

SOPHIA COLLEGE
(AUTONOMOUS)

DEPARTMENT OF ECONOMICS

TYBA SYLLABUS

SEMESTER-V & VI

SOPHIA COLLEGE (AUTONOMOUS) COURSE STRUCTURE

(APPLICABLE FROM ACADEMIC YEAR 2020-2021)

TYBA ECONOMICS- (SEMESTER –V&VI)

PREAMBLE:

The Board of Studies in Economics, Sophia College for Women (Autonomous) has finalized the syllabi of papers at the TYBA which will be made effective from the Academic Year 2020-2021. The syllabus of TYBA has been framed keeping in view the recent trends in the subject of economics. The papers which would be offered to the students of Sophia College at TYBA in Semester V and Semester VI have been enlisted below. A broad overview of the structure, followed by the syllabi of individual papers, is given below.

DURATION:

The course shall be a full-time course.

The duration of B.A. course shall be of Three years /Six Semesters.

- FYBA: SEMESTER – I & II (One paper each semester)
- SYBA: SEMESTER – III & IV (Two papers each semester)
- TYBA: SEMESTER – V & VI (Six papers each semester)

PATTERN:

The T.Y.B. A. [Entire Economics] Course shall have 12 papers. Every semester shall have six papers, each carrying 100 marks. However, students can opt combination of any two subjects (Economics and any other subject) in which every semester shall have three papers of each subject, carrying 100 marks. All Papers in both Semesters are bifurcated into 75 marks of written exam and 25 marks of internal assessment.

SCHEME OF EXAMINATION:

The duration of the examination, paper pattern and the allotment of lectures as well as marks are given in detail as follows:

Duration:

Two and Half an Hour for each 75 marks paper at the end of each Semester.

Allotment of Lectures:

The allotment of lectures is as per the common guidelines stipulated by the Academic Council for Humanities of University of Mumbai.

Paper Pattern:

- There shall be three questions each of 20 marks divided into three sub questions (a, b, c,) with an internal option to choose any two, one question of 15 marks for 75 marks paper.
- All questions shall be compulsory with internal choice within the questions.
- Questions may be subdivided into sub-questions a, b, c as mentioned earlier and the allocation of marks shall depend on the weightage given to the topic.

PAPER PATTERN:

Questions	Modules	Marks
Question 1	Unit I	20
Question 2	Unit II	20
Question 3	Unit III	20
Question 4 (short note)	Unit I,II &III	15

COURSE STRUCTURE

(APPLICABLE FROM THE ACADEMIC YEAR 2020-2021)

TYBA ECONOMICS- (SEMESTER –V)

The following Economic papers would be offered to the TYBA students of Sophia College in Semester V:

MICROECONOMICS – III: PAPER IV

SEMESTER V- COURSE CODE SBAECO501

Preamble: *The course is designed to provide sound training in microeconomic theory. The aim of this course is to improve students' understating of the concepts through applications to the real world. Since students have already studied the types of market structures (viz. perfect competition, monopoly & monopolistic competition), the focus of this course is on the study of oligopoly behaviour, application of game theory, general equilibrium approach and welfare economics, the economics of information & behavioural economics.*

Module I: Oligopoly Behaviour & Game Theory

Features of Oligopoly, Pricing & Output decisions under oligopoly: the Cournot model – the Bertrand model - the Edgeworth model – the Chamberlin model – the Kinked demand curve model – Collusion and Cartels – Price Leadership: Low Cost, Dominant Firm.

Basic Concepts in Game Theory & its application to Oligopoly: dominant strategy equilibrium – Battle of Sexes game – Nash equilibrium – Prisoner's dilemma, Price and non-price competition & Cartel cheating,- Extensive form games – game tree - Solving finite extensive form game.

Module II: General Equilibrium and Welfare Economics

Interdependence in the Economy – General Equilibrium and its Existence -The Pareto Optimality Condition of Social Welfare, Marginal Conditions for Pareto Optimal Resource Allocation, Perfect Competition and Pareto Optimality - Kaldor- Hicks Compensation Criterion - Arrow's Impossibility Theorem.

Module III: The Economics of Information

The economics of search - Searching for the lowest price - Markets with Asymmetric Information: Market for Lemons and adverse selection, Signaling & Screening, The Principals, Agents & Moral Hazard, Using Contracts to Reduce Moral Hazard- Asymmetric Information in Labor Markets: Efficiency Wage Theory.
Behavioural Economics: human decision making differs from that of the rational individual of conventional economic theory.

