

# ALLIANCE UNIVERSITY COLLEGE



## **ECO 220 *Statistics for Business and Economics* (3)**

**Fall 2005**

**Instructor: Dr. Alan Kwan**

### **Contacting the Instructor**

**Office: Room 530**

**Office Phone: 410-2000 (6907)**

**Class Times: T & Th 1:00-2:15**

**Class Location: Room 801**

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### **Course Description**

*Today's business environment is loaded with numerical information and people require the skills in statistics to interpret these data. This course provides an introductory survey of the many applications of descriptive and inferential statistics in the fields of economics and business administration. It gives an overview of the statistic principles used in business decision-making related to accounting, finance, marketing and management. Topics covered include: probability concepts, discrete probability distributions, the normal probability distribution, sampling methods and the Central Limit Theorem, estimation and hypothesis testing.*

### **Course Objectives**

*By the end of this course students are expected to gain an understanding about*

- 1. the basic principles in statistics*
- 2. selecting and interpreting data*
- 3. using statistical information in business decisions*
- 4. performing hypothesis testing*
- 5. data analysis and projections*

### **Required Texts**

Lind, Douglas A. et al., *Basic Statistics for Business and Economics*, 1<sup>st</sup> Canadian edition, McGraw-Hill Ryerson, 2004.

## COURSE SCHEDULE

|   |               |          |
|---|---------------|----------|
| <b>(I) INTRODUCTION</b>                                 | Sept. 8       | [Ch. 1]  |
| <b>(II) DESCRIBING THE DATA</b>                         |               |          |
| <i>Frequency Distributions and Graphic Presentation</i> | Sept. 13      | [Ch. 2]  |
| <i>Numerical Measures</i>                               | Sept. 15      | [Ch. 3]  |
| <b>(III) PROBABILITY THEORY</b>                         |               |          |
| <i>Probability Concepts</i>                             | Sept. 20      | [Ch. 4]  |
| <i>Discrete Probability Distributions</i>               | Sept. 22, 29  | [Ch. 5]  |
| Community Days – <b>No Class</b>                        | Sept. 27      |          |
| <i>Normal Probability Distribution</i>                  | Oct. 4, 6     | [Ch. 6]  |
| <b>(IV) SAMPLING THEORY</b>                             |               |          |
| <i>Sampling Methods</i>                                 | Oct. 11, 13   | [Ch. 7]  |
| <b>MID-TERM EXAM</b>                                    | [Chs. 1 - 6]  | Oct. 18  |
| <i>Central Limit Theorem</i>                            | Oct. 20, 25   | [Ch. 7]  |
| Community Days – <b>No Class</b>                        | Oct. 27       |          |
| <b>(V) ESTIMATION</b>                                   |               |          |
| <i>Estimation</i>                                       | Nov. 1        | [Ch. 8]  |
| <i>Confidence Intervals</i>                             | Nov. 3, 8     | [Ch. 8]  |
| Mid-term Break – <b>No Class</b>                        | Nov. 10       |          |
| <b>(VI) HYPOTHESIS TESTING</b>                          |               |          |
| <i>One-Sample Tests</i>                                 | Nov. 15, 17   | [Ch. 9]  |
| <i>Two-Sample Tests</i>                                 | Nov. 22, 24   | [Ch. 10] |
| <b>(VII) ANALYSIS OF VARIANCE</b>                       | Nov. 29       | [Ch. 11] |
|   | Dec. 1        |          |
| <b>(VIII) LINEAR REGRESSION</b>                         | Dec. 6, 8, 13 | [Ch. 12] |

## Course Requirements

*Students are advised to be prepared for the lectures by reading the relevant chapters in the required text and participating in group discussions.*

## Course Grade

|                                  |            |
|----------------------------------|------------|
| <i>Assignments (5 x 6% each)</i> | <i>30%</i> |
| <i>Mid-term Examination</i>      | <i>30%</i> |
| <i>Final Examination</i>         | <i>40%</i> |

**“Forgivable” Mid-term Exam:** *The weight of the Mid-term Exam will be transferred to the Final Exam if student achieves a better score in the Final Exam.*

## Important Notes

- Late assignment will receive a mark of 0 unless consulted with the instructor ***in advance***.
- When students miss the mid-term exam ***without a legitimate reason*** beyond their control (typically likes a medical reason with doctor’s note), a mark of 0 will be assigned.
- When students miss the mid-term exam ***with a legitimate reason***, a make-up mid-term exam will be arranged within one week. If this arrangement is not possible, the weight will be reallocated as follows:

|                          |            |
|--------------------------|------------|
| <i>Assignments</i>       | <i>40%</i> |
| <i>Final Examination</i> | <i>60%</i> |