## Instructor Information

| | |
|---|---|
| Name | Dr. Hedayeh Samavati |
| Email | SAMAVATI@IPFW.EDU |
| Office location | Neff 340E |
| Office hours | TR: 11:00 - Noon & by appointment. |
| Office Phone | 260-481-6487 |

## Teaching Assistant

| | |
|---|---|
| Name | Mr. Adam Westgerdes |
| Email | Westaj01@students.ipfw.edu |

## Textbooks

| | |
|---|---|
| Required reading | *Statistics for Business and Economics*, Anderson/Sweeney/Williams, Southwestern Publishing Co., Tenth Edition/2009 |
| Recommended reading | *Statistics for Business and Economics Workbook*, Anderson/Sweeney/Williams, Southwestern Publishing Co., 2009 |

## Course Prerequisites

Math 229 or equivalent, Sophomore Standing

## Course Objectives

1. Students are to become competent in the use of statistical methods and to be able to apply concepts, principles and techniques of decision making to the problems examined in the upper division business courses at IPFW and to those in the "real world".

2. Students are to develop an appreciation for the utility of statistical methods and the evidence these methods can provide and the way they are used in business decision making.

3. Students are to become familiar with the essential elements of computer use needed to perform statistical computing.

## Course Outline

**1. Data and Statistics. Chapter 1.**
Sections: 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6.

*Textbook Suggested Problems:*
*Problems: 2, 3, 4, 10, 11,13, and 22.*

**2. Descriptive Statistics: Tabular and Graphical Presentations. Chapter 2.**
Sections: 2.1, and 2.2.

*Textbook Suggested Problems:*
*Section 2.1: 3, and 7.*
*Section 2.2: 11, 12, 13, and 15.*

**3. Descriptive Statistics: Numerical Measures. Chapter 3.**
Sections: 3.1, 3.2, and 3.3.

*Textbook Suggested Problems:*
*Section 3.1: 3, 4, 5, 8, 10, and 11.*
*Section 3.2: 13, 14, 16, 18, 22, and 23.*
*Section 3.3: 25, 26, 27, 28, 29, 30, and 31.*

**4. Introduction to Probability. Chapter 4.**
Sections: 4.1 (pg. 143, pp. 148-150), 4.2, 4.3, and 4.4 (pp. 167-168).

**5. Discrete Probability Distributions. Chapter 5.**
Sections: 5.1, 5.2, 5.3 and 5.4.

*Textbook Suggested Problems:*
*Section 5.1: 1, 2, 3, and 6.*
*Section 5.2: 7, 8, 9, 10, 12, 13, and 14.*
*Section 5.3: 15, 16, 17, 18, and 24.*
*Section 5.4: 25, 26, 27, 28, 30, 31, 33, and 35.*

**6. Continuous Probability Distributions. Chapter 6.**
Introduction (pg. 227) and Section 6.2.

*Textbook Suggested Problems:*
*Section 6.2: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 22.*

**7. Sampling and Sampling Distributions. Chapter 7.**
Sections: 7.3, 7.4, 7.5, and 7.7.

*Textbook Suggested Problems:*
*Section 7.3: 11, 13, and 15.*
*Sections 7.4 & 7.5: 18, 19, 20, 21, 22, 23, 25, 26, and 28.*

**8. Interval Estimation. Chapter 8.**
Sections: 8.1, 8.2, and, 8.3.

*Textbook Suggested Problems:*

*Section 8.1: 1, 2, 5, and 7.*
*Section 8.2: 12, 13, 14, 15, 17, 18, and 21.*
*Section 8.3: 23, 25, 26, and 30.*

**9. Hypothesis Testing. Chapter 9.**
Sections: 9.1, 9.2, 9.3, and 9.4.

*Textbook Suggested Problems:*
*Section 9.1: 1, 2, and 3.*
*Section 9.3: 9, 10, 11, and 13.*
*Section 9.4: 23, 24, 25, 26, and 27.*

**10. Statistical Inference about Means of Two Populations. Chapter 10.**
Sections: 10.1 and 10.2 (Independent Samples).

*Textbook Suggested Problems:*
*Section 10.2: 10, 11, 12, 13, and 14.*

**11. Simple Linear Regression and Correlation. Chapter 14.**
Sections: 3.5 (pp. 110 - 116), Appendix 14.2 (pp. 619 - 620), 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, and 14.7.

