

RUTGERS UNIVERSITY
Department of Agricultural, Food & Resource Economics

Application of Statistics in Business Economics: 11: 373: 215

Fall

Tuesdays 3:55 – 5:15 213 Hickman

Thursdays 3:55 – 5:15 213 Hickman

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Office Hours: Tuesdays 3:55 – 5:15 pm.

Thursdays 3:55 – 5:15 pm.

Course Description and Goals:

The purpose of this course is to develop skills in statistical analysis and computer techniques. Particular focus will be on applied descriptive and inferential statistics, including cross-tabulations and correlation and regression analysis, and on computer tools useful in business economics. The course will consist of lectures, weekly readings, problem sets and examinations. In addition, we will have two formal lab sessions and learn to use the statistical package SPSS for Windows.

At the end of the course students should be able to: (1) demonstrate the use of applied statistics for business applications, (2) analyze and interpret data using SPSS, and (3) read and understand professional/business literature with an appreciation for the contribution made by technical (statistical) tools.

This course is intensive and will require serious attention. You should plan on attending every class session – this is particularly important for a quantitative methods course.

Requirements:

- ❖ Participation in class.
- ❖ Completing three problem sets. Doing problem sets is the primary way of really understanding the material. Students are encouraged to work in groups on the problem sets, but solutions are to be written independently.
- ❖ A midterm exam and a cumulative final exam.

Grading:

The final grade will be computed as follows:

3 Problem Sets (10 percent each) 30 percent

Midterm Exam	30 percent
Final Exam	40 percent

It is important that exams be taken as scheduled. Please notify me if, for medical or other valid reasons, it is impossible for you to meet an examination or other deadline.

Text Book:

Healey, Joseph F. (2008). *Statistics: A Tool for Social Research*, Eighth Edition. New York: Wadsworth.

The text is available at Amazon and Barnes & Noble.

Class Attendance:

Class attendance is strongly recommended.

Cell Phones/Blackberries/Related Electronics:

The use of these devices in class is disruptive to the teaching process. All devices must be turned off in class. Failure to do so will be addressed as follows:

1st infraction: Verbal reprimand

2nd infraction: Student will be asked to leave class

3rd infraction: Student will be asked to leave class and will be readmitted only after department chair written approval

Schedule of Classes

Week 1	Introduction to Course	
Part I – Descriptive Statistics		
Week 2	<ul style="list-style-type: none"> • Introduction to Statistics • Basic Descriptive Statistics 	Ch. 1 and 2
Week 3	<ul style="list-style-type: none"> • Measures of Central Tendency • Measures of Dispersion 	Ch. 3 and 4
Week 4	<ul style="list-style-type: none"> • The Normal Curve • <i>Problem Set 1 distributed</i> 	Ch. 5
Week 5	<ul style="list-style-type: none"> • SPSS Lab I 	
Part II – Inferential Statistics		
Week 6 <i>PS #1 Due</i>	<ul style="list-style-type: none"> • Sampling and Sampling Distribution • Estimation Procedures 	Ch. 6 and 7
Week 7	<ul style="list-style-type: none"> • Estimation Procedures (contd..) • One Sample Hypothesis Testing 	Ch. 8
Week 8	Midterm Examination	
Week 9	<ul style="list-style-type: none"> • Two Sample Hypothesis Testing • Hypothesis Testing: Anova • Hypothesis Testing: Chi Square • <i>Problem Set 2 distributed</i> 	Ch.9, 10 and 11
Part III – Measures of Association		
Week 10	<ul style="list-style-type: none"> • SPSS Lab II • Bivariate Association: Intro & Basics • Measures of Association: Nominal Variables 	Ch. 12 and 13
Week 11 <i>PS #2 Due</i>	<ul style="list-style-type: none"> • Measures of Association: Ordinal Variables • Measures of Association: Interval Variables 	Ch. 14 and 15
Week 12	<ul style="list-style-type: none"> • Using SPSS for Measures of Association 	Ch 16
Part IV – Multivariate Techniques		
Week 13	<ul style="list-style-type: none"> • Elaborating Bivariate Tables • <i>Problem Set 3 distributed</i> 	
Week 14	<ul style="list-style-type: none"> • Simple Linear Regression 	Ch. 17
Week 14	<ul style="list-style-type: none"> • Multiple Linear Regression 	
<i>PS #3 Due</i> Exam Week	Final Exam (Cumulative)	