KSKSV Kachchh University, Bhuj - Kachchh
(Effective from June 2024 - 25 Under NEP -2020)
SEMESTER 3
Course Title: Applications of Microsoft Excel in Mathematical Concepts
Practical/ Lab course (Course Code: SEC MAT - 309) Credit : 2

DISCIPLINE SPECIFIC CORE COURSE (SEC)						
COURSE	SEMSTER	COURSE CODE	COURSE TITLE	PRACTICAL		
				Credits	Practical	Internal/External
Certificate Course	B. Sc. III	SEC MAT - 309	Applications of Microsoft Excel in Mathematical Concepts	2	50	50(25 +25) Marks

Topics

1. Matrix Addition, subtraction and multiplication in Microsoft Excel.
2. Find the inverse of a matrix in Microsoft Excel.
3. Solve simultaneous linear equations of 3 or 4 variables in Microsoft Excel.
4. Verify Cayley Hamilton Theorem in Microsoft Excel.
5. Verify Idempotent property of Matrix in Microsoft Excel.
6. Verify Nilpotent property of Matrix in Microsoft Excel.
7. Solve System of equations by Gauss- Jacobi Method in Microsoft Excel.
8. Find the roots of algebraic equations by Bisection Method in Microsoft Excel.
9. Find the roots of algebraic equations by Newton - Raphson Method in Microsoft Excel.
10. Find the roots of algebraic equations by Secant Method in Microsoft Excel.

References:

1. Microsoft Excel Formulas and Functions (Office 2021 and Microsoft 365),1st Edition ,21 November 2023, by Paul McFedries, Pearson Education.
2. Introductory Methods of Numerical Analysis (2012), 5th Edition by S. S Sastry, PHI Learning.
3. MATRICES - TRUSSES USING MS EXCEL (2018) (College Mathematics Series Book

KSKSV Kachchh University, Bhuj - Kachchh
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SEMESTER 4
Course Title: Applications of Microsoft Excel in Statistical Concepts
Practical/ Lab course (Course Code: SEC MAT - 409) Credit : 2

DISCIPLINE SPECIFIC CORE COURSE (SEC)						
COURSE	SEMSTER	COURSE CODE	COURSE TITLE	PRACTICAL		
				Credits	Practical	Internal/External
Certificate Course	B. Sc. IV	SEC MAT-409	Applications of Microsoft Excel in Statistical Concepts	2	50	50 (25 +25) Marks

Topics

1. Basic application of tabular data of class interval in Microsoft Excel.
2. Find Mean and Median of a given data in Microsoft Excel.
3. Find mode of a given frequency distribution table in Microsoft Excel.
4. Find mean deviation of a given frequency distribution table in Microsoft Excel.
5. Find median deviation of a given frequency distribution table in Microsoft Excel.
6. Find Karl Pearson correlation coefficient of a given data in Microsoft Excel.
7. Find Spearman's Rank correlation coefficient of a given data in Microsoft Excel.
8. Draw the scatter diagram of a given data in Microsoft Excel.
9. Find regression coefficient of a given data in Microsoft Excel.

References:

1. Statistical Analysis with MS Excel (2023) by Dr. Satinder Bal Gupta & Dr. Monika Gupta, Mahavir Books
2. Statistics with Microsoft Excel (2008) 4th Edition by Beverly Dretzke, Pearson Education.
3. Excel Statistics: A Quick Guide (2015) 3rd Edition by Neil J. Salkind.