ECONOMICS 321: INTRODUCTION TO STATISTICS

Time and Place:
- Mondays, Wednesdays, and Fridays, 2:30-3:20pm; BUSAD (Business Administration) A101

Professor Karacaovali’s Contact Information and Office Hours:
- Office: Saunders Hall 531   Phone: 808-956-7296   E-mail: baybars@hawaii.edu
- Office Hours: Mondays and Wednesdays 1:15-2:15pm and by appointment

Teaching Assistant’s Contact Information and Office Hours:
- Office: Saunders Hall xxx   Phone: 808-xxx-xxxx   E-mail: xxxxx@hawaii.edu
- Office Hours: TBA

Course Objectives:
In this course we aim to study Basic Statistics with a specific emphasis on problem identification and problem solving. The main topics include descriptive statistics, probability, discrete and continuous probability distributions, sampling and sampling distributions, confidence intervals, hypothesis testing, correlation and basic regression analysis.

In this course you will get a chance to improve your quantitative and analytical skills as well as obtain a solid background for more advanced courses. More importantly, you will have a more informed understanding of Statistics in your everyday lives and future careers.

Prerequisites: None

Required Equipment: i>clicker
i>clickers are required (while a textbook is not) for this class. Make sure that you obtain your i>clicker by the second day of classes. You may purchase one at the Manoa Bookstore. You may use your already existing i>clicker if you have one but if you are buying new, please get an i>clicker 2.

Next, make sure to register your i>clicker on Laulima: https://laulima.hawaii.edu/iclicker/ in order to earn credit for attendance and participation!

Recommended Textbook:
You do not have to buy the textbook. If you buy it, you don’t need the latest (7th) edition. 6th edition is perfectly fine, especially if you want to save money. Order it online right away and choose expedited shipping.

  or
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:
Practice is the key for understanding Statistics. You will be assigned around 8-9 problem sets which mainly comprise exercises based directly on lectures. 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. They 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 5 points if you hand it by the next lecture after it is due and will receive no credit thereafter. The weight of the problem sets is 15% of the final grade. The graded problem sets will be returned back in class by the TA before lectures and during TA’s office hours.

You will be assigned several 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. The weight of the computer assignments is 15% of the final grade. The graded computer assignments will be returned back in class by the TA before lectures and during TA’s office hours.

Attendance:
Attendance is very important for understanding the material truly and for your success in Statistics. In order to ensure you attend and do well in this class, I will allocate 5% of your grade to mere attendance which will be recorded through i>clickers only. Four unexcused absences will lead to a 0% attendance grade and each additional unexcused absence beyond four lectures will mark-down your overall grade by 1% each. This will be especially crucial in determining borderline grades.

Participation:
In order to facilitate participation and get instant feedback, we will have several in-class exercises. You will get a chance to work on these exercises in small groups. Given the large class size, I will rely on i>clickers to keep track of participation and attendance. I will allocate 10% of your grade to participation and both correct and incorrect answers will get full credit. You need to respond to a minimum of 75% of the questions posed in a given lecture (either correctly or incorrectly) to get credit.

Bonus Challenge:
In order to encourage students stay on top of the material and reward those who go the extra mile, some participation exercises will be graded for accuracy and awarded 3% bonus credit on top of the final grade. The evaluation will again rely on i>clickers but credit will only be given for correct answers.

Exams and Grading:
There will be around 5-6 quizzes based directly on the problem set questions and will be administered in class after you obtain the solutions to the problem sets. They are worth 15% of your final grade. There will be no make-ups for the quizzes but the quiz that you have to miss will be
waived if you have a university approved legal excuse (see the “Make-up Policy” section below). Unexcused absences on quizzes will receive a zero. The quiz with the lowest grade will be dropped.

There will be one midterm and one final exam for our class. The weight of the midterm exam is 15%, while the weight of the final exam is 25% 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 10% midterm and 30% 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.

The graded midterms and quizzes will be returned back in class by the TA before lectures and during TA’s office hours.

**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 up to my discretion to administer a make-up exam or not. You are obliged to inform me and the TA immediately after an exam should you miss it (even if you may not have the documentation yet).

In the case of problem sets and computer assignments, you need to contact the TA to make alternative arrangements to submit your assignments on time if you have a university approved excuse to miss a class. And in the case of attendance and participation credits, you need to contact the TA to be excused from them when you have a valid excuse.

**Course Materials Online: Laulima**

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

- A copy of the most updated syllabus
- Important announcements
- Problem sets, 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
- Formula sheets and statistical tables
- Final Exam Grades

Thus, you should regularly check Laulima!

**Grading Summary:**

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<thead>
<tr>
<th>Category</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Attendance</td>
<td>5%</td>
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<tr>
<td>Participation</td>
<td>10%</td>
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<tr>
<td>Problem Sets</td>
<td>15%</td>
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<td>Computer Assignments</td>
<td>15%</td>
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<td>Quizzes</td>
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<td>Midterm</td>
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<td>Total</td>
<td>100%</td>
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<td>Bonus Challenge</td>
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Calculators:
It would be useful to have a basic scientific/statistical calculator for this class. It doesn’t have to be anything fancy but it would be nice if the calculator can perform tasks such as (1) compute combinations of $n$ things taken $x$ at a time, i.e. $C(n,x)$ or $nCx$ (2) compute permutations, i.e. $P(n,x)$ or $nP_x$ (3) 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. Cell phones, pdas, tablets etc. will not be permitted during exams as well.

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! Additionally, you may meet the teaching assistant at the posted office hours.

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 Lili‘uokalani Center for Student Services.

OUTLINE OF TOPICS*

There might be changes to the schedule as we advance through the course.

- Topic 1: Introduction (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)

MIDTERM EXAM: Topics 1 through 5

- 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)
- Topic 11: Simple Regression (Chapter 15)
- Topic 12: Multiple Regression (Chapter 16)

FINAL EXAM: Topic 6 and onward (i.e. not cumulative)

*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.