

MBA-Executive (Working Professionals)

Syllabus - First Semester

QUANTITATIVE APPLICATIONS IN MANAGEMENT

Course Code: MWP4103

Credit Units: 04

Course Objective:

The aim of this course is to develop the understanding of the various statistical models used for decisions making and how each applies to and can be used in the business environment using contemporary computerbased technology.

Course Contents:

Module I: Introduction

Application of Statistics in Business & Management; Basic Concepts of Statistical Studies: Variable and Classification of Data; Diagrammatic & Graphical Presentation of Data: Bar Diagram, Histogram, Pie – Diagram, Stem Leaf Display, Frequency Polygons, and Ogives.

Module II: Summary Statistics

Measures of Central Tendency: Arithmetic Mean, Weighted Mean, Median and Mode

Measures of Dispersion: Range, Quartiles, Average Deviation, Standard Deviation, Variance and Coefficient of Variation.

Module III: Forecasting Techniques

Simple Correlation & Regression Analysis, Time Series Analysis- Introduction, Variation in Time Series, Trend Analysis, Cyclical Analysis, Seasonal Analysis, Irregular Variation

Module IV: Probability & Probability Distributions

Probability: Basic Terminology in Probability, Types of Probability, Probability rules, Probabilities under condition of Statistical Independence, Probabilities under condition of Statistical dependence, Baye's Theorem Probability Distributions: How Random Variable arise, Probability distribution of random variable, Mean or Expected value of random variable, Variance and Standard Deviation of random variable. Binomial Distribution, Poisson Distribution, The Normal Distribution.

Module V: Sampling, Estimation and Testing of Hypotheses

Sampling & Sampling Distribution: Parameter and Statistic, Point and Interval Estimation, Interval Estimation of three common parameters viz. Mean, Standard Deviation and Proportion.

Hypothesis Testing for a Single Population: Concept of Hypothesis, Test involving a population mean, Test involving a population proportion, Test involving population Standard Deviation, The concept of P – Value Hypothesis Testing to compare two populations: Test for two population means (Independent Samples), Tests for two population means (Dependent Samples), Tests for two population proportions

(Independent Samples), Tests for two population variances (Dependent Samples), F-test, Non-parametric Tests (Chi – Square Test)

Module VI: Decision Theory & Introduction to Operations Research

Decision Theory: Introduction of Decision Theory, Steps in decision theory approach, Types of Decision Making Environments, Decision Making under Uncertainty- Criterion of Optimism, Criterion of Pessimism, Equally likely decision (Laplace) criterion, Criterion of Realism (Hurwicz Criterion), Criterion of Regret (Savage criterion) Decision Making under Risk- Expected Monetary Value & Expected Opportunity Loss. Linear Programming: Introduction of Linear Programming, Formulation of LPP, Solution of LPP – Graphical Method

Examination Scheme

Components	C	A	CT	EE
Weightage (%)	10	5	15	70

Text & References:

Text:

□ Levin R.I. & Rubin S.R. 1998, Statistics for Management, 7th Ed. Prentice Hall Of India

References:

□ Anderson David R, Sweeny Dennis J, Williams Thomas A, Statistics for Business and Economics 9th ed, Cengage learning.

□ Keller Gerald, Statistics for Management, Cengage Learning

□ Anderson David R, Sweeny Dennis J, Williams Thomas A, Quantitative Methods for Business, Cengage learning.

□ Vohra N.D., Quantitative Techniques in Management, Tata McGraw Hill

Syllabus – Second Semester

OPERATIONS RESEARCH

Course Code: MWP4202

Credit Units: 04

Course Objective:

The course aims to provide a thorough understanding of the essential features, relevance, application, tools and techniques of Operations Research. The objective of this course is to develop the understanding of models building and quantitative approach to decisions making in the functions of the management of any organization with special focus on International Business. It also aims to develop the understanding of the various optimization techniques used for decisions making in the functions of the management of any organization.

On Completion of this module, students will be able to understand the Importance of learning Operations Research. The student will also be able to mathematically capture the behavior in strategic situations. They will better analyze the situation among the two, which will increase the Decision Making Capability.

Course Contents:

Module 1: Introduction to Operations Research

History, models
Modeling in operations research
Methods of solving operations research problems
Applications and scope
Types of Models

Module 2: Linear Programming

Structure, assumptions, terms used, Application, general model
Linear Programming Model Formulation
Graphical Solution Methods
Simplex Method, Big-M method
Infeasibility, Unboundedness, Degeneracy, Multiple optimal solutions
Duality

Module 3: Transportation Problems

Structure
Model formulation, mathematical representation
North west corner method, least cost method, Vogel's approximation method
Stepping Stone method, Modified Distribution Method for testing optimality
Unbalanced supply and demand, Degeneracy, Prohibited Routes, Duality
Maximization transportation problems
Transshipment problems

Module 4: Assignment Problems

Structure, Model
Methods of solving Assignment Problem- Simplex, transportation, exhaustive
Hungarian method
Multiple optimal solutions