References:

1. Jeffrey M. Perloff , Microeconomics, 7th edition, Pearson Education, Inc., publishing as Addison-Wesley, 2015.
2. Robert S. Pindyck & Daniel L. Rubinfeld, Microeconomics,8th edition, Pearson Education, Inc., publishing as Prentice Hall, 2013.
3. Robert H. Frank, Microeconomics & Behaviour, 9th edition, McGraw-Hill Education, New Yourk, 2015.
4. Mankiw, N. Gregory, Principles of Microeconomics,7th edition, Cengage Learning, 2015.
5. Mansfield, Edwin, Micro-economics: Theory & Applications, 5th edition, W.W. Norton & Company, New York, 1985.
6. Salvatore, D., Microeconomics: Theory and Applications, New Delhi Oxford, New Delhi, Oxford University Press, 2006.

ECONOMICS OF DEVELOPMENT: PAPER V

SEMESTER V- COURSE CODE SBAECO502

***Preamble:** This course is designed to inculcate diverse concepts related to economic growth and development by giving special emphasis on structural issues related to the process of development. In order to create an awareness on policy options, the pressing problems on the path of development such as inequality, poverty and technological aspects are dealt in.*

Module 1: Concepts of Economic Growth and Development

Meaning of Growth and Development, Importance of growth rate - Basis of change in GDP measurement in India,- Concept of human development, HDI, GDI, Sustainable development – Green GDP – Three core values of development – Capability Approach.

Module 2: Structural Issues in Development Process

Big push theory – Schultz theory of human capital –Schumpeter’s theory of development, Lewis’s model of growth, Solow’s growth model- Role of Education, Health & nutrition in economic development - Role of Infrastructure in economic development –Role of technology in economic development - Types of technical progress.

Module 3: Inequality, Poverty and Development

Measures of poverty and inequality – Kuznets inverted U-hypothesis – Policy options for poverty alleviation – Inclusive growth – Micro Finance –Schumacher’s Concept of Intermediate/ Appropriate technology, Green technology.

References:

1. Todaro, Michael P. and Stephen C. Smith. Economic Development, 8e. Delhi: Pearson Education, 2003.
2. Thirlwall, A.P. Growth and Development 8e. New York: Palgrave MacMillan, 2005.
3. Meier, Gerald M. and James E. Rauch. Leading Issues in Economic Development, 8e. New Delhi: Oxford Univ. Press, 2006.
4. Baldwin, Economic Development: Theory, History and Policy, Willy Publishers, 1957

5. Sinha Francis, Microfinance self Help Groups in India: Living up to Their Promises, Practical Action Publishing, England, 2009.

ECONOMICS OF AGRICULTURE AND COOPERATION: PAPER VI

SEMESTER V - COURSE CODE SBAECO503

***Preamble:** This paper provides an overview of the role of agriculture in the economic development of the country and the salient features associated to agricultural productivity and agricultural labour. The pertinent aspects related to agricultural credit, agricultural marketing as well as the global problems existing in the marketing are dealt in. Students can acquire understanding about the features of agricultural policy and the agrarian crisis as well as the problems and challenges in the field of agriculture and cooperation.*

Module 1: Agricultural Productivity

Role of agriculture in economic development - Cropping Pattern -Agricultural Productivity, Causes of Low Productivity in Agriculture - Measures taken to improve the Agricultural Productivity in India - Water Management and agricultural development - Agricultural labour: Problems and suggestions.

Module 2: Agricultural Credit and Marketing

Agricultural Credit- Sources of Credit - Co-operative Credit and Agriculture, Commercial Banks and Regional Rural Banks, microfinance- NABARD - Rural Indebtedness,.
Agricultural Marketing: Types of Agricultural Marketing - Problems of Agricultural Marketing - Measures to correct it - National Agricultural Market - WTO and Indian Agriculture.

