ECONOMICS 321: INTRODUCTION TO STATISTICS

Time and Place:
- Mondays, Wednesdays, and Fridays, 9:30-10:20am; BUSAD A102

Contact Information and Office Hours:
- Office: Saunders Hall 531  Phone: 808-956-7296  E-mail: baybars@hawaii.edu
- Office Hours: Mondays and Wednesdays 11:00am-12:00pm and by appointment.

Course Objectives:
In this course we aim to study basic statistical concepts with a specific emphasis on problem identification and problem solving. The main topics include descriptive statistics, probability, discrete/continuous probability distributions, sampling, confidence intervals, and hypothesis testing. You will get the chance to improve your quantitative and analytical skills as well as obtain a solid background for further courses in statistics and econometrics.

In the immediate run you will most likely benefit from the skills you develop for this class in your summer internships and in the long run you will realize that statistical analysis is a crucial part of your toolkit as managers, economists, and social scientists of the future.

Prerequisites: None

Textbook:
You do not have to buy the latest (7th) edition. 6th edition is perfectly fine, especially if you want to save money. Order it soon and choose expedited shipping.

- or

You are expected to read the appropriate chapter(s) before each lecture. Note that, the textbook is not a substitute for the lecture notes and the lectures go beyond the coverage of the book so, as I will repeat below, your attendance and taking notes during lectures are absolutely crucial for your success in this course.

Assignments:
You will be assigned around 8-9 problem sets which mainly comprise exercises from your textbook. Attacking these problems by itself is a vital part of the learning and preparation process and you should never leave the answer to a question blank. For each problem set, I will randomly select one question and grade it for accuracy, whereas the remaining questions will be graded based on completeness only. You may discuss the questions with your classmates, but you must hand in your individual and original answers. It is imperative to turn in your assignments at the announced deadlines. The problem set grade will be reduced by 3 points if you hand it the next lecture after it is
due and by 7 points if it is two lectures late. The weight of the problem sets is 20% of the final grade and each is graded out of 10 points. The problem set with the lowest grade will be dropped.

You will be assigned around 5-6 computer exercises that must be completed by using Microsoft Excel. I will provide instructions for Excel in case you are not familiar with it. If you turn in a computer assignment up to 1 lecture late, you will get 3 points below the lowest grade for that computer assignment in your class and zero credit beyond 1 lecture. Each computer assignment is graded out of 10 points. The weight of the computer assignments is 10% of the final grade.

I encourage you to participate in the class discussions and I may ask you to demonstrate solutions on the board after working on them in groups or individually prior to class. Although there is no direct credit for participation and attendance, I will take them into account in determining grades and especially the grades in the borderline.

**Course Materials Online: Laulima**

Here is a list of the things that you can find on https://laulima.hawaii.edu/portal:

- A copy of the syllabus if you lose this
- Important announcements
- Problem set and computer assignments, due dates, and solutions
- Handouts on the material covered or to be covered in class (please print these and bring to class)
- Sample exam questions and answers
- Final Exam Grades

Thus, you should regularly check Laulima!

**Exams and Grading:**

There will be one midterm and one final exam for our class. The weight of the midterm exam is 30%, while the weight of the final exam is 40% of the final grade. If you perform better in the final exam as compared to the midterm, the weight of the exams will be readjusted as 20% midterm and 60% final (Unexcused absences on midterms receive a zero and do not qualify for this convenience). The final exam is not cumulative. I will provide some sample questions prior to the exams. The midterm exam date will be announced in class after discussing the exam schedules of the students.

**Make-up Policy:**

Make-up exams for the midterm and final examinations may be provided only for the following legal excuses as authorized by the university: illness supported by an official note from your physician, religious holidays, and participation in university activities at the request of the university authorities. However, it is still to my discretion to administer a make-up exam or not. You are obliged to inform me immediately after an exam should you miss it (even if you may not have the documentation yet).

**Grading Summary:**

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<th>Component</th>
<th>Weight</th>
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<tr>
<td>1. Problem Sets</td>
<td>20%</td>
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<td>2. Computer Assignments</td>
<td>10%</td>
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<td>3. Midterm</td>
<td>30%</td>
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<td>4. Final</td>
<td>40%</td>
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<td>Total</td>
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Calculator:
You absolutely need a scientific/statistical calculator for this class. The calculator should be at least able to perform tasks such as (1) raise $e$ to a negative number (2) compute the natural logarithm of a number (3) compute combinations of $n$ things taken $x$ at a time, i.e. $C(n,x)$ or $nC_x$ (4) compute permutations, i.e. $P(n,x)$ or $nP_x$ (5) should have 7 or 8 digits of display after the decimal. You should bring your calculator to every class and to certainly all the exams and quizzes. You will not be permitted to exchange calculators during exams. Make sure that you keep the manual and make a copy of it for backup.

Office Hours:
You are encouraged to utilize my office time. Please do not hesitate to see me for any questions you have in the posted hours or by arranging an appointment with me if these hours do not work for you. I am here to help, not judge you so do not be afraid to ask questions.

Academic Dishonesty:
I have absolutely zero tolerance against any sort of cheating, plagiarism, and academic dishonesty. I value fairness to all students and will seek the harshest disciplinary action in case the trust is broken.

Disability Services:
Any student who feels s/he may need an accommodation based on the impact of a disability is invited to contact me privately. I would be happy to work with you, and the KOKUA Program (Office for Students with Disabilities) to ensure reasonable accommodations in my course. KOKUA can be reached at (808) 956-7511 or (808) 956-7612 (voice/text) in room 013 of the Queen Liliuokalani Center for Student Services.

OUTLINE OF TOPICS*

- Topic 1: Introduction: Basic Concepts (Chapter 1)
- Topic 2: Graphical Description of Data (Chapter 2)
- Topic 3: Statistical Description of Data (Chapter 3)
- Topic 4: Probability (Chapter 5)
- Topic 5: Discrete Probability Distributions (Chapter 6)
- Topic 6: Continuous Probability Distributions (Chapter 7)
- Topic 7: Sampling and Sampling Distributions (Chapter 4 and Chapter 8)
- Topic 8: Confidence Intervals (Chapter 9)
- Topic 9: Hypothesis Testing I (Chapter 10)
- Topic 10: Hypothesis Testing II (Chapter 11)

*Note: Each student has a different taste for the pace of lectures. What is slow for you might be too fast for others or vice versa. However, do not hesitate to let me know how you feel. And finally please be good sport and attend all lectures.