

# NATIONAL WORKSHOP SERIES ON

Regression Analysis,

Computation of Sample Size in Health Sciences Research

&

Survey Research and Statistical Analysis

July 29 - August 3, 2019



**Organized by,**

Department of Data Science

(formerly Department of Statistics),

Prasanna School of Public Health (PSPH),

Manipal Academy of Higher Education (MAHE),

Manipal - 576104, Karnataka



**MANIPAL**  
ACADEMY of HIGHER EDUCATION

(Deemed to be University under Section 3 of the UGC Act, 1956)

## **About workshops**

Department of Data Science, Prasanna School of Public Health (PSPH), Manipal Academy of Higher Education (MAHE), Manipal will be organising a series of three national workshops namely “Workshop on Regression Analysis” during July 29-30, 2019, “Workshop on Computation of Sample Size in Health Sciences Research” on July 31, 2019 and “Workshop on Survey Research and Statistical Analysis” during August 1-3, 2019. These workshops aim to sensitize the participants on the concerned topics, perform practical exercises using SPSS software, interpret the findings and effective presentation of results.

## **About Department of Data Science (formerly Department of Statistics)**

Established on August 1, 2006, the Department of Data Science offers courses in MSc Biostatistics, MSc in Data Science, Doctoral programmes and Internships. The department also offers a “Certificate course in Biostatistics, Epidemiology & Research Methodology”. For more details visit: <https://manipal.edu/dos/about-dos.html>

## **About Manipal Academy of Higher Education (MAHE)**

MAHE has been imparting world class education for over 60 years. It has been accorded the status of “The Institute of Eminence” by the Ministry of Human Resource Development (MHRD) in the year 2018. Situated at the rocky yet lush green hinterland of the Malabar coast, students from over 50 countries study here. It is home to one of the best libraries and also to one of the finest anatomy museums in the world and what more; it has fully equipped campuses, research centre of national repute and above all a perfect harmony with nature. For details, log on to [www.manipal.edu](http://www.manipal.edu).

## **Target audience**

This workshop is targeted for Post graduates, PhD scholars, Research staff Faculty and Professionals in Nursing, Pharmaceutical Sciences, Dentistry, Allied health sciences, Life sciences, Public health and Healthcare.

# Regression Analysis

## Background

Regression is one of the most widely used statistical techniques. It helps to model the relationship between the dependent variable/outcome variable and independent variable(s) which in turn helps to predict the former in terms of fixed value of the latter. At the end of this workshop the participants will be familiar with the concept of regression analysis, model building, performing regression in SPSS, interpretation and presentation of results.

## Date and venue

**July 29-30, 2019**, Department of Data Science, Level 6, Health Sciences Library Building, MAHE, Manipal - 576104.

## Course fee

- » For staff/students of MAHE and its constituent institutions - ₹2500/-
  - » For external candidates - ₹2950/- (including 18% GST)
- Course fee includes workshop kit, course material, lunch and refreshments.

## Course content

- » Simple linear regression - assumptions, interpretation of coefficients, testing of significance of coefficients, coefficient of determination, regression diagnostics.
- » Multiple linear regression - assumptions, interpretation of coefficients, testing of significance of coefficients, adjusted  $R^2$ , model diagnostics, model building, selection of variables using stepwise procedures.
- » Introduction to logistic regression analysis.

## Prerequisite

Participants are expected to have basic knowledge of statistics and computer usage.

# Computation of Sample Size in Health Sciences Research

## Background

Determination of sample size is an important aspect of any study. It is the procedure of determining the optimum number of individuals to be included in the study to obtain reliable results. Choosing a sample size lesser than optimum leads to underpowered studies and more than optimum leads to wastage of resources. At the end of this workshop the participants will be able to compute the optimum sample size for different study designs /statistical tests.

## Date and venue

**July 31, 2019**, Department of Data Science, Level 6, Health Sciences Library Building, MAHE, Manipal - 576104.

## Course fee

- » For staff/students of MAHE and its constituent institutions - ₹1500/-
  - » For external candidates - ₹1770/- (including 18% GST)
- Course fee includes workshop kit, course material, lunch and refreshments.

## Course content

Sample size calculation for:

- » Estimation of mean and proportion.
- » Comparison of mean and proportion for 2 and more than 2 groups.
- » Comparison of paired means and proportions (2 time points).
- » Case control studies and cohort studies based on OR, RR and HR.
- » Estimation of correlation coefficient, testing of correlation coefficient.
- » Repeated measures ANOVA and Validation of diagnostic tools.

