University of Kerala

Discipline	STATISTICS				
Course Code	UK4VACSTA203				
Course Title	DATA ANALYSIS USING SPREADSHEETS				
Type of Course	VAC				
Semester	IV				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	3	2hours	-	2hours	4
Pre-requisites					

COURSE OUTCOMES

Upon completion of the course, students should be able to:		Cognitive level	PSO addressed
CO1	Explain the significance of spreadsheet applications	Understand	PSO-2,4,5 PO -1,3 4 7
CO2	Demonstrate the predefined and conditional functions in spreadsheets.	Apply	PSO-2,3,4,5 PO -1,3 4 7
CO3	Illustrate the basic plotting tools in spreadsheets.	Apply	PSO-2,3,4,5,6 PO -1,3 4 7

COURSE CONTENT

Module	Content	Hrs
I	**Introduction to Spreadsheets**	**20**
	Overview and significance of Spreadsheet Applications like LibreOffice Calc; Key components of a spreadsheet interface such as cells, rows, columns, and sheets; Ribbon toolbar/menu options for accessing different functionalities.	
II	**Pre-defined and Conditional functions in spreadsheets**	**20**
	Pre-defined functions -Uses of Mathematical functions to calculate sum, minimum, maximum, square root logarithmic and trigonometric functions; Statistical functions for univariate and bivariate analysis; Conditional functions	
III	**Data Visualization and interpretation**	**20**
	Importance of Data Visualization in data analysis, creating different types of charts and graphs such as bar charts, line graphs, pie charts, histograms and scatter plots, Adding labels, titles and legends. Interpretation of charts and Graphs	

PRACTICAL/LABWORK

List of Practical Worksheets

1. Problems using mathematical functions
2. Problems using statistical functions

3. Graphical Methods

REFERENCES

1. Manohar, H.L. (2017). *Data Analysis and Business Modelling Using Microsoft Excel.* Prentice Hall of India, New Delhi.
2. Dan Remenyi, George Onofrei, Joe English (2010). An Introduction to Statistics Using Microsoft Excel. Academic Publishing Ltd., UK
3. Neil J Salkind (2010). Excel Statistics, A Quick Guide. SAGE Publication Inc. New Delhi
4. Vijai Gupta (2002). Statistical Analysis with Excel. VJ Books Inc. Canada

Name of the Course: DATA ANALYSIS USING SPREADSHEETS
Credits: 2:0:1 (Lecture:Tutorial:Practical)

CO No.	CO	PO/PSO	Cognitive Level	Knowledge Category	Lecture (L)/Tutorial (T)	Practical (P)
CO1	Explain the significance of spreadsheet applications	PSO-2,4,5 PO -1,3 4 7	Understand	F, C, P	L	P
CO2	Demonstrate the predefined and conditional functions in spreadsheets.	PSO-2,3,4,5 PO -1,3 4 7	Apply	F, C, P	L	P
CO3	Illustrate the basic plotting tools in spreadsheets.	PSO-2,3,4,5,6 PO -1,3 4 7	Apply	C, P	L	P

F-Factual, C- Conceptual, P-Procedural, M-Metacognitive
Mapping of COs with PSOs and POs :

	PSO 1	PSO 2	PSO 3	PSO4	PS O5	PSO 6	PO1	PO2	PO3	PO4	PO5	PO 6	PO7	PO8
CO 1		3	-	2	2	-	2		1	1	-	-	3	-
CO 2	-	2	2	3	2	-	2		1	1	-	-	3	
CO 3	-	2	3	3	3	1	2		1	1	-	-	3	

Correlation Levels:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

Assessment Rubrics:

- Quiz / Assignment/ Discussion / Seminar
- Internal Examination
- Practical Evaluation
- End Semester Examinations

Mapping of COs to Assessment Rubrics :

	Internal Exam	Quiz / Assignment/ Discussion / Seminar	Practical Evaluation	End Semester Examinations
CO 1	✓	✓	✓	✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