

ಮೈಸೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ



**UNIVERSITY OF MYSORE**  
(Estd.1916)

**CERTIFICATE COURSE**  
**in**  
**THEORY OF ECONOMETRICS FOR**  
**RESEARCH**



**UNIVERSITY OF MYSORE**

**DEPARTMENT OF STUDIES IN ECONOMICS AND CO-OPERATION  
MANASAGANGOTRI, MYSURU-570 006**

**CERTIFICATE COURSES**


[Syllabus: 2017-2018]

**INSTRUCTIONS:**

1. **Duration:** Certificate Course is for a duration of THREE Months
2. **Number of Credits:** Number of Credits for each Course shall be 5.
3. **Teaching Hours:** 5 Hours per week for each course. [About 60 hours for each course]  
[This shall be inclusive of theory, application, practical work, tutorials, and seminars as required/applicable to each course depending on the content and approach by the faculty]
4. **Allocation of Marks: Number of Marks for Each Course: 100**  
Out of 100 Marks:           70 Marks is for Theory Examination [Comprehensive end Semester Exam]  
  30 Marks is for Internal Assessment [for all the Courses in 2 Semesters]  
30 Marks for Internal Assessment shall have the break-up as follows:  
  10 Marks for One Test  
  05 Marks for One Assignment  
  05 Marks for Seminar Presentation
5. **Fees Structure:**
  - Diploma Course is fully Self-Finance Course.
6. **Eligibility Criteria:**
  - Students who have completed their Bachelor's Degree with Economics as one of the Cognate Subjects, B.Sc., with Mathematics or Statistics as one of the Cognate Subjects in Bachelor's Programme, B.Com, BBM and Students with Masters' Degree in Social Science, Commerce & Management are eligible to pursue this Course.

**LIST OF CERTIFICATE COURSES**

Sl. No.	Title of the Certificate Course	Marks for Theory	Internal Assessment	Total Marks
1	Certificate Course in Basic Mathematics for Research	70	30	100
2	Certificate Course in Basic Statistics for Research	70	30	100
3	Certificate Course in Theory of Econometrics for Research	70	30	100
4	Certificate Course in Applied Econometrics for Research	70	30	100
5	Certificate Course in Research Methodology	70	30	100
6	Certificate Course in Statistical Software for Data Analysis	70	30	100

  
**CHAIRMAN**  
 Department of Studies  
 in Economics and Co-operation  
 University of Mysore  
 Manasagangotri  
 MYSORE-570 006

UNIVERSITY OF MYSORE

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CERTIFICATE COURSE IN THEORY OF ECONOMETRICS FOR RESEARCH

[For Research in Social Science, Commerce & Management]

**Preamble:** The explosive growth in econometric literature in the last few decades hardly needs any emphasis. Introduction of this Course can be viewed as an attempt to expose the students to the basic concepts of econometrics. Keeping this in mind, the focus of this Course will be on a meaningful interface between theory and application - the emphasis being more on empirical analysis rather than theoretical rigour.

**Module 1: Introduction to Econometrics**

Meaning - Nature and Scope of Econometrics - Distinction between Economics and Econometrics, Mathematics and Econometrics, Statistics and Econometrics - Methodology of Econometrics - Types of Econometrics.

**Module - 2: Simple and Multiple Regression Model**

*Simple Regression:* Meaning - Basic Ideas - Significance of Disturbance Term. Method of Estimation: Ordinary Least Squares and Maximum Likelihood Estimation - BLUE Property - Coefficient of Determination - Assumptions - Hypothesis Testing - Confidence Interval and Test of Significance Approach - Testing Regression Coefficients - Interpretation of Results.

*Multiple Regression:* Meaning - Three Variable Regression Model - Partial Regression Coefficients - Method of Estimation - R-Square and Adjusted R-Square - Hypothesis Testing - Testing Individual Regression Coefficient - Overall Significance Test - ANOVA.

Introduction to Matrix Approach to Estimation of Parameters of more than Three Variables.

**Module - 3: Practical Problems of Regression**

Multicollinearity: Nature - Causes - Consequences - Detection - Remedial Measures. Heteroscedasticity: Nature - Causes - Consequences - Detection - Remedial Measures. Auto-Correlation: Nature - Causes - Consequences - Detection - Remedial Measures.

**Module - 4: Dummy Variable and Dynamic Regression Models**

*Dummy Variable Model:* Meaning - Nature - Dummy Variable Trap - Dummy Variable Model with Single Qualitative Variable - Two Qualitative Variables - Dummy Variable Model with Mixture of Qualitative and Quantitative Variables.

*Autoregressive and Dynamic Models:* Role of Lag in Economics - Estimation Methods: Koyck's: Adaptive Adjustment and Partial Expectation Models - Almon Approach to Distributed Lag Models.

**Module - 5: Simultaneous Equation Models**

**Nature** - Simultaneous Equation Bias - Identification: Under - Exact - Over Identification - Rules of Identification - Order and Rank Condition of Identification - Estimation of Simultaneous Equations Models: ILS, 2SLS, 3SLS, LIMLE, FIMLE.

**References:** [Please refer to the Latest Editions]

1. Damodar N Gujarati, *Basic Econometrics*, McGraw Hill, International Student Edition.
2. Damodar N Gujarati, *Econometrics by Example*, Palgrave Macmillan, United Kingdom.
3. Ghosh Sukesh K, *Econometrics- Theory and Applications*, Prentice Hall Private Ltd., New Delhi.
4. Koutsoyiannis A., *Theory of Econometrics*, The Macmillan Press Ltd., London.