

University of Hawaii at Manoa
Department of economics
Introduction to Statistics (ECON 321 section 001) “Tentative Syllabus”

Fall 2008 (ECON 321 Section 1)
MWF 9.30 – 10.20 AM
Room MSB 100

Instructor : Supachai Srisuchart
Office Hour: Room SAUND XXX
MW 10.40 - 11.45

TA : TBA

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Course Description and Teaching Style

This course mainly introduces the concept about statistics, and how to apply statistical method to your interesting topics. The context of this course begins with the concept about how to present the statistics by an appropriate table and graph, probability theory and its applications. The sampling process and its inference, estimation, and of parameters will be discussed in detail as well as the hypothesis testing. The last section is about regression with single and multiple dependent variables with applications. Most of them will be discussed in theory and its applications.

We have *three midterm exams without the final exam*, one group report with presentations, every week homework, and class participation. All midterm exams allow for one A4 cheat sheet, front - back. The detail of each will be discussed in detail later. This class is generally tough to understand everything in detail. According to we have a lot of calculation and examples in class, please *bring your own calculator to class every session*.

This course will *comprehensively use Excel*. The functions used in class come from the standard package and add-ins from Microsoft and from textbook. Some template and spreadsheet will be provided by instructor. I mostly assign homework using Excel. Computer labs in SAUND building [by your student ID and password] at third and the sixth floor already accommodate for a necessary module.

The expected outcome of this class: After finished this class, students have to understand the basic concept of how to random an appropriate sample, find an appropriate measure of center, probability theory, important discrete and continuous random variables, how to apply the normal distribution in various circumstances, hypothesis testing, simple and multiple regression, basic non-parametric analysis. In addition, student can use the Excel program in appropriate analysis. Students have to apply these concepts to be an empirical / survey / descriptive paper with an appropriate methodology. Last of all, students have to prepare a simple report with presentation applying the statistical method in acceptable quality

Course Material

Triola, Mario F., 2007. *Elementary Statistics Using Excel (3rd ed.)* Boston: Pearson/Addison-Wesley. **[Required]** Make sure your copy of the text has the CD included with the package. This CD includes data set, homework, and Excel add-ins application.

Nolan, Deborah, 2000. *Stat Labs: Learning Theory Through Applications*. Springer-Verlag New York **[Required in some chapters]**. This book can be freely accessed and printed through university library website. Do not print until instructor assigns which chapter will be used.

>> Electronic base: ebrary > use UH ID and password > create your username and password in to ebrary website, add this book into bookshelf > print it when you need.

Other materials

Statistics tables are provided in textbook, please bring it to class [I will tell you when we will use it].

Handout by instructor and Homework assignment

Grading (tentative)

I will use the group curve for grad assignment. Plus and minus sign will be assigned in total grade.

Midterm 1	(Oct 6, with one cheat sheet A4 front-back)	20% (100 points)
Midterm 2	(Oct 27, with one cheat sheet A4 front-back)	20% (100 points)
Midterm 3	(Nov 26, with one cheat sheet A4 front-back)	20% (100 points)
Homework	(Drop 3 lowest times out of approximate 15 times)	20% (100 points)
One group report and presentation		15% (75 points)
Class participation		5% (25 points)
Total		100% (500 points)

>>**Note: We don't have FINAL EXAM, the midterm exam dates are in schedule. Grading will be based on curve including only member in your section even I teach two ECON 321 course because we have different exams, class time, and number of student.**

Exam policy: Make up exams will not be offered except in the most tragic case with well-documented support, please check the class schedule carefully. The midterm and final exams allow for one cheated sheet front-back size A4 with calculator. Questions include multiple choices, short answer, and explanation with calculation. The topic cover in exam showed in class schedule. TA will help you to prepare for midterm exams (1-2 times for each midterm). My midterm exams will be added with some bonus point.

>> Although I teach two ECON321 sections in this semester, I may design different exams because of class time, covered topics, and number of student. In addition, I do not allow you to take the exam in other ECON 321 section that you are not registered.

However, you can join my lecture or fill your note if you are not sure about concept or missed a class.

Homework: All of the homework due before class starts (before 9.30 AM). To be fair to all class members, I and my TA will not accept late homework. This policy will be strictly enforced, with exceptions only for documented illness and documented University functions such as athletic travel. The problem sets also include an analytical section and application. Homework includes hand in homework and Excel homework. Scores of each homework is equally weighted.

>> **Excel Homework will be sent to address: homework_section1@yahoo.com**

Each of homework will be graded with equally weight; however, you may have some business during semester, I will drop three lowest score of your score out of my calculation. Bonus point will be frequently assigned from class participation. If you properly register, you can use the computer lab at SAUND building 3rd or 6th floor (by your UH ID and password).

Group report and presentation: This section mainly aims to practice and encourage you to analytically apply to statistics and its application to your major context, interesting topics, and hot issue. The 3-5 members will be grouped by your preference. Survey or secondary data are allowed for this report. You may use some chapter in *Stat Labs* as the guideline for your paper. Some question from a group report will be selected in Midterm3.