Problems will be provided by Dr. Samavati

**12. Multiple Regression, Chapter 15.**
Sections: 15.1, 15.2, 15.3, 15.4 and 15.5
Problems will be provided by Dr. Samavati

## Quizzes- Home-Works

There are nine quizzes in addition to the three exams. Quizzes, however, are in reality just home-works! That is, in the content for each chapter, I have provided you with the "quiz" problem(s). After seeing the quiz problem, you can print the problem(s) and work to find the solution. Once you have the solution, you can go to the "Quizzes" icon on the homepage and take your quiz by the deadline. Therefore, quizzes are simply computer-graded home-works. I have prepared them in this manner to create flexibility for you. You can take each quiz up to 2 times and your **highest** grade will be used as your grade.

Remember the quiz problems will HELP you to figure out the answer to the quizzes. These problems and quizzes, in turn, will help you to do well on the exams. Also, remember that you have limited time and TWO chances to take a quiz. However, you have plenty of time to

figure out the answer to the quiz problems before you actually take a quiz. You will be wise to take the relevant quizzes BEFORE each exam, but you have time until the last week of classes (before the final week) to take all of quizzes. Make sure to take them all BEFORE the deadline. The deadline for quizzes can be seen by clicking on the icon for each quiz (April 30, 2011, at 10:00 pm).

## A Tentative Timetable For The Coverage Of Course Material

Please pay close attention to the DATES of exams and CHAPTERS over which you will be tested, WEEKS are less important. Also, slight adjustments are possible. The professor reserves the right to vary the class schedule, depending on student response, the need for increased / decreased time for coverage of topics, and possibly important events / speakers.

**WEEKS 1, 2 AND 3**

Course Introduction, Chapter 1, Chapter 2, and Chapter 3.

**WEEKS 4 AND 5**

Probability, Probability Distributions, Standard Normal and Normal Probability Distributions. Chapters 4, 5, and 6.

**EXAM I**
**In-class Students: Tuesday, February15, 2011**
**Distance-learning Students: Any time between February 12 and Monday, February 14, 2011 (10:00 AM to 10:00 PM).**

**WEEKS 7 AND 8**

Sampling Distributions, Chapter 7; Interval Estimates and Sample Sizes, Chapter 8.

SPRING BREAK MARCH 7 THROUGH MARCH 11

**WEEKS 9 AND 10**

Hypothesis Testing about Mean of One Population, Chapter 9.

**EXAM II**

**In-class Students: Tuesday, March 29, 2011**
**Distance-learning Students: Any time between Tuesday, March 29 and, Thursday, March 31, 2011 (10:00 AM to 10:00 PM).**

**WEEKS 11, 12 AND 13**

Hypothesis Testing Comparing Means of Two Populations, Chapter 10.
Covariance and Correlation: Measures of Linear Mutual Association.
Simple Regression Analysis: Chapter 14 and computer printout of simple regression analysis.

**WEEKS 14 AND 15**
Multiple Regression Analysis: Chapter 15 and computer printout of multiple regression analysis.

**FINAL EXAM**

**12:00 section In-class Students: Tuesday, May 3, 2011, 1-3:00 PM**
**4:30 section In-class Students: Thursday, May 5, 2011, 4:00-6:00 PM**
**Distance-Learning Students: Any time between May 4 and May 5, 2011 (10:00 AM to 10:00 PM).**

## Examination and Grading Policy

Distance learning students will take their tests and quizzes online.
In-class students will take their quizzes online but their tests in-class.

| | |
|---|---|
| Exam 1 | 25% |
| Exam 2 | 30% |
| Final Exam | 35% |
| Excel Data Analysis Exercises | 5% |
| Homework Assignments & Quizzes | 5% |

The following guidelines will be used to determine letter grades**:

A = 90% - 100%
B = 80% - 89%
C = 70% - 79%

D = 60% - 69%
F = Less than 60%

** If a student wishes to be graded using + , - grading system, he/she is welcome to request such grading system in advance (by the end of last week of classes).

