



**JAWAHARLAL INSTITUTE OF POSTGRADUATE  
MEDICAL EDUCATION AND RESEARCH (JIPMER)**

(An Institution of National Importance under the Ministry of Health & Family Welfare)

**PUDUCHERRY 605 006**



**14<sup>th</sup> short course on basic and advanced**

# **EPIDEMIOLOGY**

**with hands-on training in SPSS**

Organised by the

**Department of Preventive and Social Medicine**

**JIPMER, Puducherry**

**23<sup>rd</sup> to 28<sup>th</sup> September 2024**

**JIPMER International School of Public Health**

**Organizing Chairperson: Dr. Ganesh Kumar S**

**Organizing Secretary: Dr. Venkatachalam J**

# Overview of the course

The Department of Preventive and Social Medicine at JIPMER is dedicated to academic excellence and fostering a robust foundation in medical research among health professionals. One of the primary objectives of the department is to elevate community health by disseminating and imparting comprehensive knowledge and expertise in epidemiology.

This extensive six-day workshop encompasses various topics, including study designs, epidemiological concepts in effect measurements, and statistical tests, accompanied by SPSS demonstrations and hands-on sessions in the basic course. The advanced workshop will cover advanced topics such as regression analysis, survival analysis, sample size estimation and diagnostic accuracy

## Objectives of the course

### Basic course

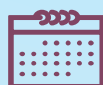
1. Apply basic principles of epidemiology in planning and conducting research
2. Analyse the given data set using SPSS and draw appropriate conclusions

### Advanced course

1. Apply the assumptions and conduct regression analysis in epidemiological research
2. Apply the principles for estimating sample size for different types of epidemiological study designs/statistical measures
3. Understand and apply various concepts of time to event analysis and its applications in research
4. Understand and apply various concepts of diagnostic accuracy

## Course details

### Basic course



23.09.2024 – 26.09.2024

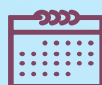


INR 6000



08:30 AM – 5:00 PM

### Advanced course



27.09.2024 – 28.09.2024



INR 3000



1<sup>st</sup> floor, JISPH, JIPMER

**Basic and Advanced: Rs. 8500/- per participant**

*Participants can directly register for only one advanced course*

 **Registration link** <https://forms.gle/K1Bv1jZcMp1MsUwB6>

**Application Deadline: August 31, 2024**

**Contact:** [epidemiologyworkshop24@gmail.com](mailto:epidemiologyworkshop24@gmail.com)

### Account details for course fee payment:

**Account No.:** 40248842618

**Name:** Preventive and Social Medicine Society of JIPMER

**Bank name:** SBI **Branch:** JIPMER (Pondicherry), **IFSC:** SBIN0002238

*Sharing transaction ID in Google form is mandatory*

*The certificate will be provided after completion of the course*

*Registration, once done, cannot be cancelled*

## Resource Persons

Dr. Gautam Roy

Dr. Premarajan K. C

Dr. Sonali Sarkar

Dr. Sitanshu Sekhar Kar

Dr. Ganesh Kumar S

Dr. Swaroop Kumar Sahu

Dr. Palanivel C

Dr. Subitha L

Dr. Mahalakshmy T

Dr. Jayalakshmy R

Dr. Venkatachalam J

Dr. Zunatha Banu

## SR Coordinators

Dr. Karthik (8939611243), Dr. Bitty (9497771143)

# Basic Course Schedule

(08:30 AM - 5:00 PM)

## 23.09.2024 (Monday)

1. Introduction to Study Designs
2. Observational and Interventional Studies
3. Sampling and Sample Size Estimation
4. SPSS: Introduction

## 24.09.2024 (Tuesday)

1. Measures of Association
2. Study variables, Descriptive and Inferential statistics
3. Choice of statistical tests
4. SPSS: Descriptive statistics and Data visualisation

## 25.09.2024 (Wednesday)

1. Bias, Confounding and Interaction
2. Introduction to Diagnostic tests
3. SPSS: Parametric and Non-parametric tests

## 26.09.2024 (Thursday)

1. Correlation and introduction to regression
2. SPSS: Correlation and Regression
3. Application of epidemiological principles :
  - Outbreak Investigation
  - Critical review of journal articles using checklist

# Advanced Courses Schedule

(27.09.2024 - 28.09.2024; 08:30 AM - 5:00 PM)

## Regression (Course 1)

1. Types: Linear and Logistic regression
2. Assumptions and Diagnostics
3. SPSS: Demo and hands-on

## Sample size calculation (Course 2)

1. Theoretical concepts: Principles and consideration for sample size calculation
2. Power calculation
3. Hands-on calculation with open source software

## Survival Analysis (Course 3)

1. Life table and Kaplan Meier analysis
2. Log rank test and Cox-proportional regression
3. SPSS: Demo and hands-on

## Diagnostic accuracy (Course 4)

1. Sensitivity, Specificity, Predictive values, Likelihood ratio
2. Receiver Operating Characteristic curve, Bland Altman plot, Kappa statistics
3. SPSS Demo and hands-on

*\*Note: Participants can attend only one of the advanced courses*