of the four courses required for the SAS Programming and Data certificate jointly sponsored by FSU and the SAS Institute. **Students** interested in the program **must apply to the program before** the end of the semester in which **the second course in the program is taken**. In addition, a portfolio is required to be submitted in the last semester of program and a representative assignment and/or project from this course must be included. For more details see <http://stat.fsu.edu/sas-certificate>.

### **MATERIALS**

**Textbook:** Optional: *Applied Linear Statistical Models, 5<sup>th</sup> ed*, by Kutner, Nachtsheim, Neter, and Li. This book contains the course topics but focuses mainly on prerequisite material.

Additional resource: *Linear Models with R, 2<sup>nd</sup> ed*, by Faraway. None of the R code in the text will be used. We will use SAS instead.

**Class notes:** Guided note outlines as Word documents will be posted on Canvas under Files. You should either print them before class or have them available on a computer. You can write on or type in the documents. Example SAS code and instructions will also be given.

**SAS:** SAS software will be used in the course. Previous SAS experience is not necessary. You will receive an e-mail containing instructions for registering for the SAS Studio course site.

You should bring your laptop to class so you can follow along with the SAS examples

### **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.

The syllabus is intended to be an agreement between you (student) and I.

The presence of your name on your section roster after drop/add ends indicates that you have read and understood all of the information and documents posted on the course Canvas site, you have had your questions about them answered, and you accept and will abide by my policies.

Please understand that I deal with hundreds of students each term, and in the interests of fairness, I will not do for one student what we cannot do for all students who are likely to request the same.

Bear in mind that the opportunities presented in this class are made equally available to all students in the class and it is up to each individual to make the best of them.

### **ATTENDANCE, ABSENCE AND DROP/WITHDRAWAL**

Attendance will be taken on the first day of class. If you are absent, the Registrars Office will drop you from the course. Students are expected to attend all class meetings and stay for the duration of the class period. If you must miss class or leave early or arrive late, please let me know beforehand or as soon as possible. If you miss class, I expect you to keep up-to-date with the lessons, activities and announcements by getting in touch with a classmate or with me, **and** by reading the course site on Canvas. Drop and withdrawal deadlines are given in the University's academic calendar at [https://registrar.fsu.edu/registration\\_guide/fall/academic\\_calendar/](https://registrar.fsu.edu/registration_guide/fall/academic_calendar/)

#### **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.

**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/academic-resources/academic-integrity-and-grievances/academic-honor-policy>.)

**Americans With Disabilities Act:**

Students with disabilities needing academic accommodation should:

- (1) register with and provide documentation to the Student Disability Resource Center; and
- (2) bring a letter to the instructor indicating the need for accommodation and what type.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided.

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

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center

874 Traditions Way

108 Student Services Building

Florida State University

Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

[sdrc@admin.fsu.edu](mailto:sdrc@admin.fsu.edu)

<http://www.disabilitycenter.fsu.edu/>

**EMAIL & COMMUNICATION**

E-mail will be used as the primary method of communication.

All e-mails will be sent to fsu.edu addresses

If you send me an e-mail, send it from your fsu.edu address and the course name in the subject line

**ASSESSMENT AND GRADING**

- Assignments will be posted on Canvas along with a due date. You may work together on these assignments, but you must formulate and write your own solutions. No credit will be given for answers without supporting work.
- When collected, assignments are due at the beginning of class. Late assignments will not be accepted for any reason. Only hard copies may be submitted unless otherwise noted. The lowest assignment score will be dropped
- Exams: During an exam, everything except a calculator and writing utensil must be stowed under the desk or chair.
- Calculators may not be shared. Phones may not be used as calculators.

- No early or late exams will be given for any reason. If you miss an in-class exam due to an excused absence (as defined in the University Attendance Policy), the final exam score will replace the missed exam score.

Grade disputes must be made within 24 hours of the class period in which graded exams are first returned.

You will be allowed to bring one 8.5 by 11 inch sheet (front and back) of notes for each in-class exam and the final exam. These notes must be handwritten without the assistance of anyone else.

Privacy: I strictly follow FERPA rules and guidelines. For example, grades cannot be given out in e-mail or over the phone and you cannot take a graded assignment or exam to another student. For more information, read <https://registrar.fsu.edu/records/ferpa/>

Cell phone policy: Please show consideration for others by putting your phone in silent mode during class. You may not use your phone during class.

The grades are posted in Canvas only so you can see them. The average given by Canvas is not calculated using the correct formula, so please disregard it.

**Grading:**

In-Class Exam I	25%
In-Class Exam II	25%
Assignments	20%
Final Exam	30%

Weighted Average is rounded up to the next integer.

**Grading Scale:**

Average	Letter
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
0-59	F

**Exam Schedule:**

Exam I: Thursday October 3

Exam II: Thursday November 7

Final Exam: Monday December 9, 5:30-7:30 pm