

## **Economics 321**

## **Introduction to Statistics**

Semester: Summer 2008 (July 7, 2008 - August 14, 2008)

MTWRF 9:00 a.m. - 10:15 a.m.

Instructor: Quang Duc Nguyen

Office: TBA

Tentative Office hours: T-R 11 a.m. - 12 p.m. (or by appointment)

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### **Course Description**

**Welcome to the wonderful world of data!** This three credit hour course is designed for the students who have little or no background in statistics. Statistics is an incredibly useful tool that we see almost everywhere in everyday life and our studies. The basic statistical ideas, techniques, and methods to be covered range from, but are not limited to: probabilities, frequency distributions, the normal distribution, confidence intervals, hypothesis testing, correlation and regression analysis, and analysis of variance.

#### **Goals of the Course:**

1. Learn to understand the main features statistics.
2. Learn how to analyze statistical data properly.
3. Understand the role of formal statistical theory and informal data analytic methods.

4. Gain an understanding of statistical methods relevant to more advanced interdisciplinary courses.

5. Sharpen students statistical intuition and abstract reasoning as well as their reasoning from numerical data through the class project, interdisciplinary examples and exercises.

We hope that you will like statistics and see the power of the statistics on enriching the quality of life of the community that you are a part of.

### **Outline of course material to be covered**

The Nature of Probability and Statistics

Frequency Distribution and Graphs

Data Description

Counting Techniques & Probability

Discrete Probability Distributions

The Normal Distribution

Confidence Intervals and Sample Size

Hypothesis testing

Testing the Difference between 2 Means, 2 Variances, & 2 Proportions Correlation and Regression

Chi-Square and Analysis of Variance (ANOVA)

### **Class Resources**

The following course materials are available from the bookstore:

Text: Bluman, Allan G., "Elementary Statistics, A Step by Step Approach, 6<sup>th</sup> ed." McGraw Hill, 2008.

It is recommended that you read the text before the lecture. Also, please bring your text to class, as we will use it frequently for in-class examples and necessary statistical tables.

### **Tentative Grading Schedule**

Grades will be based on the following:

In class exercises	20%
Quizzes:	10%
Midterm	30%
Final Exam:	30%
Project:	10%

**Midterm and Final Exam:** Please check your schedule of courses to confirm your final exam schedule. If you are not willing and/or able to take the final exam at the time indicated (due to travel arrangements, multiple exams scheduled, time conflicts, etc.), please do not take this class. I will not administer early or late exams.

**In class exercises:** This is an important component of the course. We can learn statistics a great deal by doing the exercises. In most classes, we will spend 30 minutes to do the exercises together. I will assign some questions in the textbook. You then form your own groups to solve these questions and present them in the class. The added benefit of doing the exercise together is to help you develop the skill of working in team.

There will be a few quizzes. The quizzes/exams will be short answers, t/f, m/c, and/or problem

solving. There are no make-up quizzes/exams. I will be assigning final grades using the plus/minus system.

### **Attendance and Class Participation**

Attendance is mandatory and class participation may provide extra credit points when indicated by the instructor. You are responsible for any changes in material or announcements given in class. Contact a classmate for any information missed due to absence.

**Tardiness, absence, or leaving early are not acceptable excuses for not knowing information or important announcements covered in class.**

### **Project and Participation**

Participation grade consists of project presentation and peer review feedback

### **Academic Honesty**

Cheating and plagiarism will not be tolerated. Failure to comply with University of Hawaii guidelines of academic honesty may result in a failing grade in the course and further action taken by the university. Please do not attempt to test the boundaries of this guideline.

**Cell phones and pagers:** I respect the student's need for communication provided the following rules are followed without exception:

1. Devices are set on vibrate or silent mode.
2. Do not answer phone in class.

Please respect these rules so no other steps need to be taken to assure compliance.

**Others:**

I reserve the right to make any changes to class policy and schedule. You will be informed of any changes that occur.

Fell free to ask me questions. Please remember that your questions are important to me, that I want to help you to do well in the course, and that **every question is worth answering.**