Call for Participants — Onsite Training Seminars in Applied Statistics November 2023

The University of the Philippines (UP) School of Statistics, in collaboration with the University of the Philippines Statistical Center Research Foundation, Inc. (UPSCRFI), is pleased to announce our onsite training seminars this November 2023:

(1) Basic Statistics with Exploratory Data Analysis (8-10 November);
(2) Introduction to R and Data Management Using the Tidyverse Ecosystem (15-17 November); and
(3) Applied Statistical Forecasting (23-24 November)

These modules aim to equip participants with the foundation in understanding Statistics, with the basics in using R, one of the most popular platforms in doing statistical analysis, and approaches of statistical forecasting. Details of the training seminars are attached in this letter for your reference.

Faculty members of the UP School of Statistics with wide-ranging consulting and research experience will serve as resource persons. Certificate of completion will be awarded to participants upon successful completion of a module.

The training seminar fee for each module per participant is Php 10,000. This includes materials, lunch, snacks, and use of laboratory facilities. Interested individuals and groups may fill out the form found in this link: bit.ly/UPSS-November2023-Trainings. Full payment or completion of the conforme form is required to secure a slot for the training. Payments are non-refundable for no show participants. Discounted rates are available for individuals who will register for the two modules, and for groups of at least 10 participants. Guidelines on the discounted rates are attached in this letter for your reference.

Payment details will be provided after accomplishing the registration form.

Thank you very much. We look forward to seeing you in one of our training seminars!

Yours sincerely,

Czarinne Antoinette A. Antonio
Director, Office for Extension Services and External Linkages
UP School of Statistics

Endorsed by:

Prof. Joseph Ryan G. Lansangan, PhD
Dean, UP School of Statistics
Executive Director, UP Statistical Center Research Foundation, Inc.

GUIDELINES ON DISCOUNTED RATES

Regular Rate* Php 10,000.00 per participant per module

Discounted Rate *Individuals registering for two modules*
(10% discount from regular rate)
Php 9,000.00 per participant per module

Groups of at least 10 individuals registering for one module
*(10% discount from regular rate)***
Php 9,000.00 per participant per module

Groups of at least 10 individuals registering for more than one module
*(15% discount from regular rate)****
Php 8,500.00 per participant per module

*Training Fee includes materials, lunch, snacks, and use of laboratory facilities. UPSCRFI is VAT-exempt. Copy of BIR certification is available upon request to aid processing of fees.

**Groups must settle their bill as one, unless they are endorsed by an institution who requested separate billings for the members of the group.

***Billing rules for group registration shall also apply. If endorsed by an institution, participants need not be the same set for each module as long as the number of participants sent to each module is the same. In the event that the institution sends a different number of participants for each module, the smallest number will be used for the discount provided that it is at least 10. Modules wherein the number of participants of the institution does not meet the minimum number of participants will not be eligible for the discounted rate.

TRAINING MODULE 1

Basic Statistics with Exploratory Data Analysis

8-10 November 2023
9:00 AM–12:00 NN and 1:00–4:00 PM
UPSS Computer Laboratory 1
Total training hours: 18 hours

Description — This module is designed to introduce basic concepts in Statistics including methods of data collection, sampling techniques, data presentation, and summary measures. Statistical Inference is also introduced, covering estimation and hypothesis testing. Integrated into this course are Exploratory Data Analysis (EDA) techniques which provide a new way of approaching data. Participants are also trained on the use of appropriate statistics software.

Objectives — At the end of the training, participants are expected to learn the basic concepts in statistics, collect and present statistical data, learn the different sampling techniques, interpret summary measures, perform estimation and hypotheses testing and do exploratory data analysis.

Outline of Topics

1. Introduction to Statistics
    a. Definition of Statistics
    b. Basic Concepts
2. Collection of Data
    a. Data Collection Techniques
    b. Types of Questionnaires
    c. Guidelines in Questionnaire Construction
3. Sampling Techniques
    a. Census vs Sample Survey
    b. Sampling vs Non-sampling Errors
    c. Probability and Non-probability sampling
4. Descriptive Statistics: Presentation of Tables and Construction of Graphs
5. Descriptive Statistics: Computation of Summary Measures
    a. Measures of Central Tendency
    b. Measures of Location
    c. Measures of Dispersion
    d. Measures of Skewness and Kurtosis

6. Exploratory Data Analysis
    a. Main Themes of EDA
    b. Boxplots
7. Descriptive Statistics Using Jamovi
8. Inferential Statistics: Point Estimation
9. Inferential Statistics: Interval Estimation with Applications in Jamovi
    a. Confidence Interval Estimators for the Population Mean
    b. Confidence Interval Estimator for the Population Proportion
    c. Confidence Interval Estimator for the Difference between Two Population Means
10. Inferential Statistics: Hypothesis Testing with Applications in Jamovi
    a. Elements of Hypothesis Testing
    b. Tests Concerning the Population Mean
    c. Test Concerning the Population Proportion
    d. Tests Concerning the Difference between Two Population Means
    e. Test Concerning the Independence between Two Categorical Variables

TRAINING MODULE 2

Introduction to R and Data Management Using the Tidyverse Ecosystem

15-17 November 2023
9:00 AM–12:00 NN and 1:00–4:00 PM
UPSS Computer Laboratory 1
Total training hours: 18 hours

Description — Doing data management tasks and applying statistical analysis are most efficiently done using a specialized software. This training module is designed to introduce the participants to one of the most commonly used platform in data management and statistical analysis: R. The experience in using R is improved and made easier by using R Studio, an integrated development environment (IDE). Participants are exposed to both Base-R concepts and to the Tidyverse ecosystem of packages.

Objectives — The training seminar aims to provide participants with the basic knowledge and skill set in using R for basic programming tasks. Furthermore, it aims to provide participants with tools in R and R Studio for importing and exporting data, wrangling data, visualizing data and generating replicable outputs.

Outline of Topics

1. R and RStudio
2. Writing R Codes and Programs
3. Basic Objects in R
    a. Homogenous Objects in R
    b. Heterogenous Objects in R
4. Basic Programming in R
5. Using R Projects
6. Using Tidyverse Packages for:
    a. Importing and Exporting Data Sets
    b. Data Wrangling and/or Transformations
    c. Data Visualization
    d. Introduction to R Markdown

TRAINING MODULE 3

Applied Statistical Forecasting

23-24 November 2023
8:30 AM–12:00 NN and 1:00–4:30 PM
UPSS Computer Laboratory 1
Total training hours: 14 hours

Description — Two approaches to forecasting time series data are presented: classical smoothing procedures and the use of statistical models, specifically ARIMA models.

Objectives — At the end of the training, participants are expected to learn the basic concepts in time series analysis and apply classical approaches and ARIMA models to generate forecasts.

Outline of Topics

1. Classical Approaches to Statistical Forecasting
    a. Preliminaries
    b. Basic Concepts
    c. Components of a Time Series
    d. Addressing Data Gaps
    e. Simple Moving Averages
    f. Exponential Smoothing
2. ARIMA models
    a. Preliminaries
    b. Stationarity and Unit Root Tests
    c. Autocorrelation
    d. ARIMA process