# ALLIANCE UNIVERSITY COLLEGE



# STA 200 Statistics (3) Fall 2004

Instructor: Dr. Alan Kwan

#### **Contacting the Instructor**

Office: Room 530 Office Phone: 410-2000 (6907)

Class Times: WF 1430-1545 Class Location: 529

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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   | Week of           |             |
|---|-------------------|-------------|
| (1) Introduction  | Sept. 13          | [Ch. 1]     |
| (2) Describing Data                                     | <b>Sept. 20</b>   |             |
| Frequency Distributions and Graphic Presentation        |                   | [Ch. 2]     |
| Numerical Measures                                      |                   | [Ch. 3]     |
| (3) Probability Theory                                  | Sept. 27 & Oct. 4 |             |
| Probability Concepts and Discrete Probability Distribut | tions             | [Chs. 4, 5] |
| The Normal Probability Distribution                     |                   | [Ch. 6]     |

| (4) Sampling Methods and the Central Limit Theorem |            | Oct. 11        | [Ch. 7]     |
|--|------------|----------------|-------------|
| MID-TERM EXAM                                      | [Chs. 1-6] | Oct. 18        |             |
| (5) Estimation and Confidence Intervals            |            | Oct. 25        | [Ch. 8]     |
| (6) Hypothesis Testing                             |            | Nov. 1, 8 &    | z <b>15</b> |
| One-Sample Tests                                   |            |                | [Ch. 9]     |
| Two-Sample Tests                                   |            |                | [Ch. 10]    |
| (7) Analysis of Variance                           |            | <b>Nov. 22</b> | [Ch. 11]    |
| (8) Linear Regression                              |            | <b>Nov. 29</b> | [Ch. 12]    |
| (9) Review   |            | Dec. 6         |             |

## **Course Requirements**

Students need to familiarize themselves with current business topics and economic events which will constitute the materials for assignments and class discussions.

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**

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

# **Important Notes**

- Late assignment will receive a mark of 0 unless consulted with the instructor *in*
- 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:

| Assignments       | 40% |
|-------------------|-----|
| Final Examination | 60% |