International Summer School-Manipal University Jaipur [ISSMUJ]-2024

[Hybrid Mode]

Course Overview

Name of Course- Basic Computational Techniques for Data Analysis: An exploration into MS Excel

Name of Instructor: Prof Sharad Ranjan & Dr Monika Mathur

Session: June-July 2024

Language of instruction: English

Number of contact hours: 36

Credit awarded: 03

Pre-requisite: *(write NA if no pre-requisite required) : NA*

Objective of Course/Project

▪ Visualise, present and analyse data through MS Excel spreadsheets and tables and create personal or business spreadsheets

▪ Learn how to work with spreadsheets, use formulae, and perform calculations and analysis

▪ Create tables using Pivot Tables

▪ Become familiar with basic statistical and financial measures

▪ Design creative spreadsheets and communicate effectively in business using spreadsheets and data analysis

Syllabus:

Getting Started With Microsoft Excel; Basic Arithmetic Operations in Excel; Data: Input Into Excel and Sources; Visualization of Data Using Charts in Excel; Measures of Central Tendency; Measures of Dispersion; Correlation Coefficient; Regression Analysis; Hypothesis Testing in Regression Analysis; Understanding Growth Rates, Time Value of Money, Investment Decision Criterion (NPV and IRR); Loan Amortization.

Organization of Course

Total contact Hours: 36		
1st week:	hrs (classes)	hrs (self-study/project)
2nd week:	hrs (classes)	hrs (Mid-term exam/assessment/discussion)
3rd week:	hrs (classes)	hrs (self-study/project)
4th week:	hrs (Classes)	hrs (End term exam)

Mode of lectures: Hybrid mode lecture/videos/case study/ discussion/ workshop/ hands-on

Course/Project Plan

Lecture no.	Topic	Lecture mode	Instructor
L: 1-3	Getting Started with Microsoft Excel	Lecture & practice sheet	Dr Monika Mathur
L: 4-5	Basic Arithmetic Operations in Excel	Lecture & practice sheet	Dr Monika Mathur
L: 6-7	Data: Input Into Excel and Sources	Lecture & practice sheet	Dr Monika Mathur
L: 8-9	Measures of Central Tendency	Lecture & practice sheet	Prof Sharad Ranjan
L: 10-11	Measures of Central Tendency	Lecture & practice sheet	Dr Monika Mathur
L:12-13	Measures of Dispersion	Lecture & practice sheet	Prof Sharad Ranjan
L:14-15	Correlation Coefficient	Lecture & practice sheet	Dr Monika Mathur
L: 15-19	Regression Analysis	Lecture & practice sheet	Prof Sharad Ranjan
L:20-21	Hypothesis Testing	Lecture & practice sheet	Prof Sharad Ranjan
L: 22-25	Understanding Growth Rates	Lecture & practice sheet	Dr Monika Mathur
L: 26-30	Time Value of Money	Lecture & practice sheet	Prof Sharad Ranjan
L: 31-34	Investment Decision Criterion: NPV and IRR	Lecture & practice sheet	Prof Sharad Ranjan
L: 35-36	Loan Amortization	Lecture & practice sheet	Prof Sharad Ranjan

Brief profile of the instructor with Photograph

Prof Sharad Ranjan is a professor in economics at Zakir Husain Delhi College Evening (University of Delhi) with a teaching experience of nearly three decades. He is PhD from the Centre for Economic Studies and Planning, Jawaharlal Nehru University, New Delhi. He has published many research papers in various journals of repute and has also authored six books, the latest co-authored one being **Basic Computational Techniques for Data Analysis (2023)** published by *Routledge*. He has conducted workshops in financial literacy for the Securities and Exchange Board of India as a resource person and has also co-supervised and evaluated PHd theses.

Dr Monika Mathur is Associate Prof & Head, Dept of Economics, Manipal University jaipur, with a teaching experience of 18 years. She is Ph d In the area of Health Economics and has been closely associated with Entrepreenurial activities & enagagements of students. She is a regular resource person for tranings at Regional Training Institute for Auditors. She has authored & co – authored several research papers in Journals of repute.