Module 3: Agricultural Policy

New Agricultural Policy & recent developments in agricultural policy
Agricultural Price Policy in India and Its evaluation
Subsidies on Agricultural Inputs
Food Security in India
Agricultural Crisis and Farmers' Suicide

References:

1. Bilgram, S.A.R, Agricultural Economics, Himalaya Publication House, Delhi, 1966
2. Raj K.N, Essays in Commercialization of Indian Agriculture, Oxford University Press, New Delhi, 1988.
3. Thamarajalaxmi R, Intersectoral Relationship in Developing Economy, Academic Foundation, Delhi, 1994.
4. Memoria C. B, Agricultural Problems of India, Kitab Mahal Allahabad, 1979.
5. Datt and Sundaram, Indian Economy, S.Chand & Company, New Delhi, 2012.
6. Mishra &Puri, Indian Economy, Himalaya Publishing House, New Delhi,2012. 7. World Development Report 2008: Agriculture for Development

MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS: PAPER VII

SEMESTER V -COURSE CODE SBAECO504

***Preamble:** A plethora of data has emerged at an exponential rate and it is the description, interpretation and understanding of these data and drawing of accurate conclusions that is imperative for a student of Economics. The aim of this paper is to provide students with the mathematical and statistical skills and understanding needed for 'knowing why' and 'when' to apply these techniques.*

Module 1: Equations, Graphs and Derivatives

A. Microeconomic applications of equations and graphs

Linear and non-linear relationships in economic analysis

Market demand and supply models, impact of taxes

B. Derivatives and their applications in various areas of economic analysis

Derivative and the rules of differentiation

Higher order derivatives

Application of derivatives: Increasing and decreasing functions, Concave and convex functions, relative extremes, inflection point

Application of derivatives in Economics: Obtaining marginal functions, price elasticity of demand, Optimising economic functions

Module 2: Linear Algebra

Matrices and basic operations on matrices

Determinant of a matrix

Rank of a matrix

Inverse of a matrix

Cramer's rule

Input-Output Analysis and policy implications

Module 3: Descriptive Statistics and graphing techniques for presenting data Concept of primary and secondary data along with tabulation and graphs – Measures of central tendency (only arithmetic-mean, median, and mode) – Absolute and relative measures of dispersion (range, quartile deviation, mean deviation and standard deviation) with simple applications – Measures of skewness and kurtosis – Lorenz Curve.

Module 4: Elementary Probability Theory

Sample space and events– Mutually exclusive, exhaustive and complimentary events– Conditional probability– Binomial probability distribution– Nature and Properties of the Normal Probability Distribution; Standard Scores and the Normal Curve; The Standard Normal Curve: Finding Areas when the Score is Known, Finding Scores when the Area is Known.

References:

1. Dowling Edward T: Introduction to Mathematical Economics, Schaum Outline Series in Economics, Tata McGraw -Hill, New Delhi, 2004.
2. Dowling Edward T: Theory and Problems of Mathematical Methods for Business and Economics, McGraw –Hill, 1993.
3. Gupta S.P.: Statistical Methods, S. Chand, New Delhi, 2014.
4. Lerner Joel J and P.Zima: Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986.
5. Sancheti D.C. and V.K. Kapoor: Statistics-Theory, Methods and Applications, S. Chand, New Delhi, 2014.

6. Chiang A. C.: Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill, 1984.
7. Peter Goos and David Meintrup: Statistics with JMP: Graphs, Descriptive Statistics, and Probability, John Wiley & Sons, Ltd, 2015.

INTRODUCTION TO ECONOMETRICS: PAPER VIII(A)

SEMESTER V - COURSE CODE SBAECO505(A)

***Preamble:** The objective of this course is to impart a basic understanding of econometrics. The student will be able to appreciate the theoretical basis of the subject. At the same time, it will enhance the student's ability to apply the theoretical techniques to the problems of the real world. Topics like forecasting have been introduced to impart this practical orientation.*

Module 1: Idea of a random variable

Concept of a random variable: Discrete and continuous
Expectation and variance of a random variable
Discrete random variables: Bernoulli, Binomial, Poisson
Continuous random variables: The normal distribution
Bivariate random variables: Joint and Marginal distribution
Conditional probability, Conditional mean and conditional variance
Covariance, Correlation
Central Limit Theorem (without proof)

Module 2: Statistical Inference

Estimation: Point and Interval estimation
Hypothesis testing: The Null and Alternate hypotheses
Significance testing for mean using Z distribution when population variance is known
The Chi-square distribution and testing for sample variance with known population variance
The F distribution and comparing sample variances
The t distribution and hypothesis tests when population variance is unknown

