

# STA3032 APPLIED STATISTICS FOR ENGINEERS AND SCIENTISTS

## Spring 2022

### Course Information:

- **Time:** MWF 1:20 PM- 2:10 PM
- **Place:** HCB 0217

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<b>Instructor:</b>	Rongjie (RJ) Liu
<b>Email:</b>	<a href="mailto:rliu3@fsu.edu">rliu3@fsu.edu</a>
<b>Office Hours:</b>	MW 2:20 PM- 3:20PM (SB 417)

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<b>TA:</b>	Kaizhou Lei
<b>Email:</b>	<a href="mailto:kl19o@my.fsu.edu">kl19o@my.fsu.edu</a>
<b>Office Hours:</b>	MW 10:00 AM- 11:00 AM (SB 342)

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**Prerequisites:** MAC 2312 (Calculus II).

**Textbook:** *Statistics for Engineers and Scientists*, by William Navidi, 4th Edition. ISBN: 9780073401331.

**Course Description:** This calculus-based course is primarily designed for scientists and engineers. The emphasis is both on theory and applications. Topics include descriptive statistic, probability, interval estimation, hypothesis testing, correlation, simple and multiple regression. Students will be able to

- understand basic statistical analysis methods;
- conduct basic descriptive and inferential statistics procedures;
- state research testing hypotheses;
- translate word problems into statistical statements necessary for statistical analysis;
- analyze sample data using a variety of methods;
- use software for statistical analysis;
- describe and interpret statistical results.

**Grading Policy:** Attendance (5%), Homework (30%), Midterm 1 (20%), Midterm 2 (20%), Final Exam (25%). The following scheme will be used to convert percentage points to letter grades:

A	: [93, 100]	C	: [73, 77]
A-	: [90, 93)	C-	: [70, 73)
B+	: [87, 90)	D+	: [67, 70)
B	: [83, 87)	D	: [63, 67)
B-	: [80, 83)	D-	: [60, 63)
C+	: [77, 80)	F	: [0, 60)

- Attendance: Regular attendance is essential and expected.
- Homework: Homework will be assigned after each chapter and is due the following week. Group discussions are encouraged, but you have to write up your own solutions. Homework will be uploaded onto Canvas.
- Midterm: The two midterms are tentatively scheduled on Feb 16th and March 30th. The midterm will be taken in class. The midterm is closed book, you may use the calculator and you are allowed to bring a piece of paper 8 by 11.5 inches, 2 sided.
- Final Exam: The final exam will be cumulative, closed book. The final exam will be taken in class. You may use the calculator and you are allowed to bring two pieces of paper 8 by 11.5 inches, 2 sided.

\* No late submissions will be accepted for any assignments or examinations.

**Tentative Course Outline:**

█ Chapter 1 Sampling and Descriptive Statistics (HW1)	.....	≈ Week 1-2
█ Chapter 2 Probability (HW2)	.....	≈ Week 2-4
█ Chapter 3 Propagation of Error (HW3)	.....	≈ Week 4-6
█ Midterm 1	.....	≈ Feb 16th
█ Chapter 4 Commonly Used Distributions (HW4)	.....	≈ Week 6-8
█ Chapter 5 Confidence Intervals (HW5)	.....	≈ Week 8-10
█ Chapter 6 Hypothesis Testing (HW6)	.....	≈ Week 10-12
█ Midterm 2	.....	≈ March 30th
█ Chapter 7 Correlation and Linear Regression (HW7)	....	≈ Week 12-15
█ Final Exam	.....	= Apr 27th Wednesday 12:30 PM- 2:30 PM

**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 integrity and 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 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 [Academic Honor Policy PDF](#).

**Americans With Disabilities Act:** Students with disabilities needing academic accommodation should: (i) Register with and provide documentation to the Office of Accessibility Services; and (ii) Bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Office of Accessibility Services 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/>