The grading criteria are following:

- Hypothesis (you may have some motivation idea, why you select this topic?, who did it before?, what is their conclusion?)
- Appropriate of simple survey and data to answer your question
- Method – we limit method that we learned in class only, you have to ask yourself, why you use this method?, What is the advantage of this method over other?
- Analysis – appropriate analysis by theoretical guideline, your own idea. In some case, the result may be not good (wrong direction of sign), it is OK, Please, do not cheat to report, you try to find the other way to explain it such as some limitation, misspecification, measurement error from survey, or stupid questionnaire.
- Conclusion and policy implication
- Presentation style, Well- Preparation, Organization
- Contribution to your group
- **Important Note:** Try to avoid topic about race, religion, nationality, politic, disability, personal issue, and other conflict in negative opinion. However, these topics might be changed the tone into the neutral direction. Please feel free consult me if you do not make sure about your topic.
- Do not use experimental method such as play a game with some compensation

Class participation: The class participation score will be randomly assigned in class for small and individual group work. Scores of each participation is equally weighted. The example of participation is random quiz. The participation may take 5 – 10 minutes before the class finish to remind you about next previous and next context. Although score for this section is not many enough to change your grade, it is sufficient for change the plus and minus sign of your total grade.

Note: Your participation score will be counted if you are in the registered class (session 1 – MWF 9.30-10.20).

Excel Setting: You have to initially set the some add-ins program in Excel by following procedure:

1. Excel Add- Ins

Open Excel > Tools > add-ins > check at Analysis ToolPak, Solver Add In and click OK. We will have Solver and Data analysis in toolbar “Tools”

2. DDXL

Insert CD from text book and find the folder DDXL and do step by step by instructions.

Both components will help you to calculate the statistics information, and some kind of graph that did not include in original Excel.

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 courses and further action taken by the university. Please do not attempt to test the boundaries of this guideline.

Note

I reserve the right to make any changes to the class policy and schedule because of necessary and valid condition. You will be informed via formal email and in class discussion before every change will occur.

Tentative Class Schedule Session1 (Monday-Wednesday-Friday)

Session	Important Date	Topic	Reading List
1	Aug 25	Overview; Nature of Data; Critical Thinking	Triola Chapter 1
2	Aug 27	Graphing of Data, Frequency Distributions and Histograms	Triola Chapter 2, 3
3 – 4	Aug 29, Sept 3	Measures of Center & Variation Last day of drop or register Sept 2 No Class on Labor Day (Sept 1)	Triola Chapter 2, 3
5 – 8	Sept 5, 8, 10	Correlation and Simple Regression	Triola Chapter 10
9 – 11	Sept 12, 15, 17	Fundamentals of Probability; Addition Rule Multiplication Rule: Basics	Triola Chapter 4
12 – 13	Sept 19, 22	Random Variables <i>Submit Group Member and Topics***</i>	Triola Chapter 5
14 – 15	Sept 24, 26	Binomial Probability Distributions Mean, Variance & Standard Deviation for Binomial Distribution No Class on Instruction Holliday (Sept 28)	Triola Chapter 5
16 – 18	Sept 29 Oct 1, 3	Normal Distributions and law of large number	Triola Chapter 6
19	Oct 6	Midterm 1 Topic covered session 1 - 18	+ Review class (TBA)
20 - 21	Oct 8, 10	Applications of Normal Distributions	Triola Chapter 6
22 – 23	Oct 13, 15	Sampling Distributions and Estimators Central Limit Theorem	Triola Chapter 6, 7
24 – 25	Oct 17, 20	Estimates and Sample sizes and Proportion Estimating a Population Mean, σ Known	Triola Chapter 7, 8, 9
26 - 27	Oct 22, 24	Estimating a Population Mean, σ Not Known and Hypothesis Testing First Draft of group paper*** Last day of restricted withdrawal Oct 24	Triola Chapter 7, 8, 9
28	Oct 27	Midterm 2 Topic mainly covered session 14 – 27	+ Review Class (TBA)
29 – 30	Oct 29, 31	Hypothesis Testing Testing claim about mean and proportion	Triola Chapter 8, 9
31 - 32	Nov 3, 5	Estimating a Population Variance	Triola Chapter 12
33 - 34	Nov 7, 10	Testing claim about Two Samples	Triola Chapter 9
35 – 37	Nov 12, 14, 17	Non-Parametric Statistics	Triola 13
38 – 40	Nov 19, 21, 24	Regression with multiple dependent variables (again) and ANOVA	Triola 10, 12
41	Nov 25	Midterm 3 Topic mainly covered session 24 – 40	+ Review Class (TBA)
42 – 45	Dec 1, 3, 5, 8	Group Report : Mandatory and check attendance (participation) for each presentation	
46	Dec 10	Last Day of instruction, Q&A <i>Submit Final Draft for group paper***</i>	