## Prerequisite

Participants are expected to have basic knowledge of study designs and biostatistics.

# Survey Research and Statistical Analysis

## Background

Questionnaire is an important tool for data collection. A reliable and valid questionnaire is an essential component for one's research. Under many circumstances, a standard questionnaire may not be available which compels the investigators to develop a new questionnaire. The objective of this workshop is to introduce the use of questionnaire & rating scales in survey research, guidelines for questionnaire design, validation & administration and analysis of survey data. Hands-on training will be provided in SPSS software.

## Date and venue

**August 1-3, 2019**, Department of Data Science, Level 6, Health Sciences Library Building, MAHE, Manipal - 576104.

## Course fee

- » For staff/students of MAHE and its constituent institutions - ₹3500/-
  - » For external candidates - ₹4130/- (including 18% GST)
- Course fee includes workshop kit, course material, lunch and refreshments.

## Course content

Types of questionnaire, uses and methods of administration, Guidelines for questionnaire design, Item generation, sources of items, Analysis of questionnaire data using SPSS, Introduction to rating scale, developing a rating scale, Validity and reliability of rating scales/Screening tools, Factor analysis and Analysis of data from rating scales, Validation of screening tool, ROC analysis, Sensitivity & Specificity, Sampling.

## Prerequisite

Participants are expected to have basic knowledge of statistics and computer usage.

## Registration

### Course Fee

Workshop	Course fee (₹)	
	Internal	External
Regression Analysis	2500	2950
Sample Size Computation in Health Sciences Research	1500	1770
Sample Survey and Statistical Analysis	3500	4130
<b>Registration for all the three workshops (Discounted rate)</b>	<b>7000</b>	<b>8000</b>

Participants may pay the full registration fee online or by DD

### Online Registration:

Participants can deposit the registration fee to the following account:

Savings Bank Account No: 33508958510

Name of Bank: State Bank of India

Name of Account Holder: Manipal University Conference/Workshop

IFSC Code: SBIN0004426

MICR Code: 576002006

SWIFT Code: SBININBB770

### Offline Registration:

Payments can be made by demand draft (DD). The DD should be in favor of “**Manipal University Conference/Workshop**” payable at Manipal or Udupi

### Selection procedure

Interested candidates should E-mail the duly filled registration form and proof of fee payment to **statsmanipal.workshop@gmail.com** on or before **20/07/2019**. The candidates should make the payment on or before the specified deadline, failing which their selection will be cancelled.

### **Note:**

1. Organisers will **NOT** be providing the SPSS software.
2. After payment of registration fee, the course fee will not be refunded under any circumstances.
3. Maximum intake for each workshop is **40** and the selection is purely based on a first-cum-first-serve basis.

### **How to reach Manipal**

Manipal is well connected by road, rail and air. Two main cities close to Manipal which serve as entry points are Udupi and Mangalore. Udupi is about 5km from Manipal (10 min drive), whereas Mangalore is about 65km (1.5 hours drive). There are ample number of buses plying between Mangalore and Manipal. Udupi railway station is only 4km from Manipal and the nearest airport is Mangalore.

### **Accommodation**

The organizing committee can help in arranging accommodation in and around the campus with a prior request and availability. There will be limited subsidized accommodation in and around the campus and will be provided on first-come-first-serve basis.

### **Some of the nearest hotels are:**

- » Fortune Inn Valley View, Manipal : 0820-2571101
- » Green Park, Manipal Hill View, Manipal : 0820-2570562
- » Kediyoor, Udupi : 0820-2523382
- » Udupi Residency, Udupi : 0820-2530005

### **Contact**

**Dr. Ravishankar. N,**  
Assistant Professor,  
Department of Data Science, PSPH  
MAHE Manipal  
**Email:** [ravi.shankar@manipal.edu](mailto:ravi.shankar@manipal.edu)  
**Ph:** +91- 9902601079

# NATIONAL WORKSHOP SERIES ON

## Regression analysis, Computation of sample size in health sciences research & Survey research and statistical analysis

**July 29 - August 3, 2019**

### Registration form

Name: .....

Gender: .....

Designation: .....

Employee ID/Roll no.(only for MAHE candidates): .....

Official address: .....

.....

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Phone: .....

Email: .....

Please tick the workshop(s) opted for:

1. Regression Analysis

2. Computation of Sample Size in Health Sciences Research

3. Survey Research and Statistical Analysis

Do you require accomodation within campus? Y/N: .....

Signature of the applicant with date: .....