

Common Subject
Sem I

I> Course Content:

Semester	I-Core
Subject	Business Statistics
Course Code	MMSC103 (RGCMS)
Credits	4
Duration	40 hrs

Learning Objective:

1.	To know statistical techniques
2.	To understand different statistical tools
3.	To understand importance of decision support provided by analysis techniques
4.	To appreciate and apply it in business situations using Caselets, modelling, cases and projects
5.	To understand Managerial applications of Statistics

Prerequisites if any	Basic Mathematics
Connections with Subjects in the current or Future courses	Operations Research, Economics, Research Methodology, Quantitative Techniques, Project Management, Financial Management, production and operations management

Module

Sr. No.	Content	Activity	Course Outcome
1.	Revision of data, representation, central tendency and dispersion, kurtosis and skewness	Problem solving, cases demonstrating typical uses of mean, mode median, Use of Microsoft Excel, available software	MMSC103.1
2.	Probability- Axioms, Addition and multiplication rule, types of probability, Independence of events, probability tree, Bayes' Theorem	Solving problems and Caselets, Writing short cases	MMSC103.2
3.	Concept of random variable, probability distribution, expected value and variance of random variable, conditional expectation,	Problem solving, Creating decision tree, cases	MMSC103.2

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	classical newspaper boys problem (EMV, EVPI)		
4.	Probability distributions- Binomial, Poisson, Normal	Problem solving, Microsoft excel, cases	MMSC103.3
5.	Sampling distribution	Problem solving, Microsoft excel	MMSC103.4
6.	Estimation- Point Estimation, interval estimation	Problem solving, Microsoft Excel	MMSC103.4
7.	Hypothesis testing- students t-test, Chi square test, Z test	Problem solving, Microsoft excel, cases	MMSC103.5
8.	Analysis of variance- One way, two way	Problem solving, Microsoft excel, cases	MMSC103.5
9.	Correlation and regression analysis and significance	Problem solving, Microsoft excel, cases	MMSC103.6

II> Course Outcomes

<u>Course Code</u>	<u>Course Outcomes</u> Students will be able to:	<u>Cognition</u>
MMSC103.1	CO1: Apply the basic concepts of statistics in business situations	Apply
MMSC103.2	CO2: Evaluate uncertainty in business situations using probability	Evaluate
MMSC103.3	CO3: Apply theoretical distribution in quality control, process control and six-sigma	Apply
MMSC103.4	CO4: Apply central limit theorem and confidence interval for testing of hypothesis	Apply
MMSC103.5	CO5: Analyze using statistical tests as t-test, chi-square test, z-test and ANOVA	Analyze
MMSC103.6	CO6: Create models using correlation and regression analysis	Create

Text books

1.	Statistics for Management- Richard Levin, David Rubin, Prentice Hall of India
2.	Statistics for Managers- Levine, Stephen, Krihbiel, Berenson, Pearson Education
3.	Complete Business Statistics- Aczel Sounderpandian, Tata McGraw Hill

Reference Books

1.	Statistics for Business and Economics- Newbold, Carison, Throne, Pearson Education
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2.	Statistics for Business and Economics- Anderson, Sweeney, Williams, Cengage Learning
3.	Data Analysis and Decision Making- Albright, Winston, Zappe, Thomson