

University Campus, TU, Kirtipur
Workshop On
Quantitative Data Analysis Methods and Tools in Research
(SmartPLS and SPSS)

Organized by



University Campus, TU
Kirtipur

Supported by



University Grants Commission
Sanothimi, Bhaktapur

Day 1				
Inauguration Session (8:00 AM-10:00 AM)		Breakfast/ Registration: 8:00-9:00 Formal Programme (9:00-9:45): Opening, Welcome speech, Speech on the Relevancy of the programme, Closing the session.		1 Hour Programme Venue: University Campus Hall
Workshop Session				
Day 1: Foundations of Quantitative Research and Measurement				
Date	Time	Title of the Session	Duration	Resource Person
Day 1st : 2083 -02 -18 (June 01, 2026)	10:00-11:30	Selection of research topic, Starting objectives, and Formulating research questions	1:30 hr	Dr. MRB
	11:30-1:00	Tool construction and validation	1:30 hr	Dr. RA
	1:00-1:30 REFRESMENT			
	1:30-3:00	Understanding Types of Data and Measurement Scales: Nominal, Ordinal, Interval, Ratio	1:30 hr	Dr. RA
	3:00-4:30	Hands-on session on Data input methods in SPSS: Manual entry, importing from Excel, CSV, etc. Coding and labeling variables. Data cleaning and handling missing values.	1:30 hr	Dr. RA
Day 2: Descriptive Statistics, Bivariate Analysis & Hypothesis Testing Using SPSS				
Day 2nd :2083 -02 -19 (June 02, 2026)	10:00-11:30	Hypothesis Testing: Concepts, Decisions, and Real-life Cases (Formulations of Hypothesis Testing and Significance Level)	1:30 hr	Dr. BPD
	11:30-1:00	Descriptive Statistic: Mean, Standard Deviation, Skewness, Kurtosis, Data Visualization and Graphical Summary (Charts, Histograms, Box Plots). Understanding correlation: Pearson, Spearman, and Kendall correlation (Using SPSS)	1:30 hr	Dr. MRB
	1:00-1:30 REFRESMENT			
	1:30-3:00	Performing parametric tests in SPSS	1:30 hr	Dr. RA
	3:00-4:30	Conducting non-parametric tests in SPSS	1:30 hr	Dr. RA

Day 3: Regression Analysis & Factor Analysis Using SPSS				
Day 3rd : 2083-02-20 (June 03, 2026)	10:00-11:30	Simple and multiple regression using SPSS	1:30 hr	Dr. SLS
	11:30-1:00	Interpretation of regression output and statistical significance	1:30 hr	Dr. SLS
	1:00-1:30 REFRESHMENT			
	1:30-3:00	Concept of factor analysis and its applications	1:30 hr	Dr. BPD
	3:00-4:30	Performing Exploratory Factor Analysis (EFA) in real data through SPSS	1:30 hr	Dr. BPD
Day 4: Structural Equation Modeling (SEM), Confirmatory Factor Analysis (CFA) and Path Modeling Using SmartPLS				
Day 5th : 2083-02-21 (June 04, 2026)	10:00-11:30	Introduction to Structural Equation Modeling (SEM) Framework	1:30 hr	Dr. BST
	11:30-1:00	Practicum: Introduction to SmartPLS	1:30 hr	Dr. BST
	1:00-1:30 REFRESHMENT			
	1:30-3:00	Evaluation Model Fit Indices and Validity (Convergent and Discriminant)	1:30 hr	Dr. BST
	3:00-4:30	Practicum: Developing measurement model	1:30 hr	Dr. BST
Day 5: Principal Component Analysis and Confirmatory Factor Analysis				
Day 5th : 2083-02-22 (June 05, 2026)	10:00-11:30	Principal Component Analysis (PCA)	1:30 hr	Dr. BST/ Dr. SLS
	11:30-1:00	Interpretation of factor loadings and scree plots	1:30 hr	Dr. BST/ Dr. SLS
	1:00-1:30 REFRESHMENT			
	1:30-3:00	Concept of Confirmatory Factor Analysis (CFA)	1:30 hr	Dr. BST/ Dr. SLS
	3:00-4:30	Validity and Reliability of Reflective and Formative Constructs	1:30 hr	Dr. BST/ Dr. SLS
Day 6: Use of AI for Article Publication				
Day 6th : 2083-02-23 (June 06, 2026)	10:00-11:30	Use of AI for Literature Review in Quantitative Research	1:30 hr	Dr. LN/ Dr. NPK
	11:30-1:00	AI for academic writing (Jenni AI, Scispace, Paperpal)	1:30 hr	Dr. LN/ Dr. NPK
	1:00-1:30 REFRESHMENT			
	1:30-3:00	Introduction to AI and General Tools: Commercial AI Tools	1:30 hr	Dr. LN/ Dr. NPK
	3:00-4:30	Introduction to AI and Large Language Models (LLMs), Overview of AI Prompts and tools (ChatGPT, Demini, Deepseek, Gork, Perplexity AI, etc)	1:30 hr	Dr. LN/ Dr. NPK

Day 7: Use of AI for Data Analysis				
Day 7th : 2083 -02 -24 (June 07, 2026)	10:00-11:30	Data analysis and visualization using AI, Introduction to data analysis and installation of softwares	1:30 hr	Er. UK
	11:30-1:00	Creating graphs, flowcharts etc. using AI tools, Introduction to image analysis, Generation of images/videos using AI-Image tools.	1:30 hr	Er. UK
	1:00-1:30 REFRESHMENT			
Closing After Day 7: 1:30PM-4:00PM Participants' Feedback, Certificate Distribution, Formal Closing of the Programme.				

Experts:

- Dr. Ramesh Adhikari (Dr. RA)
- Dr. Bharat Singh Thapa (Dr. BST)
- Dr. Bed Prasad Dhakal (Dr. BPD)
- Dr. Megha Raj Banjara (Dr. MRB)
- Dr. Srijan Lal Shrestha (Dr. SLS)
- Dr. Lila Nyaichai (Dr. LN)
- Er. Ujjwal Koirala (Er. UK)
- Dr. Narayan Prasad Koju (Dr. NPK)

