



Course Type: **Core**

Course Code: **DBA 807**

Course Name: **Business Statistics**

Faculty Name: **Prof Kavan Ratnatunga PhD**

Faculty Contact information: via **'My Courses'** link on Tubeclases

COURSE SYLLABUS

Students please note that this is DBA Core course. Recognized Prior Learning (RPL) for this course will be recognized. Students may do this course by (a) studying the course via Tubeclases and using the (free) MOOC courses from leading universities as supplementary delivery vehicles of the course content (\$250 per course); OR (b) undertaking similar courses elsewhere (including accredited MOOC Courses) and having the assessments suitably externally proctored (via organizations such as ProctorU); and then applying to Calwest for credit towards their degree program (\$25 per course); OR undertaking similar courses elsewhere (including accredited MOOC Courses) and undertaking 'challenge exams' at Calwest university (\$250 per course). Students may also undertake similar courses in other accredited universities for credit (\$25 per course). Please note there are limits to the maximum credits allowed in doctoral programs.

1. Course Description

This course is designed for students who are thinking of doing a research project in business administration. Business Statistics is an introductory course in which the focus is on statistical inference: how to make valid conclusions based on data from random samples. At the heart of the main problem addressed by the course will be a population connected with which there is a numerical quantity of interest. If students could talk to each member of the population, they could calculate that number exactly. But what if the population is so large that a student's resources will not stretch to interviewing every member? What if a student's can only reach a subset of the population? This course will discuss good ways to select the subset; how to estimate the numerical quantity of interest, based on what is seen in the sample; and ways to test hypotheses about numerical or probabilistic aspects of the problem. The methods that will be covered are among the most commonly used of all statistical techniques; although there will be no mindless memorization of formulas and methods. Throughout the course, the emphasis will be on understanding the reasoning behind the calculations, the assumptions under which they are valid, and the correct interpretation of results.

2. Learning Objectives

1. Students will gain an understanding of statistical inference: how to make valid conclusions based on data from random samples.
2. Students will understand the numerical quantity of interest based on what is seen in the sample.
3. Student will understand good ways to select subsets of populations.
4. Students will be able to test hypotheses about numerical or probabilistic aspects of the problem.
5. Students will be able to understand the reasoning behind statistical calculations, the assumptions under which they are valid, and the correct interpretation of results.

3. Learning Outcomes:

To successfully complete this subject, a student should be able to:

1. Develop basic mathematical concepts and skills so that they are able to understand and perform a wide variety of basic mathematical processes that are necessary for analyzing business operations.
2. Become competent in the basic use of statistical tools and techniques their applications to solve problems in business.
3. Become competent in the use of statistical data in order to be more effective in business planning, forecasting, performance evaluation, auditing and management.
4. Appreciate the basic management of operations.
5. Apply relevant management science techniques in practical business situations.
6. Understand how some techniques of managerial economics are used in business decision making.
7. Derive management information from data using computers where appropriate to help solve problems.
8. Use statistical information in numerous business applications such as planning, forecasting, and performance evaluation.

4. Prescribed Reading (Compulsory)

Robert A. Donnelly, *Business Statistics*; Latest Edition, Pearson, <http://www.pearsoned.com/>

5. Student Resource Requirements

- PC: A reliable computer running Windows XP or higher with 500 MB of RAM or higher
- Mac: A reliable computer running Mac OS 10 or higher
- Reliable high speed Internet connection (minimum 768 Kbps/128 Kbps)
- Web browser with Adobe Flash Player installed (Flash Player 10 or higher recommended)

6. Topic Outline

Topic No.	Topic	Text Book Chapter	Lecture Power Point
1	An Introduction to Business Statistics	1	1
2	Displaying Descriptive Statistics	2	2
3	Calculating Descriptive Statistics	3	3
4	Introduction to Probabilities	4	4
5	Discrete Probability Distributions	5	5
6	Continuous Probability Distributions	6	6
7	Sampling and Sampling Distributions	7	7
8	Confidence Intervals	8	8
9	Hypothesis Testing for a Single Population	9	9
10	Hypothesis Tests Comparing Two Populations	10	10
11	Analysis of Variance (ANOVA) Procedures	11	11
12	Chi-Square Tests	12	12
13	Correlation and Simple Linear Regression	14	14
14	Forecasting	16	16

15	Decision Analysis	17	17
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7. Assessment

There will be **Continuous Assessments** done throughout this course. All topics will have a **Topic Quiz** that needs to be satisfactorily answered prior to being allowed to access the next topic in the course. You are allowed unlimited attempts in each Topic Quiz, so that you can master the topic before proceeding to the next. After completing all Topics (and Quizzes) your **Final Assessment** will be available for you to undertake online. There will be a time limit of *90 minutes* for the final assessment in which you will need to answer *80 multiple-choice questions* that will be randomly selected from the questions asked in the topic quizzes.

Please ensure that you have an undisturbed 90 minute time frame to undertake your Final Assessment; as after 90 minutes your work will be automatically submitted and graded.

There will be only one attempt provided for the Final Assessment.

The Final Assessment will form the over 80% of the weight given to your final course grade. The Balance 20% is obtained as an average of the scores you achieve in the Topic Quizzes.

8. Grading Criteria

Calwest University applies the following grading system in all courses:

A pass mark of 60% (grade of D which is a bare minimum pass) or above is required to satisfy the educational requirements of the university for completing the course. The grade assessments are as follows:

Below 60%: Fail	73-75% : C	85-88% : B+
60-64% : D	76-78% : C+	89-91% : A-
65-69% : D+	79-81% : B-	92-95% : A
70-72% : C-	82-84% : B	Over 95% : A+