Executive MBA Program

QUA 508

Statistics for Managers (1 Cr Hr)

Spring Term - 2019-2020

Course Description and Objectives:

This course helps managers understand how to use statistics in decision making. The objective of this course is to introduce basic concepts in statistics that have wide applicability in business decision making. As such, the focus will be more practical than theoretical. Because statistical analysis informs the judgment of the ultimate decision-maker—rather than replaces it—some key conceptual underpinnings of statistical analysis are covered to insure understanding its proper usage.

Session	Content
Sessions 1	Basic Concepts of Statistics ❖ What is the meant of statistics ❖ Types of statistics
Sessions 2	❖ Collecting Data ❖ Types of variables ❖ Population versus Sample
Sessions 3	❖ Types of sampling Method (Simple Random Sampling, Systematic Sampling, Stratified Sampling, Cluster Sampling).
Sessions 4	Numerical Descriptive Measures ❖ Measures of central tendency (Mean / Median / Mode) ❖ Business applications.
Sessions 5	❖ Variation and Shape (Range / Variance / Standard Deviation) ❖ Business applications.
Sessions 6	❖ Exploring Numerical Data (Quartiles / Boxplot) ❖ Business applications.
Sessions 7	Numerical Descriptive Measures using Excel
Sessions 8	**Midterm Exam (30 % of total points)**

Sessions 9	❖ Data Visualization using Excel
Sessions 10	❖ Numerical Descriptive Measures for population (Mean / Variance / Standard Deviation) ❖ Shape : Skewness ❖ Business applications.
Sessions 11	❖ Correlation analysis ❖ Business applications.
Sessions 12-13	❖ Simple Linear Regression ❖ Business applications.
Sessions 14-15	❖ Basic probability concepts ❖ Business applications.
	Final Exam (40 % of total points)

Course Materials:

> ❖ **Text Books Recommended:**
>
> 1. Lind, Marchal and Wathen: **Statistical Techniques in Business and Economics**, McGraw Hill International
>
> 2. David M Levine, Kathryn A. Szabat, David F. Stephan**: Business Statistics, A first Course,** Pearson Education Limited 2016, Seventh Edition.

GRADING

Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
Midterm 1	11	30 %
Assignments and case studies		30 %
Final Exam		40%

Course learning outcomes:

1. **Knowledge**
   - ❖ Define Basic concepts of Statistics – both descriptive and inferential.
   - ❖ Define Basic concepts of diagrammatic and graphical presentation of data.
2. **Cognitive Skills**
   - ❖ Explain the steps involved in calculating measures of central tendency and measures of dispersion.
   - ❖ Explain the steps involved in calculating probabilities.
3. **Interpersonal Skills & Responsibility**
   - ❖ Demonstrate the application of basic statistical techniques.
4. **Communication, Information Technology, Numerical**
   - ❖ Demonstrate the application of the Excel software for statistical analysis