Probability Theory and Statistical Inference – Math 530

Monday/Wednesday 5:30-8:15 p.m. PST

In-person: McCarthy Hall (MH) - 480

Via Zoom: https://fullerton.zoom.us/j/88904589935

Zoom Meeting ID: 889 0458 9935

Instructor:	Mortaza (Mori) Jamshidian, Ph.D.
Office:	MH-182A
Office Hours:	Monday: 3:30-5:00 PST & 8:15 – 9:00 p.m. (online and in-person) Wednesday: 8:15 p.m. – 9:00 p.m. PST (online and in-person)
Office Hours Link:	https://fullerton.zoom.us/j/88904589935
Email:	mori@fullerton.edu
Website:	http://www.fullerton.edu/math/faculty/jamshidian/index.php
Phone: **Fax:**	657-278-2398 657-278-1431

Delivery of lectures: This course will be conducted in-person and synchronously through a two-way stream using Zoom. For each class, you have the option to either attend in person or participate via Zoom.

All students attending the class via Zoom are required to activate their webcams throughout the class session and switch on their microphones when instructed by the instructor. If you have a valid reason for not turning on your video, it is essential that you communicate with me as soon as possible. Unacceptable excuses include the absence of a camera or microphone, or insufficient bandwidth.

Attendance is required. Attendance live is mandatory, and participation in class discussions is highly encouraged. I will do my best to record the lectures for your review after class. However, **there is no guarantee that the lectures will be recorded**.

Text: Casella, G. and Berger, R. L. (2001). *Statistical Inference*, Second Edition, Duxbury Advanced Series.

Canvas: We will use the Canvas Learning Management System for class-related material, including take-home quizzes, exams, announcements, and a class discussion forum.

Course Description: Math 530 introduces the theory of statistical inference. The course begins with an introduction to probability theory. It then moves to statistical inference topics, including parameter estimation, maximum likelihood, method of moments, sufficiency, Bayesian estimation, estimators' properties, confidence and credible intervals, hypothesis testing, and asymptotic theory.

Software: There will be some use of R and Rguroo in this class, mainly to show concepts. R is a free software environment for statistical computing and graphics. Rguroo is a cloud-based point-and-click software that is free for all CSUF students. Go to https://www.rguroo.com and click the Register button to register for your account.

Grading

Homework: Homework will be assigned weekly but will not be collected. Homework assignments are due on Monday of each week (except possibly for weeks with holidays or exams). You should attempt to solve all the problems assigned and if you have any questions about the assigned problems, ask on or before the due date in class or during the office hours. You can discuss solutions to the homework problems with your classmates.

Take-home Quizzes: will account for **20% of your grade.** Quizzes will be given weekly (except possibly for weeks with holidays or exams). Your quizzes will contain questions closely related to the homework assignments. Quizzes will be posted on Canvas in pdf format. **You must work on the quizzes individually.** You are to print out each quiz and write your answers to the questions on the printed page. Then, scan your solutions into a single pdf file and submit your solutions to Canvas. Make sure that your scanned documents are readable. Typewritten solutions are also acceptable. You will have roughly 24 hours to write your solutions**. Late quizzes will not be accepted**.

Exams: Two midterm exams **(25% each)** and a final exam **(30%)** will be given. Exams may be given during class time, or they may be take-home or a combination of both. I reserve the right to interview you about your exam solutions after you submit any of your exams.

Make-up exams will be given only in extreme instances and only with the advance permission of the instructor. Any student who does not take an exam at the scheduled time without the prior consent of the instructor will receive a grade of zero on that exam. If any student feels that a sudden illness is sufficiently extreme to warrant a make-up exam, the instructor must be provided with documentation prepared by an appropriate authority.

Posting questions to the Internet: Posting exam or quiz questions or their solutions to any Internet site is strictly prohibited and is considered cheating and plagiarism, and it will be dealt with according to the university policy.

Letter grades: will be assigned according to the distribution of the overall grades. Plus-minus grading will be used.

The following is a tentative exam schedule:

Exam I	*Exam II*	*Final Exam*
Wed. 9/27	Wed. 11/1	Mon. 12/1, 5:00-6:50 p.m. PST

Remote Exams: All students will take the in-class exams on the scheduled day and time. You can take your in-class exams either in person or via Zoom. When taking your exam via Zoom, you must have (1) a computer with Internet access, (2) speakers, (3) a microphone, (4) a webcam, and (3) a scanner. Instruction on how exams will be proctored will be provided.

Required Technology Materials and Equipment:

- A computer equipped with speakers, a webcam, and a microphone. **Headsets are highly recommended**.
- Cable or DSL access to the high-speed Internet.
- A scanner will be required to scan handwritten material.
- Zoom must be installed on your computer.

Students with Special Needs: If you have a disability or special need for which you are or may be requesting an accommodation, please inform me and contact the Disabled Student Services Office, located in University Hall 101, as early as possible. For more information, the Disabled Student Services Office can be reached by calling (657) 278-3117 or visiting their website at www.fullerton.edu/disabledservices/. Confidentiality will be protected.

ACADEMIC INTEGRITY

Students are expected to maintain a high standard of academic integrity. Policies on academic integrity will be strictly enforced. Familiarize yourself with the academic dishonesty policy, which can be found at http://www.fullerton.edu/integrity/student/integritycounts/academic_integrity/. According to the Policy on Online Instruction (UPS 411.104), students enrolled in online courses are subject to the same university policies and procedures applicable to students attending courses on campus. Academic standards regarding cheating, plagiarism and appropriate online behavior ("Netiquette") shall be according to the UPS 300.021 Academic Dishonesty.

MATH DEPARTMENT ADD / DROP DATES

September 5 (Tuesday): Last day for students to ADD with a permit. All permits expire at midnight on September 5.

September 5 (Tuesday): Last day for students to DROP without a grade of "W". Students drop using Titan Online.

September 18 (Monday): Last day the Math Department will be flexible on the approval of non-medical withdrawal requests. Beginning Tuesday, September 19, students must have a serious and compelling reason for non-medical withdrawal requests and must provide supporting documentation for their reason.

November 13 (Monday): Last day to withdraw with a truly serious and compelling reason that is clearly beyond the student's control. Students must document their reason.