MA201

Business Statistics

3 Credits

Instructor: Cliff McAuley
780 871 5786

Original Developer: Patty Pidruchney

Current Developer: Cliff McAuley

Reviewer: Kenneth Rutherford

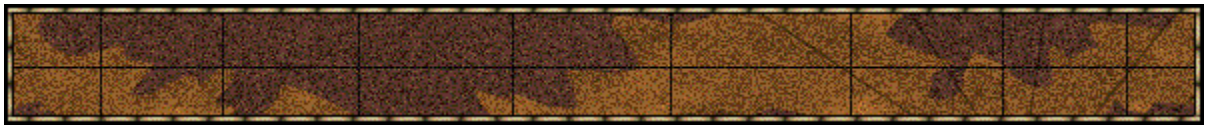
Created: 01/07/1991

Revised: 23/11/2015

Approval: 23/11/2015

The Implementation Date for this Outline is 01/09/2015

MA201 Version: 25



Business Statistics

Calendar Description

This course is an introduction to statistical concepts and techniques, progressing to inferential statistics. The techniques introduced are used in all the functional areas of business. Topics include data presentation, probability distributions, sampling and estimation, hypothesis testing, time series analysis, non-parametric tests, regression, and correlation.

Rationale

This is a required course for students in the Accounting and the Real Estate Appraisal and Assessment Majors of the Business Administration Diploma. Virtually every production and service industry in this country has turned its attention to quality control. Decision makers in industries such as wood products, electronics, steel, garments, and food processing must have a basic understanding of statistics to effectively deal with the quality control issues facing their organizations.

Decisions such as those involving new product introductions, market identification, desired inventory levels, production volume, and financial investment strategy can be improved by using statistics.

As the competitive nature of business increases, it is becoming apparent that to make good decisions, the business graduate must be able to carefully analyze all alternatives in light of all available information. The primary role of statistics is to provide decision makers with methods for obtaining data and converting this data into useful information pertaining to pertinent alternatives.

Prerequisites

MA101

Co-Requisites

None

Course Learning Outcomes

Upon successful completion of this course, students will be able to

1. demonstrate the process of data collection.
2. perform different methods of organizing, graphing, and presenting data from raw into usable form.
3. analyze and explain how to use different techniques for central measures and for measures of spread.
4. explain the fundamentals of probability used in statistical inference.
5. explain the rules and concepts associated with probability theory.
6. identify and analyze several discrete probability distributions.
7. identify and analyze the characteristics of a continuous probability distribution.
8. identify the difference between statistical and non-statistical sampling.
9. explain the process of estimating population values based on samples from the population.
10. explain statistical hypothesis testing for large-sample applications and demonstrate how to use sample information to test.
11. perform a statistical estimation based on small samples using the T distribution and confidence levels for the intervals.
12. test hypothesis involving a single population variance using the distribution, the difference between two population variances using the F distribution.
13. perform linear regression and correlation techniques and test whether a significant linear relationship exists between two variables.
14. develop a multiple regression model demonstrating how to add qualitative and/or quantitative variables.

Resource Materials

Required Text:
Anderson, D. R., Sweeney, D. J., Williams, T. A., & Camm, J. D., & Cochran, J. J. (2014).

Statistics for business and economics (12th ed.). South-Western Cengage Learning.

Conduct of Course

This course is conducted as follows; when students read a chapter, problems listed at the end of the chapter in the text and accompanying study guide must be worked out to develop skills and understanding of important statistical techniques. It is critical each student read the assigned materials for each class and keeps up to date with all lectures and assigned homework problems.

Classroom participation concerning class material is expected and is beneficial to all students. Practice classroom courtesy so that class discussion period can be conducted in an orderly manner. If you must enter the classroom after class has begun, please do so quietly. The method of teaching focuses on lecture, questioning technique, working sample assignments and problems and discussion.

The method of teaching focuses on lecture, questioning technique, working sample assignments and problems and discussion.

Students who are experiencing difficulty with the course should immediately consult the instructor during office hours or by appointment because each new topic builds on your previous knowledge.

Finally, any student observed cheating on exams and written assignments will be dealt with according to the procedure stipulated in the student handbook.

Evaluation Procedures

The final grade is an aggregate of the following components:

Assignment/Examination	**Weighting**
Midterms	47%
Tutorials Activities	13%
End of Term Examination	40%
Total	**100%**

Assignment Format

- All assignments must be submitted at the start of the class on submission date. Late assignments will be accepted with a 25% deduction per day late up to 4 days late. Assignments submitted after this date will receive a grade of zero.
- Plagiarism is a serious offense and will be met with disciplinary action. Penalties may include a reduction in marks, a student suspension or student withdrawal from class.

Grade Equivalents and Course Pass Requirements

A minimum grade of D (50%) (1.00) is required to pass this course.

Letter	F	D	D+	C-	C	C+	B-	B	B+	A-	A	A+
Percent Range	0-49	50-52	53-56	57-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100
Points	0.00	1.00	1.30	1.70	2.00	2.30	2.70	3.00	3.30	3.70	4.00	4.00

Students must maintain a cumulative grade of C (GPA - Grade Point Average of 2.00) in order to qualify to graduate.

Attendance

Regular attendance is essential for success in any course. Absence for any reason does not relieve a student of the responsibility of completing course work and assignments to the

satisfaction of the instructor. Poor attendance may result in the termination of a student from a course(s).

The instructor will recommend that the Registrar withdraw any student who does not meet the established attendance requirements. A failing grade of RW (Required to Withdraw) will appear on the student's transcript.

In cases of repeated absences due to illness, the student may be requested to submit a medical certificate.

Instructors have the authority to require attendance at classes.

Course Units/Topics

1. Data and Data Collection
2. Organizing and Presenting Data
3. Measures of Location and Spread
4. Introduction to Probability Concepts
5. Discrete Probability Distribution
6. Continuous Probability Distribution
7. Sampling Techniques and the Sampling Distribution
8. Interval Estimation - Large Samples
9. Hypothesis Testing
10. Statistical Inference about Mean and Proportion
11. Inferences about Population Variances
12. Simple Linear Regression and Correlation

2602 - 59 Avenue, Lloydminster, Alberta, Canada T9V 3N7. Ph: 780 871 5700
5707 College Drive, Vermilion, Alberta, Canada T9X 1K5. Ph: 780 853 8400
Toll-free in Canada: 1 800 661 6490 E-mail: admissions@lakelandcollege.ca