

STA 4321/5323

SYLLABUS



COURSE INFORMATION

- **Course Hours:** 2:00 PM - 3:15 PM, Tuesday & Thursday
- **Course Meeting Location:** Zoom Room (Lecture)
- **Credit Hours:** 3 hours
- **Prerequisites:** MAC 2311, 2312, 2313. You need to be familiar with the theory and applications in Calculus I, II, III.



COURSE DESCRIPTION

This course will introduce you to basic concepts used in probability theory and mathematical statistics. By taking this course, you will develop a technical vocabulary and gain solid foundations to facilitate your understanding of advanced statistical modeling and inference.

This course covers various topics including combinatorial analysis, random variables (discrete and continuous), probability distributions, independence, conditional probability, sums of random variables, generating functions, central limit theorem, the laws of large numbers, etc.



COURSE INSTRUCTOR



 Andrés F. Barrientos



◆ PhD in Statistics

✉ abarrientos@fsu.edu (abarrientos@fsu.edu)

🏢 Department of Statistics/OSB 0409

🕒 3:15 PM – 3:45 PM, Tuesday & Thursday, or by appointment, Zoom Room (Instructor Office Hours)

↩ I will reply to emails within 24 hours. (see *Policy on Responding to Students* below).



COURSE TEACHING ASSISTANT(S)

👤 Ning Wang

✉ nw17b@my.fsu.edu (<mailto:nw17b@my.fsu.edu>)

🕒 9:00 AM – 10:00 AM Wednesday, Zoom Room (TA Office Hours)



COURSE MATERIALS

Required

- *A First Course in Probability* (9th Edition), by Sheldon Ross, Pearson Education, 2014. Most of the homework problems will be from this book.

Optional

- *Probability and Statistics with Applications: A Problem Solving Text*, by Leonard A. Asimow and Mark M. Maxwell, ACTEX Publications, 2010.



STUDENT RESPONSIBILITIES

- Students should log on to Canvas at least every other day to check for course updates.

- Students are expected to keep up with the class, engage with the course material, and submit assignments by the due dates.
- Assignments, quizzes, and exams are expected to be products of individual students per the **FSU Academic Honor Policy** (<http://registrar.fsu.edu/bulletin/undergraduate/information/integrity/>).
- Students should not discuss any of the questions with each other during exams without instructor approval.
- To receive maximum points for questions, students need to follow the instructions carefully, follow word limits as instructed, and use spell and grammar checking.
- To be successful in this course, students need to complete all required assignments and tests.



GRADING POLICY

Homework: The homework assignments will be posted roughly biweekly. You are encouraged to discuss with each other, but should write down the answers independently.

Exams: There will be two midterm exams and a final exam. The midterms will be based on all the material covered by the time of the exams. The final exam will be cumulative. You will be permitted to bring a hand-written two-sided sheet (letter size, 8.5 × 11 in) of notes to the exams. You may need a calculator for some problems. Cellphones are not allowed to use as calculators during exams. All midterms are held in the classroom where the course normally meets. Here is the tentative schedule for the exams:

- Midterm 1: 2:00 PM – 3:15 PM, Thursday, Oct. 01
- Midterm 2: 2:00 PM – 3:15 PM, Thursday, Nov. 05
- Final: 5:30 PM – 7:30 PM, Tuesday, Dec. 08

Remark. If you must miss an exam, notify the instructor as early as possible.

Final grade: It will be determined by a weighted average of the following items: (1) two

midterms (2 × 20%), (2) final exam 30%, and (3) homework (30%).



GRADING SCHEME

The following grading standards will be used in this class:

Grading Scheme
Breakdown

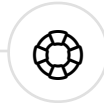
Grade	Range
A	100% to 93%
A-	< 93% to 90%
B+	< 90% to 87%
B	< 87% to 83%
B-	< 83% to 80%
C+	< 80% to 77%
C	< 77% to 73%
C-	< 73% to 70%
D+	< 70% to 67%
D	< 67% to 63%
D-	< 63% to 60%
F	< 60% to 0%



TECHNOLOGY REQUIREMENTS

Course content is accessible through Canvas. Students will need to be able to view

videos, write and upload assignments, post to discussion boards, and take assessments. Students should have access to high-speed internet and updated software. Mobile devices may be used to view course content, upload assignments, and take assessments as determined by the instructor. To view the most current technology requirements, visit the [FSU Canvas support site \(http://support.canvas.fsu.edu\)](http://support.canvas.fsu.edu).



CANVAS SUPPORT

Need help with Canvas? Contact FSU Canvas Support:

✉ **Email:** [canvas@fsu.edu \(mailto:canvas@fsu.edu\)](mailto:canvas@fsu.edu)

📞 **Phone:** (850) 644-8004

🌐 **Website:** [support.canvas.fsu.edu \(http://support.canvas.fsu.edu\)](http://support.canvas.fsu.edu)

🕒 **Hours:** 8am to 5pm, Monday - Friday



COURSE POLICIES

COMMUNICATIONS/NETIQUETTE

For Discussions:

- Please use polite, respectful behavior when posting your responses to prompts in the Discussion Boards.
- Be mindful of how you express your emotions and humor, and be sensitive to cultural and ability differences of your online peers.
- Keep postings to the point, and make sure your comments are relevant to the topic of discussion.
- Avoid messages such as, "Wow," "Way to go," or "Ditto" and aim for comments that validate other members' ideas through careful explanation of why.
- When replying, give a short description in the subject line of what you are replying to,

and use correct punctuation and spelling throughout your post.