Unbalanced Assignment Problems
Restrictions in Assignment problems
Maximization models
Traveling Sales man problems

Module 5: Theory of Games

Structure, Factors
Two-Person Zero-Sum Games
Pure Strategy games, Saddle point
Mixed Strategies games
Rules of dominance
Methods of solving games without saddle point

Module 6: Network Analysis

Concept of CPM/PERT
Difference between CPM/PERT
Network Diagrams and rules for preparing networks
CPM, Critical Path Analysis, float, project crashing, time cost trade off
PERT, Probability in PERT, estimation of completion time

Module7: Theory of Queuing

Structure, Characteristics of queuing
Pure birth, pure death process
Types of queuing models
Single Server Unlimited Queue Model and limited queue model
Multiple Server unlimited queue model and limited queue models

Module 8 A: Break Even Analysis

Break even volumes of production
Forecasting profits, determining effects of change in output on profit and cost

Module 8 B: Annuities

Present value of annuities, perpetual annuities, deferred annuities

Module 9: Replacement Decisions

Types of failures of machinery and equipment
Replacement of assets that deteriorate over time
Replacement of assets that fail completely

Module 10: Simulation

Basic Concepts
Stochastic and Random numbers
Monte Carlo method of simulation for queuing, inventory etc
Learning Methods:

Occasional, non-graded homework sets will be handed out in class. It is also expected that students will work the problems as the part of assignments. The class will be doing *Cases* throughout the semester. Students will prepare three written cases in small groups of 4-6 students. There will be presentations also in which the student have to collect, collate and analyze the data.

Examination Scheme:

Components	P1	A	C1	EE
Weightage (%)	15	5	10	70

Text & References:

Website:

<http://www.gate2quality.com/Basic%20Statistics.htm>

<http://www.interventions.org/pertcpm.html>

<http://www.me.utexas.edu/~jensen/ORMM/omie/frontpage/contents/index.html>

http://www.eventhelix.com/realtimemantra/CongestionControl/queueing_theory.htm

Text:

□ Vohra N D (2007), Quantitative Techniques in Management, Tata Mc Graw-Hill Publishing Company Ltd.

References:

□ F Hillier, G Lieberman (2005), Introduction to Operations Research, Tata McGraw-Hill

□ A Taha Hamdy (1987), Operations Research–An Introduction, Macmillian Publishing Company, New York

□ A Ravindran (latest), Operations Research: Principles and Practices, John Wiley & Sons, New York

□ L Rardin, Ronald (latest ed.), Optimization in Operations Research, Pearson Education, Singapore

□ Hillier, Federick S. and Gerald J. Lieberman, Introduction to Operations Research, 8th Edition, Mc Graw Hill, 2005

RESEARCH METHODS AND REPORT PREPARATION

Course Code: MWP4204

Credit Units: 04

Course Objective:

The course aims to provide a thorough understanding of the essential characteristics and the basic tenets of research methodology and report preparation. The course will focus on quantitative and descriptive research methods and techniques that are essential for the validity and reliability of the research process. The course will identify and review the components essential for preparation of research proposals, research reports, business proposals and feasibility studies in order to develop report writing and formal presentation skills of the research projects undertaken.

Course Contents:

Module I: Research Methodology and Research Methods

Objective, significance and types of research
Research Methods vis-à-vis Methodology
Research Process and criterion for good research
Ethics in Business Research

Module II: Research Problem and Research Design

Defining and Identifying the Problem
Formulation of Hypothesis
Techniques involved in defining the Problem
Meaning and features of Research Design
Types of Research: Qualitative and Quantitative Research
Developing a Research Plan: Industry Specific **Research Proposals**

Module III: Sampling Design and Scaling Techniques

Census and sample survey
Criteria for selecting a sampling procedure
Measurement and Scaling techniques
Classification and importance of Scaling techniques
Market Specific Sample survey

Module IV: Interpretation and Analysis of Data

Methods of Data collection: Primary and Secondary Data
Constructing Questionnaires: Guidelines
Elements / Type of Analysis of Data
Processing Operations
Usage of Statistical Software such as SPSS
Problems of accuracy in interpretation of data

Module V: Testing of Hypothesis

Z-test
F-test
T-test
Chi-Square Test

Module VI: Design and Analysis of Experiments

Analysis of Variance

Completely Randomized Design

Factorial Design (22 Factorial Experiment, 23 Design)

Module VII: Report Writing

Significance of Report Writing: Market Research and Experience Based Reports

Mechanics and Steps in writing a Research Report

Techniques and Interpretation of Research Process

Salient aspects of Oral Presentation

Learning Methods:

Occasional, non-graded homework sets will be handed out in class. It is also expected that students will work the problems as the part of assignments.

The class will be doing *Cases* throughout the semester. Students will prepare three written cases in small groups of 4-6 students. There will be presentations also in which the student have to collect, collate and analyze the data.

