SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.11))
Programme: B.COM   Semester: VI
Syllabus with effect from the Academic Year:

B.COM. SEMESTER-VI		
Paper Code **UB06DCOM85**	**Title of the Paper** Advanced Statistics –XI	**Total Credit** 3

Course Objectives	To enhance analytical ability in students for processing data. To familiarize students with applications of Statistical technique in business decision Making.

Course Description		
Unit	**Description**	**Weightage**
1.	**Demand Analysis & Monopoly & Duopoly Problems:** Demand and supply function, Market equilibrium, effect of taxation and subsidy, marginal and average, revenue & cost function, Discussion of monopoly problems-classical duopoly problems (idea only), Simple examples of monopoly under perfect competition, Difference between monopoly & duopoly problems.	25%
2.	**Partial Derivatives and its applications:** Definition of partial derivative involving two variables up to second order, Homogeneous functions, Statement of Euler's theorem (without proof) and its application to homogeneous function, Application of partial derivative to the problems related to constrained optimization problems, (Cost function and Utility function).	25%
3.	**Statistical Software:** Simple introduction to SPSS and R Software and their Simple uses. Define Variable and find mean and standard deviation using both software and how to write basic Formula.	25%
4.	**Curve Fitting:** Meaning and definition of least square principle, Fitting of linear, quadratic and exponential curves like (i) $y = ab^x$ (ii) $y = ae^{bx}$ (iii) $y = ax^b$ etc. and simple examples based on it.	25%

*Units will have the same Weightage in the evaluation as suggested in the course outline.

Teaching-Learning Methodology	• Lecture Method • Online Lectures • Group Discussion • Practical Problem Solving

Evaluation Pattern		
Sr.No.	**Details of the Evaluation**	**Weightage**
1.	Internal/Written Examination	15%
2.	Internal Continuous Assessment in the form of Practical , Viva-Voce, Quizzes, Seminars, Assignments, Attendance	15%
3.	University Examination	70%

* Students will have to score a minimum of 40 (Forty) Percent to pass the course.

Course Outcomes: Having Completed this course, the students will be able to
1. Uses of market situation analysis for monopoly and duopoly.   2. Uses of mathematical procedures in calculus.

	3. Uses of "R" software basic fundamentals.

Suggested References: (include Reference Material from where a student is expected to study the said content in APA Style) Reference Websites can also be included)

Sr. No	References
1.	J. K. Sharma, Mathematics for Business and Economics, Asian Books Private Ltd.
2.	S. C. Gupta, V. K. Kapoor, Fundamentals of Applied Statistics, Sultan Chand & sons, New Delhi.
3.	David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Statistics For Business and Economics, South-Western Cengage Learning India Pvt. Ltd. New Delhi.
4.	S.C. Gupta: "Fundamentals of Mathematica Statistics" S. Chand, New Delhi.
5.	R. G. D. Allen, Mathematical Analysis for Economists, Macmillan, New, York.
On-Line Resources available that can be used as Reference Material	