## Note: Calculating Your Course Grade

Your course grade is the **weighted average** of all your grades in the course. The "**weights"** are shown above. The following shows how you can calculate your course grade if GRD1, GRD2, FNL are your grades on Exam1, Exam2, and Final, in percentage, and if EXL and HWK are your grades, in percentage, for the Excel assignment and your quizzes.

**Course grade = .25* GRD1 + .30* GRD2 + .35* FNL +.05* EXL +.05*HWK**

For example, if your grades were as follows: Exam1= 72%, Exam2= 80%, Final = 88%, Excel assignment= 100%, Homework-Quizzes= 95%, then your course grade will be:
Course grade= .25*72 +.27*80 +.35*88 +.05*100 +.05*95
Course grade= 18 + 24 + 30.8 +5 + 4.75 = 82.55 and your letter grade in the course is B.

## Attendance, Extra Credit Work and Other Course Policies

No "official" attendance will be taken. However, extra credit work as well as in-class Excel Data Analysis Exercises is offered in-class. Naturally, only those students in attendance will have the opportunity to earn these points.

Distance learning students must check the course web site at least once a week to make sure they are up-to-date on all e-mails sent by Dr. Samavati informing them on the extra credit opportunities, Excel data analysis exercises, and other information related to the course.

## Additional Information

1. In-class students are allowed to bring a one-page "formula-sheet" to each test. The purpose of this formula sheet is to help alleviate the need for memorizing long computational forms of the formulas. Therefore, the intent is not for the students to use a summary study sheet, where the students have written a summary of all the information. The sheet

must contain formulas ONLY.

2. Dates of quizzes- home works are posted on the course web site. You can see them by clicking on each quiz. Make sure to check all the deadlines so you do not miss your quizzes and assignments. You can take each quiz up to 2 times and your **highest** grade will be used as your grade.

3. Excel Data Analysis Exercises – In-class students will complete these exercises in class. Distance learning students are given deadlines and will submit their work online.

4. If you are ill and cannot attend an exam, you must notify me before the exam. Those who miss an exam without notification will receive an "F" for the exam.

5. DISABILITIES STATEMENT: If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of Services for Students with Disabilities (Walb, room 113, telephone number 481-6658) as soon as possible to work out the details. Once the Director has provided you with a letter attesting to your needs for modification, bring the letter to me. For more information, please visit the web site for SSD at http://www.ipfw.edu/ssd/

6. **Center for Academic Support and Advancement**, www.ipfw.edu/casa
*The place to go for concentrated study time!*

***The SPOT Learning Center:*** Make your study time not only more effective, but also more efficient by signing up for free tutoring available in the SPOT in Kettler G21 (next door to the Writing Center). You are entitled to 2 free hours per week of one-to-one, course-specific help in understanding concepts, practicing the application or explanation of material being learned, and developing effective test-taking strategies. Make all appointments online through TutorTrac at www.ipfw.edu/casa. If you don't see a tutor available for your class, contact us in Kettler G21!

Drop-in tutoring is also available for math (schedule on Web site) and a few other subjects. If you need help with study skills in general, drop by the SPOT to view our self-paced tutorials or make a one-to-one appointment. Information about STEPS (Student Technology Education ProgramS) classes can be found on the CASA Web site, too. Also, check with your instructor about whether Supplemental

Instruction (group study) is available for this class. Questions? Call 481-5419.

7. **Computer Technology:**

**IMPORTANT: This course is taught via a combination of textbook and streaming recorded Internet lectures. Your computer must be able to capably play both audio and video. You will need DSL, Cable or a FIOS Internet connection - use dial-up at your own risk!**