

MATH 411B MATHEMATICAL STATISTICS I
WINTER 2020 (Jan 7-Mar 13)
MWF 11 – 11:50am in SAMUELSON 252

Instructor: Dr. Sooie-Hoe Loke
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Office: Samuelson 218H
Office Hours: MTWTh 10 - 10:50am and by appointment

Required Text: Hogg, Tanis, and Zimmerman, *Probability and Statistical Inference*, 9th Edition. This quarter we will cover Chapters 5 and 6.

Course Goals: At the end of this course, students should understand some beginning topics in mathematical statistics. Specifically, we will cover:

- Distributions of functions of random variables, using the distribution function technique, transformation technique, and moment generating function technique.
- Limiting theorems and sampling distributions.
- Properties of point estimators and methods of choosing point estimators.

Prerequisite: MATH 411A

Course Assessment: Your overall grade will be determined by the following:

- Homework (35%)
- Two in-class exams (40% total); tentative dates: Between Week 4 – Week 5 and between Week 8 – Week 9. Exact dates will be announced at least a week ahead in class and on Canvas.
- Comprehensive final exam (25%); given Wednesday, March 18, from 8 – 10am

Course grades will be assigned based upon the following scale:

93-100%=A 90-92.9%=A- 87-89.9%=B+ 83-86.9%=B 80-82.9%=B- 77-79.9%=C+ 73-76.9%=C
70-72.9%=C- 67-69.9%=D+ 63-66.9%=D 60-62.9%=D- below 60%=F

The instructor reserves the right to adjust the above scale (in the student's favor) if deemed appropriate.

Required calculator: A scientific or graphing calculator is also required.

Exam P: Students are strongly encouraged to take Exam P in March. For more information, see <https://www.soa.org/education/exam-req/edu-exam-p-detail.aspx>.

Homework: Weekly homework will be assigned in class. Due dates will be announced at the time of the assignment. Homework must be done neatly, stapled, and written on clean-edged paper. Your work should be clear, in a logical order, and provide sufficient explanation. Credit will not be given for late homework. A good guide is to think about whether another student in the class who didn't know how to do this particular problem could understand your solution. Collaboration on homework is permitted, but copying is not permitted. You must write up a problem on your own, even if you worked with others to figure it out. Credit will not be given to any party for work which is identical.

Exams: Make-up arrangements must be made at least 1 day prior to an exam unless you can document an unexpected circumstance beyond your control that prevented you from taking the exam.

Academic Honesty: Consult university policies ([CWUP 5-90-040\(22\)](#), [CWUR 2-90-040\(22\)](#), and [WAC 106-125-020](#)) for student conduct, cheating, plagiarism, and other academic expectations. CWU's policies and recommendations for academic misconduct will be followed, leading to disciplinary action up to and including failing the course.

Diversity Statement: CWU expects every member of the university community to contribute to an inclusive and respectful culture for all in its classrooms, work environments, and at campus events. As a student in this course, you are expected to treat your professors, fellow students, and other people affiliated with your work at CWU with respect, regardless of their sex, race and color, religion and creed, national origin, sexual orientation, gender identify and gender expression, disability and use of assistive devices or a service animal, and veteran or military status.

Disability Support Services: CWU is committed to creating a learning environment that meets the needs of its diverse student body. Students with disabilities should contact Disability Services to discuss a range of options to removing barriers, including accommodations: Hogue Hall 126, (509) 963-2214, ds@cwu.edu

Religious Holiday Absences: In compliance with RCW 28B.137.010, CWU makes every effort to deal reasonably and fairly with students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Students must present written notice to their instructor within the first two weeks of class listing the specific dates on which accommodations are required. Contact the Dean of Student Success at (509) 963-1515 for further information or questions.

Expectations for Student Conduct: Students in this class are expected to interact with students and the professor professionally. Instances of disruptive conduct¹, obstructive conduct¹, or harassment² will be referred to the Dean of Student Success.

The instructor reserves the right to change the policies contained in this syllabus as dictated by developments during the quarter. Changes will be announced in class and on Canvas.

1. Per WAC 106-125-020, the term ``disruptive" or ``obstructive" conduct means conduct, not protected by law, that interferes with, impedes, or otherwise unreasonably hinders the normal teaching, learning, research, administrative, or other functions, procedures, services, programs, or activities of the university. The term includes disorderly conduct, breach of the peace, violation of local or university noise policies, lewd or obscene conduct, obstruction of pedestrian or vehicular traffic, tampering with student election processes, or interfering with the orderly conduct of university investigations or disciplinary proceedings, including interfering with or retaliating against any witness, party, or other participant.
2. The term ``harassment" means unwelcome and offensive conduct, including verbal, nonverbal, or physical conduct, that is directed at a person because of such person's protected status and that is sufficiently serious as to deny or limit the ability of a student to participate in or benefit from the university's educational program, or that creates an intimidating, hostile, or offensive environment for any campus community member(s). Protected status includes a person's actual or perceived race, color, national origin, gender, disability, or other status protected by law.