Examination Scheme:

Components	P1	C1	CT1	EE
Weightage (%)	10	10	20	70

Text & References:

Text:

- Dr .S. Shajahan (2004), Research Methods for Management 2nd Edition, Jaico Publishers

References:

- Kothari C R, (1990)Research Methodology: Methods & Techniques, Wishwa Prakashan Publisher
- Cooper, Donald R and Schindler, Ramela (2000) Business Research Methods, Tata McGraw Hill
- Levin & Rubin (2004), Statistics for Management, 8th Ed, Prentice Hall of India
- Srivastava,Shenoy and Sharma (2002)., Quantitative Techniques for Business Decisions, 4th Ed , Allied Publishers

Syllabus – Third Semester

PRODUCT AND BRAND MANAGEMENT

Course Code: MWP4303

Credit Units: 04

Course Objective:

The main objective of the course is to make the students learn and conceptualize the entire gamut of developing new products, improving the existing products and managing the performance of product items and product line(s) as a whole to maximize the company's profit. The course also gives students the insight of process involved in branding decisions and strategies for growth of brands.

Course Contents:

Module I: The Product Management Process

The Product Management

Function

Product Management Decisions

What is a Product Portfolio?

Drawbacks of the Product

Portfolio Approach

Product Management Basics

Defining competitive set

Category Attractiveness Analysis

Competitor Analysis

Customer Analysis

Module II: The Product Planning System

The Traditional Approaches to Product Planning

A Matrix Approach to Product Planning

Product Evaluation Matrix in a Nutshell

PLC as an aid to Product Planning

PLC as a Tool to Plan Market Share Strategies

Product Strategy over Life Cycle

Module III: Diffusion of Innovation

The adoption Process

Classification of Adopters

Diffusion of Consumer Innovations

Diffusion of Industrial Innovations

Module IV: Generation, Screening And Development of New Product Ideas

Innovation and the new product development process

Generation of new product ideas

Sources of new product ideas

Methods of generating new product ideas

Screening of new product ideas

Criteria for screening new product ideas

Development of new product ideas

Module V: Economic Analysis Evaluation of New Product ideas/concepts

Purpose of Economic Analysis

Market Potential

Market Demand

Estimating Sales

Sales Forecasting Methodologies

Estimating Costs, Sales and Profits

Break-Even Analysis

Return on Investment

Economic Analysis Summary Form

Module VI: Test Marketing and New Product Launch

Purposes of Test Market

Test Marketing Strategies

Simulated Test Marketing

New Product Launch – the Marketing Plan

Defining and Selecting the Target Market

Product Strategy and Product Positioning

Pricing the New Product

Advertising the New Product

Module VII: Packaging Decisions

Importance of Packaging in Marketing

Packaging Strategies

Legal Aspects of Packaging

Cost Effectiveness of Packaging

Social Aspects of Packaging

Module VIII: Branding and Brand Positioning

Branding

Consumer Based Brand Equity [CBBE]

What is brand equity? CBBE: Keller's Model

Aaker's BE Model

Brand Identity Elements

Brand identity prism

Meaning of Brand identity

Need for Identity

Dimensions of brand identity

Brand identity prism

Brand Extension-

Meaning, Types, Needs, Advantages & Disadvantages of Brand Extension,

Brand architecture Brand Hierarchy

Designing Branding Strategy

Brand Valuation

Brand Valuation Methods

Aaker's Brand Equity 10

Interbrand Method

Brand Name Selection Process

Positioning of a Brand
Repositioning the Competition

Module IX: Marketing Integrated Communication Process

The Role of Marketing Communication
Concept of Marketing Communication\
The Occurrence of Marketing Communication
The Sources of Misunderstanding in Communication
Elements of the Promotion Mix

Learning Methods:

Tutorials, Interactive sessions, Case studies, Field visits, Management games, Extensive research projects, Seminars, Weekend experience in companies - the course is covered by adopting a combination of lecture methods, class presentation by groups of students, self study sessions. Each student is required to do the back ground reading from the specified chapters of the prescribed book before coming to class. ases are also to be analyzed, discussed in groups (teams) outside the class as preparatory work.

Examination Scheme:

Components	P1	C1	CT1	EE
Weightage (%)	10	10	20	60

Text & References:

Text:

- Morse Stephen, 2002, Handbook of Successful Product Management, Jaico Enterprises, 1st Edition
- Kapoor Jagdeep, 2003, Brand Switch, Jaico Enterprises, 1st Edition

References:

- Kotler Philip, 2005, *Marketing Management* – Thompson Press(I) Ltd, 12th edition,
- Kapoor, Jagdeep, Brand switch, Jaico Publishing House, Mumbai, 2004
- Keller, Kevin Lane, Strategic brand management building, Pearson Education, New Delhi, 2003
- Panwar, J S, Beyond consumer marketing , Response books, New Delhi, 2004
- Owens, ORV, The psychology of relationship selling, Jaico Publishing House, Mumbai, 2003
- Minett, Steve, B2B marketing: A radically different approach, Prentice Hall, London, 2002
- Matt. H, Brand Failures- 100 Branding Mistakes of all The Time, Kogan Page, 2003, UK