For Email Communication:

- For email, please respond to your instructor's and peers' messages within a 24-hour period.
- Use a brief description in the subject line that outlines the topic of discussion.
- Avoid using slang or profane words.
- Use your instructor's correct title he or she prefers for communication.
- Avoid using emoticons, such as smiley faces, and maintain a professional demeanor.
- Sign your email messages using your full name.
- AVOID USING ALL CAPS. This makes the message visually difficult to read and is perceived by the reader as "shouting."
- Use correct spelling, grammar, and punctuation, just as you would for any communication.
- Ask yourself whether you would be comfortable if someone other than the intended receiver were to read your message. Remember, email is not a completely secure form of communication.
- Refrain from "flaming," which is expressing a strongly held opinion without tact or regard for others. Don't assume that recipients will know the intent of the message (e.g., "just kidding"). It reads differently when it's in print (electronic or not).
- Report any inappropriate communication considered to be of a serious nature to your instructor, as it may be a violation of University policy.
- Treat others with respect by making messages clear and succinct.

CLASSROOM POLICY

The classroom environment is an important factor for effective learning. In order to not distract other students' attention please follow these classroom policies. The first one of these is the university policy. Remember that no food or drinks are allowed in the classroom. Turn off all audible alarms (cell phones, pagers, calculators, watches etc.) Do not use cellphones in the class. Come to the class on time. Opening and closing the classroom door in the middle of a class cause distraction to the students and the teacher. Do not talk to other students without permission while the professor is teaching. More than one conversation creates noise and makes it difficult for the students to pay attention to the lecture.

ATTENDANCE POLICY

You are required to attend all classes. The class activities will help you assimilate the lessons more easily, giving you an opportunity for active learning. Do not let this opportunity slip away. Any foreseen absence must be cleared with the instructor. If the absence is due to emergencies, it is the student's responsibility to notify the instructor at the earliest opportunity of the emergency.

POLICY FOR HOMEWORK RE-GRADE

You have one week to request a re-grade of a homework from the date on which the graded homework is available to the students of the class. Submit a written request detailing the nature of the grading error to the instructor along with the relevant homework.

POLICY FOR COLLECTING RETURNED HOMEWORK/EXAM

It is the student's responsibility to retrieve his or her homework/exam whenever they are returned and to check grades on the class website. If you notice any mistake in recording grades, please inform the instructor about it as soon as possible but no later than one week after grades been posted online.

POLICY FOR CONTACTING THE INSTRUCTOR OR TEACHING ASSISTANT OUTSIDE THE CLASS

You are strongly encouraged to come to the instructor or teaching assistant during their office hours. If your schedule conflicts with the office hours, you can make an appointment. You may ask the instructor or teaching assistant brief questions by e-mail, but you may be asked to come to office hours if the instructor or teaching assistant thinks that the questions are better answered in person. When you send e-mails, remember the

following: always send e-mails from your canvas account.

POLICY ON RESPONDING TO STUDENTS

- I respond to email typically within 24 hours, Monday through Friday.
- I might not be able to respond to questions about the assignments the day before they are due.
- Graded assignments will be typically returned within 2 weeks after due date.



UNIVERSITY POLICIES

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." (For more details see the **[FSU Academic Honor Policy and procedures for addressing alleged violations](http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy)** **[_\(http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy\)_](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 \(Tallahassee Campus\)](https://dos.fsu.edu/sdrc/) [\(https://dos.fsu.edu/sdrc/\)](https://dos.fsu.edu/sdrc/)

874 Traditions Way

108 Student Services Building

Florida State University

Tallahassee, FL 32306-4167

(850) 644-9566 (voice)

(850) 644-8504 (TDD)

Email: sdrc@admin.fsu.edu (<mailto:sdrc@admin.fsu.edu>)

[Students Disability Resource Center \(Panama City Campus\)](https://pc.fsu.edu/students/student-disability-services/) [\(https://pc.fsu.edu/students/student-disability-services\)](https://pc.fsu.edu/students/student-disability-services/)

Dr. Kimberly Leath

Office of Student Affairs

2nd Floor Barron Building (Room 215)

Email: kleath@fsu.edu (<mailto:kleath@fsu.edu>) or sds@pc.fsu.edu

(<mailto:sds@pc.fsu.edu>)

(850) 770-2172 (office)

(866) 693-7872 (toll free)

FREE TUTORING FROM FSU (TALLAHASSEE CAMPUS)

On-campus tutoring and writing assistance are available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services' comprehensive list of on-campus tutoring options - see the **[Academic Center for Excellence \(ACE\) Tutoring Services' website](http://ace.fsu.edu/tutoring)** [_\(http://ace.fsu.edu/tutoring\)](http://ace.fsu.edu/tutoring)

or contact [tutor@fsu.edu \(mailto:tutor@fsu.edu\)](mailto:tutor@fsu.edu). High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

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."



COURSE SUMMARY

All course assignments due dates will be listed below as well as dates for midterm and final exams. To be successful in this course, be sure to complete all required assignments by the due date.

Course Summary:

Date

Details

