



# Tribhuvan University

## Central Department of Management

Kirtipur, Kathmandu



### **FIVE DAYS**

ONLINE FACULTY DEVELOPMENT PROGRAMME  
on

## **RESEARCH ANALYTICS USING R-STUDIO, STATA AND AMOS**

(13th May -17th May, 2021)

Timings: 10:00 AM-06:00 PM



**SUPPORTED BY**  
**UNIVERSITY GRANTS COMMISSION, NEPAL**

## ABOUT FDP

The research works and teaching/learning activities are so intertwined that impacts directly the quality of teaching and learning in the classroom, thereby benefiting the students, the society and the nation at large. The analysis of data using appropriate statistical tools through various statistical software like RStudio, STATA and AMOS is really an important skill for research based discussion and learning. This program is designed to cover all relevant aspects of Research Analytics starting from the very basics of research and statistics, data preparation, data cleaning to advance statistical techniques like Structural Equation Model (SEM) with the sufficient theoretical explanation behind such techniques.



## EXPECTED OUTCOMES

By the end of this program the participants will develop basic and advanced level of data analysis along with research skills that will enable them to carry out research projects independently and supervise the quality dissertations of Master Level students. Specifically, the expected outcomes of the program will be as follows:

- Understand the importance and the uses of R-Studio, STATA and AMOS in analyzing various types of data
- Design an effective research project including development of conceptual model, instrumentation and measurement.
- Prepare the research design for multivariate analysis, like multiple regression, Exploratory Factor Analysis (EFA), Component Factor Analysis (CFA) and Structural Equation Model (SEM).
- Develop theoretical foundation for factor analysis using AMOS
- Apply the theory of Structural Equation Modeling (SEM) in developing models and their interpretations.
- Discuss the use and implications of Moderation and Mediation analysis using R and R Studio
- Understand the panel data analysis tools and conduct panel data analysis using STATA software

# RESOURCE PERSONS



**DR. VISHAL GUPTAT**  
Associate Professor, Indian  
Institute of Management  
Ahmedabad, India  
(3 days)

## Topic to be covered

- Introduction to Measurement, Reliability, Validity, Exploratory Factor Analysis (EFA)
- Reliability and EFA testing using R, R-Studio
- Introduction to Structural Equation Modeling
- Identification, Degrees of Freedom and Goodness of Fit Measures
- Measurement Models and Confirmatory Factor Analysis
- Path Analysis with Latent Variables, Testing Mediation and Indirect Effects (Sobel test and Bootstrap method)
- Testing Mediation and Indirect Effects (Sobel test and Bootstrap method)
- Moderation Testing
- Moderation Testing and multigroup SEM analysis
- Additional Issue in SEM (Item parceling, tackling common method bias, non-normality, modeling missing data)
- Additional Issue in SEM (Item parceling, tackling common method bias, non-normality, modeling missing data)



**Dr. Surya Bahadur GC**  
Associate Professor  
Pokhara University  
Nepal

## Topic to be covered

- Introduction to Factor Analysis and AMOS software
- Basic Concepts and Application: Confirmatory Factor Analysis using AMOS



**Mr. Siddha Raj Bhatta**  
Deputy Director  
Research Department  
Nepal Rastra Bank

## Topic to be covered

- Basics of Data Management
- Pooled OLS, Fixed Effect Model and Random Effects Model
- Issues with Panel Data Regression Models
- Dynamic Panel Data Models

## REGISTRATION PROCESS

Interested candidates can register online by using the google form given below.

Google form link for registration:

<https://forms.gle/GzrHy6qGwwCSgHBy7>

Registration will be complete if Google form is being filled after making the payment of Registration fee.

FDP Registration Fee: **NPR 5000** per participant

\*E-Certificate for all registered participants

### BANK DETAILS

Name : Central Department of Management

Bank Name : Nepal Bank Ltd.

Account No : 04500100099012000001

Branch : Kirtipur

### ORGANIZING TEAM

FDP Patron: Prof. **Dr. Ramji Gautam** (Head, CDM)

Co-ordinator: Asst. Prof. **Bharat Singh Thapa**

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Member: Asst. Prof. **Phul Prasad Subedi**

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