

# **Calcutta Institute of Engineering & Management**

### **RESEARCH METHODOLOGY WORKSHOP PROGRAMME**

February 23 - February 29, 2024 (Except 25<sup>th</sup> & 26<sup>th</sup>)

**The Research Methodology Workshop Programme** of **A.J.C Bose Centre for Incubation and Research** underCalcutta Institute of Engineering & Management, Kolkata aims at the Professional Development of Faculty Members and Research Scholars of Institutions, Colleges and Universities.

### FOR WHOM:

This programme is designed for Engineering, Science and Management Teachers and Researchers working in Universities, Colleges and Professional institutes. Individuals teaching in staff training colleges, training centers of industrial organizations, and staff training institutes of central and state governments which teach management and allied subjects are also welcome to apply.

### **COURSE WORK:**

The programme structure for the modules are as follows:

### Day 1:

First Half: Analysis of cross section data- I

- Linear regression model
- Estimation OLS
- Testing of hypotheses: t- test, F-test
- Goodness of Fit
- Tests for heteroscadasticity
- Tests for multicollinearity

#### Second Half:

- Linear regression with categorical variables
- Generating dummy variable
- Estimating model with intercept dummy, slope dummy and interaction dummy

### Day 2:

First Half: Analysis of cross section data III: Limited dependent variable model

• Logit estimation by maximum likelihood

- Marginal effects at mean
- Goodness of Fit
- LR test

Second Half:

- Probit estimation by maximum likelihood
- Marginal effects at mean
- Goodness of Fit
- LR test

### Day 3:

First Half: Analysis of pooled cross section data

- Pooling of two independent cross section samples
- Estimating time effect by allowing interaction time dummy

Second Half: Analysis of Panel Data

• Construction of panel data

- Estimation of error component model
- Fixed effect / LSDV
- Random effect
- Hausman test

### Day 4:

First Half: Multivariate Data Analysis-I

- Principal Component Analysis
- Application of Principal Component Analysis

Second Half: Multivariate Data Analysis-II

• Factor Analysis

• Application of Factor Analysis

### Day 5:

First Half

- Stochastic Frontier Analysis
- Application of Stochastic Frontier Analysis

#### • Second Half

- Basic idea of Time Series Model
- Basic application of Time Series Model

### **CERTIFICATION:**

This certificate is awarded to those who complete the entire programme.

### **PROGRAMME DURATION, IMPORTANT DEADLINES AND FEES:**

The programme duration, fees and registration deadlines are given below. The candidates need to submit the completed application forms on or before the given last date for the respective certification option.

Duration: 23.02.2024 – 29.02.2024 (Except 25th & 26th)

(Online: 24.02.2024, 27.02.2024, 28.02.2024

Time: 11 a.m.-1 p.m. (I)

1 p.m.-2 p.m. Lunch Break

2 p.m – 4 p.m. (II)

Registration Fees: Rs. 500/- (Registration fees is applicable only for other Colleges).

(Exclusive Lunch, Need to pay extra amount for food)



### For Any Clarifications Please Contact:

Calcutta Institute of Engineering and Management 24/1A, Chandi Ghosh Road, Ashok Nagar, Tollygunge, Kolkata – 700 040 Website: ciem.co.in

### **Contact:**

Dr. Sarmistha Basu (Course Co-ordinator), Asst. Prof. & Research Development Officer, 8017703933
Prof. Sonali Sarkhel , H.O.D, ECE, CIEM, 8100779888
Prof. Jhimlee Adhikari Ray- Asst. Prof. (ECE), Co-ordinator, IQAC, 9830197970
Prof. Riddha Chaudhuri, Asst. Prof. & Trainning & Placement Officer, 9674449931
Dr. Sarmistha Basu (Course Co-ordinator), Asst. Prof. & Research Development Officer, 8017703933

Last date of application: 21.02.2024

Workshop Trainer:

Dr. Anindita Sengupta Associate Professor Department of Economics, Barrackpore Rastraguru Surendranath College,

### **EDUCATIONAL APPROACH:**

This Reseach Methodology Workshop Programme relies on a variety of learning settings like classrooms, workshops and seminars, and a participatory approach to learning. Participants are encouraged to develop insights into curriculum planning and academic administration. It requires a high level of effort from the participants in terms of individual preparation as well as working in groups. Participants will have access to library resources and facilities with network connectivity during the programme. Participants are highly encouraged to take initiative towards developing their own cases or research proposals.

### **ABOUT THE INSTITUTE:**

The Calcutta Institute of Engineering and Management or CIEM alongside Calcutta Institute of Science and Management or CISM is a self-financing college in West Bengal, India offering undergraduate and postgraduate courses in Engineering and Technology and other allied fields.

All the relevant programs are approved by the All India Council for Technical Education (AICTE). The college has been accredited by NAAC.

The college is affiliated with Maulana Abul Kalam Azad University of Technology (MAKAUT).

The campus is located along Chandi Ghosh Road at Tollygunge. This

institute conducts the following major programmes:

B.Tech. in Electronics and Communication Engineering (ECE)B.Tech. in

Electrical Engineering (EE)

B.Tech. in Civil Engineering (CE)
B.Tech. in Computer Science and Engineering (CSE) B.Tech.
in Information Technology Engineering (IT) Bachelor in
Business Administration (BBA)
Bachelor of Business Administration in Business Analytics (BBA BA)
Bachelor of Computer Application (BCA)
Bachelor of Science in Data Science (B.Sc. Data Sc.)
Bachelor of Medical Laboratory Technology (BMLT)

Masters in Business Administration (MBA)

N.B.: It is compulsory to join all faculty members of CIEM/ CISM. The form is attached below.

Name:	
Subject:	Photograph
Academic Qualifications:	
Affiliation:	
Faculty / Academician/ Researcher:	
Phone No:	
Email Id:	
Payment Reference No with Bank Name:	

## **Basic Requirements:**

- 1. Basics Knowledge of Probability Theory and Correlation and Regression
- 2. Basic Knowledge of Matrix Algebra