

OAKLAND UNIVERSITY
DEPARTMENT OF MATHEMATICS AND STATISTICS
STUDENT INFORMATION SHEET AND SYLLABUS

Semester: Winter 2018

Course: Stat 4228/5114: Introduction to Mathematical Statistics II, 4 Credits

Class Time and Room: MW 7:30 pm - 9:17 pm in Mathematics and Science Center (MSC) 102

Faculty: Michael Lawlor; Office MSC 387, e-mail: mrlawlor@oakland.edu

Office Hours: W 6 - 7 PM, F 12 - 1 PM, or by appointment.

Course Description: Interval estimation, sufficient statistics and completeness, point estimation, tests of hypothesis, and analysis of variance. Satisfies the university general education requirement for the capstone experience. Prerequisite(s): STA 4227 with a grade of 2.0 or higher.

Text: An Introduction to Probability and Statistical Inference, 2nd Edition written by George G. Roussas, and published by Academic Press in 2014.

Calculator Policy: You can use your calculator on all tests and homework assignments. To receive full credit on the test and homework, be sure to show all the necessary work for setting up a calculation. Using a calculator to store formulas is not allowed.

Software: Computer laboratories are a formal part of this course. However, you can use any statistical software you like, e.g. SAS, R, Splus, Minitab, SPSS.

Tests: You will have one midterm worth 30% of your grade. Date is tentatively scheduled for March 12th. Your final is Monday, April 23th from 7 - 10 PM and is worth 40% of your grade.

Homework: Homework will be assigned and graded regularly. There will be 6 homework assignments, one for each of chapters 9-14 due at the beginning of the next chapter in class. It will be worth 30% of your overall grade. No late homework will be accepted.

Emergency Closing: If the university is closed at the time of a scheduled test, the test will be given during the next class period after the university reopens. The Oakland University emergency

closing number is 370-2000.

Grading Policy: The grading scale is $\geq 95\%$ is a 4.0, 80% - 94.9% is a 3.0 - 3.9, 65% - 79.9% is a 2.0 - 2.9, 50% - 64.9% is a 1.0 - 1.9, and anything less than a 50% is a 0.0. Grades will be evenly interpolated (meaning if an 80% is exactly a 3.0, than an 83% would be a 3.2). This applies throughout the B - D grades.

Make-up Policy: There will not be any make-up tests. If you miss the midterm and have a valid excuse, your grade will be determined by re-weighting your final (to a ridiculous 70%).

ACADEMIC DISHONESTY: Cheating is a serious academic crime. Oakland University policy requires that all suspected instances of cheating be reported to the Academic Conduct Committee for adjudication. Anyone found responsible for academic misconduct may get a 0.0 in addition to any penalty assigned by the Academic Conduct Committee. You must read the Academic Conduct Regulations of Oakland University. Working with others on homework is not cheating unless indicated by the instructor; handing in an assignment that has essentially been copied from someone else is cheating. Looking at someone else's work during an exam is cheating. Receiving help from someone else or consulting unauthorized material during an exam is cheating. Giving such assistance, even unintentionally, also constitutes cheating.

CLASSROOM ETIQUETTE: Act in a manner that allows yourself and those around you the ability to concentrate on lecture. This includes, but is not limited to, arriving early or on time, leaving after class has ended, not talking during lecture unless asking a question to Dr. Lawlor, and eating/drinking quietly/silently.

IMPORTANT DATES:

- January 3: Classes begin.
- January 15: Martin Luther King Jr. Day.
- January 17: The last day for 100% tuition reimbursement, registration, to add a class (with permission), and a no-grade drop.
- February 17-25: Spring Break.
- March 14: The last day for official withdrawal, and the last day drops are accepted.
- April 16: Last day of our class.
- April 23: Final Exam 7:00 P.M. to 10:00 P.M.

Tentative Syllabus: (subject to change)

Dates	Chapters and Topics
1/3	Ch 8: Basics of Inference (plus a quick review of Chapters 5 - 7)
1/8, 1/10, 1/15, 1/17, 1/22, 1/24	Ch 9: MLE, UMVUE, and Decision Theoretic Estimations
1/29, 1/31, 2/5 2/7	Ch 10: CIs and Confidence Regions
2/12, 2/14, 2/26, 2/28, 3/5, 3/7	Ch 11: NP, UMP, and LR Tests
3/12	Midterm Exam on Chapters 8 - 11
3/14, 3/19, 3/21, 3/26, 3/28	Ch 12: Contingency Tables and Goodness-of-Fit tests
4/2, 4/4, 4/9	Ch 13/14: Regression and ANOVA Tests
4/11, 4/16	Ch 15: Nonparametric Inference
4/23	Final Exam: 7 - 10 PM

Warning with regards to missing class: I understand that sometimes things occur where you may not be able to make it to a class. I feel that attendance is important. You will not have any reduction in grades for missing a class. However, I reserve the right to spend more/less time on any topic/chapter than what is listed above. I reserve the right to change the midterm date and the homework due dates. You are responsible for anything said in class, this includes changing any dates for either the homework or the midterm. If you miss class, I suggest getting the notes from someone who was in class ASAP. Additionally, you should ask your classmate about any announcements that were made.

E-mail Etiquette: You should write an e-mail as if it were a formal letter. It should have (at a minimum) a subject line (e.g. Stat 428 Homework 3 Questions), a greeting, a body, and a closing. It should be both self-contained and concise. Lastly, be proactive not reactive. The earlier you let me know of an issue/potential conflict, the more options I will have in resolving the matter.