St. Xavier's College – Autonomous Mumbai

Syllabus
For 3rd Semester
Core and Applied Courses in

Economics
(June 2021 onwards)

Contents:
Theory Syllabus for Courses:

AECO0301   Macroeconomic Analysis-I
AECO0302   Introduction to Econometrics –I
AAC0301   Elementary Statistical Techniques

SYBA   **Course: AECO0301**

Title: Macro Economics Analysis – I

Learning Objective:
1. Understand the different analytical methods in Macro economics.
2. Understand the methodological difference between Micro and Macro Economics.
3. Understand the relevance of macro-economic theories with the real-world scenario.
4. Learn the techniques of macro-economic analysis to apply in academic and industrial research.

Number of Lectures: 45

UNIT I: Introduction   **[15 lectures]**

1. Computation of National Income (Traditional and New Method)
2. Price Indices: Construction of Price Indices, and distinction between levels and rates of change of indices
3. Concept of unemployment, and measurement of unemployment, with emphasis on the Indian context

UNIT II: The Classical model of output and employment   **[15 lectures]**

1. Determination of output and employment
2. Say's Law
3. Demand for money in the Classical Approach
4. Value of Money: Quantity Theory of Money, Friedman's version of Quantity Theory

UNIT III: The Keynesian system of output and employment   **[15 lectures]**

1. Keynesian Aggregate Demand, Aggregate Supply and Effective Demand
2. Keynesian Consumption Function
3. Investment Function and the multiplier
4. Keynesian Demand for money, Speculative and Transaction Demands; Tobin's theory of demand for money

Basic Reference Books:
1. D'Souza, Errol: Macroeconomics. (2nd ed.) New Delhi. Dorling Kindersley (India) Pvt. Ltd, 2012. 978-81-317-6101-4--(339D'So)
2. Mankiw, N. Gregory: Principles of macroeconomics. (6th ed. Indian Reprint) Delhi. Cengage Learning India Private Limited, 2012(2015). 978-81-315-1821-2--(339Man)
3. Snowdon and Howard Vane. *Macroeconomics.*

SYBA   **Course: AECO0302**

Title: Introduction to Econometrics– I

Learning Objective:
1. Understand the theory underlying econometric techniques.
2. Understand the statistical methods for generalizing the inferences from a sample.
3. Understand the structure of economic and business data.
4. Model economic problems using econometric techniques.

Number of Lectures: 45

Unit 1: Classical Linear Regression Model   **[15 Lectures]**

- Types of Data: Cross-Section, Time Series, Panel Data, Nominal, Ordinal, Nominal, Real
- Steps in Empirical Econometric Analysis
- Concept of Population Regression Function and Sample Regression Function
- Assumptions underlying Classical Linear Regression Model

Unit 2: Ordinary Least Squares Estimation   **[15 Lectures]**

- Derivation of OLS estimators
- Properties of OLS Estimators: Gauss Markov Theorem; OLS Estimation using MS Excel

Unit 3: Interval Estimation and Hypothesis Testing   **[15 Lectures]**

- Testing hypothesis about a single parameter: Confidence Interval Approach and Test of Significance Approach, t and F test
- One tail and two tail test
- Type I and Type II Errors
- Concept of Levelof Significance

CIA 1: Written Test
CIA 2: Project

Basic Reference:
Gujarati, Damodar and Sangeetha, Basic Econometrics, McGraw Hill, Fifth Edition (2011).

References:
1. Chris Brooks, Introductory Econometrics for Finance, Cambridge University Press, Second Edition (2008).
2. Christopher Dougherty, Introductory Econometrics, Oxford University Press, Fourth Edition(2011).
3. Dominick Salvatore and Derrick Reagle, Theory and Problems of Statistics and Econometrics, Schaum's Outline Series, McGraw Hill, Second Edition (2002).

4. G.S. Maddala, Introduction to Econometrics, Macmillan Publishing, Second Edition (1992)
5. James Stock and Mark Watson, Introduction to Econometrics, Pearson, Third Edition (2011).
6. Jan Kmenta, Elements of Econometrics, Macmillan Pub., Second Edition (1986).
7. Jeffrey Wooldridge, Introductory Econometrics, Cengage Learning, Fourth Edition (2009).
8. Michael Intriligator, Econometrics Models, Techniques and Applications, Prentice

SYBA   **Course: AAC0301**

Title: Elementary Statistical Techniques

Learning Objective:
1. Learn basic statistical tools and techniques for analyzing data.
2. Apply the techniques to real data to in order to understand the characteristics and features of the data.
3. Perform univariate and bivariate analysis using statistical tools.
4. Understand probability concepts.

Number of Lectures: 60

Unit 1: Measures of Central Tendency and Dispersion   [30 Lectures]

- Graphical Representation of Categorical and Numerical data
- Describing Location of a Distribution: Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, Deciles, Quartiles, Locating Median from Histogram
- Describing Dispersion of a Distribution: Range,Mean Deviation, Variance and Standard Deviation
- Describing Shape of a Distribution: Skewness and Kurtosis.

Unit 2: **Describing Individuals in Distribution   [10 Lectures]**

- Percentile Ranks
- Percentiles with ungrouped scores
- Standardization: Common scales ofMeasurement.

Unit 3: Bivariate Analysis   [10 Lectures]

- Quantitative Description of Statistical Relation: Covariance
- Karl Pearson's CorrelationCoefficient, Spearman's Rank Correlation Coefficient.

Unit 4: Probability   [10 Lectures]

- Classical and Relative Frequency Approach to Probability
- Addition and Multiplication Laws ofProbability; Conditional Probability and Bayes Theorem

Assessment:
CIA-1: Written Test
CIA-2: Assignment
Basic Reference:
Richard Levin, Statistics for Management, Seventh Edition(2012).
Additional Reference:
S.P. Gupta, Statistical Methods, 43rd Edition(2014).