STAT6304 Advanced Statistical Inference  

**Lecture** 
Section 1:  
Tu 2:00PM - 3:50PM at Sc S 146  
Th 2:00PM - 3:50PM at Sc N 207  

Section 2:  
Tu 6:00PM - 7:50PM at Sc S 146  
Th 6:00PM - 7:50PM at Sc N 207  

**Instructor** 
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Tel: (510)885-3428  
E-mail: kelly.fan@csueastbay.edu  

**Office hours** 
TuTh 4:20 pm – 5:50 pm  

**Class website** 
http://www.sci.csueastbay.edu/~sfan  

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**STUDENT LEARNING OUTCOMES:**  
This course provides an introduction to the following competencies: 1. Apply statistical methodologies, including a) descriptive statistics and graphical displays, b) hypothesis testing and confidence intervals; 2. Formulation and model practical problems for solutions using statistics; 3. Produce relevant computer output using standard statistical software and interpret the results appropriately; 4. Communicate statistical concepts and analytical results clearly and appropriately to others.

**PREREQUISITE**  
Integral calculus: specifically, course equivalent to MATH 1305 or MATH 1820. Basic concepts of differential and integral calculus will be used during the course.

**REQUIRED TEXTBOOK**  

**COURSE GOALS/TOPICS TO BE COVERED**  
This course will cover Chapters 1-10 and several sections in Chapter 11. Lectures will contain some topics not found in the text, including the use of software *Minitab*. Computer sessions will be held when necessary. A student is expected to master the covered materials and to learn how to do a few procedures in *Minitab*. Explicitly, the topics in this course are  

- Descriptive statistics: graphical methods and numerical methods  
- Basic probability concepts: sample space, event, probability, mutually exclusive, independence, conditional probability  
- Probability models: discrete models (binomial), continuous models (normal), expectation and variability  
- Sampling and sampling distributions: simple random sample, Central Limit Theorem

This syllabus is available on BlackBoard.
• Statistical inference: confidence intervals, statistical significance, hypothesis tests
• One-Way ANOVA and simple linear regression

SOFTWARE/HOMEWORK
Except the exam weeks, a problem set will be given every Tuesday and due in class on the following Tuesday. Although the instructor will only teach Minitab but students are allowed to use R to do homework. No late homework will be accepted.

PROJECT/EXAMS
Three midterm exams will be given in class on Oct 20, Nov 10 and Dec 1. You are expected to bring your Student I.D. for identification for exams. A group project will be given at the end of quarter.

Warning: Any student caught cheating during any exams will immediately get zero score for that exam. During exams, it is your obligation to keep your work out of the sight of others.

Important: You are expected to complete all work and take all exams according to announced schedules. There are no makeup exams and a zero score is given to the missed exams. If you must miss an exam due to documented illness or emergency and provide the necessary document in 3 days from the exam date, I might agree to make some arrangement.

GRADING
• 20% for homework
• 20% for each exam
• 20% for the final group project
I do not grade on the curve. The approximate total scores separating letter course grades are shown below:

A 90  B 80  C 70

The Statistics Department follows very carefully the rules as stated in the Catalog for giving W (weeks 4-7) and IN (8th week on) grades. In particular, you will not receive a W or IN grade if the only reason is poor academic performance.

CLASSROOM COURTESY
• Cell phones must always be turned off during class.
• No eating, drinking, reading newspapers, or surfing internet is permitted in classrooms and computer labs.
• Please arrive on time and remain for the full class.
• Conversations with other students are not allowed and please raise your hand when you have a question.

This syllabus is available on BlackBoard.
Emergency Information

California State University, East Bay is committed to being a safe and caring community. Your appropriate response in the event of an emergency can help save lives. Information on what to do in an emergency situation (earthquake, electrical outage, fire, extreme heat, severe storm, hazardous materials, terrorist attack) may be found at:  
http://www.aba.csueastbay.edu/EHS/emergency_mgnt.htm
Please be familiar with these procedures. Information on this page is updated as required. Please review the information on a regular basis.

Policy on Academic Dishonesty:

The University has a published policy on cheating and academic dishonesty. Students are expected to be familiar with the policy and to abide by it. Cheating will result in: 1) a zero score on the test and the loss of all grading options; and/or 2) an "F" grade for the course; and/or 3) referral to the Academic Vice President for expulsion from the University.

By enrolling in this class the student agrees to uphold the standards of academic integrity described in the catalog at http://www20.csueastbay.edu/academic/academic-policies/academic-dishonesty.html.

Accommodations for Students with Disabilities:

If you have a documented disability and wish to discuss academic accommodations, or if you would need assistance in the event of an emergency evacuation, please contact me as soon as possible. Students with disabilities needing accommodation should speak with Accessibility Services.
http://www20.csueastbay.edu/af/departments/as/

http://www.aba.csueastbay.edu/EHS/emergency_mgnt.htm
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