Module 3: Regression Analysis

Two variable regression model
The concept of the PRF and SRF
Classical assumptions of regression

Derivation of the OLS estimators and their variance

Gauss-Markov Theorem: Properties of OLS estimators under classical assumptions

Tests of Hypothesis, confidence intervals for OLS estimators

Measures of goodness of fit: R square and its limitations, adjusted R square and its Limitations

Multivariable Regression Model

Analyzing summary of multivariable regression model

References:

1. Gujarati Damodar (2012), Basic Econometrics, Tata McGraw Hill Education Private Limited, New Delhi.
2. Hatekar Neeraj (2009), Econometrics: The First Principles A Friendly Introduction (using R), Sage Publications India Pvt Ltd.
3. A.H. Studenmund (2017), A Practical Guide to using Econometrics, Pearson India Education Services Pvt. Ltd.
4. Dougherty Christopher , (2011), Introduction to Econometrics, Oxford University Press.
5. Salvatore Dominick, Theory and Problems of Statistics and Econometrics, Schaum's outline series.
6. Sancheti D.C. and V.K. Kapoor: Statistics-Theory, Methods and Applications, S. Chand, New Delhi.

ENVIRONMENTAL ECONOMICS: PAPER VIII(B)

SEMESTER V- COURSE CODE SBAECO505(B)

***Preamble:** This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management. Economic implications of environmental policy are addressed as well as valuation of environmental improvements.*

Module 1: Introduction to Environmental Economics

Introduction, Definition, scope, evolution and growth of environmental economics- Perspectives in environmental economics - Rio declaration, Agenda 21, Kyoto protocol - Economy &

environment linkage - Economic development & environment - Consequences of environment mismanagement - Environmental Kuznets curve - Sustainable development-Environmental accounting.

Module 2: Measuring benefits of environmental improvements & Global Environmental Issues

(A) Economic value of Environment- Measurement method:-market based and non-market based methods, contingent valuation, travel cost method, hedonic price method, risk assessment and perceptions.

(B)The global environment - Trans-boundary environmental problems –global warming, greenhouse effect, economics of climate change, Ozone Layer Depletion, Acid Rain, Microplastics Pollution, Destruction of bio-diversity- Nuclear Energy & Environment – Local Environmental Issues.

Module 3: The design and implementation of Environmental Policy

Overview- Importance of Environmental Policy-objectives/goals of environmental policy- Criteria for evaluating environmental policies, Environmental Policy Instruments-types of instruments environmental Standards, Pigovian taxes and effluent fees, tradable permits, carbon credits, property rights and Coase theorem. Issues in implementation of environmental policy-National Environmental Policy.

References:

1. Barry C. Field and Martha K. Field (2017): Environmental Economics: An Introduction, MacGraw Hill.
2. Charles Kolstad (2000): Environmental Economics, Oxford University Press, New York.
3. Anil Shishodia and Katar Singh (2007): Environmental Economics: Theory and Applications, Sage Publications.
4. Ahmed M. Hussen,(2004): Principles of Environmental Economics, Routledge, New York.
5. Roger Perman, Yue Ma, James McGilvray Michael Common (2003): Natural Resource and Environmental Economics, Pearson Education Limited.

HISTORY OF ECONOMIC THOUGHT: PAPER IX

SEMESTER V- COURSE CODE SBAECO506

Preamble: *This course provides basic understanding about the celebrated economists and their contributions starting from the classical period. It throws light on the contributions of Nobel Laureates of recent period too.*

Module 1: Classical Period

Adam Smith (1723- 1790) - Division of labour, Productive vs. unproductive labour, theory of value, capital accumulation & development.

David Ricardo (1772- 1823) - Value, theory of rent & distribution.

Karl Marx (1818-1883) - dynamics of social changes, theory of values, surplus value, profit and crisis of capitalism and contemporary relevance.

Module 2: Marshall, Pigou & Keynes

Alfred Marshall (1842 - 1924): Role of time in price determination, economic methods, ideas of consumer's surplus, representative firm, external and internal economies, quasi-rent.

Arthur Cecil Pigou (1877-1959) : Pigou Effect, Pigovian tax

John Maynard Keynes (1883 - 1946): The General Theory of Employment, Interest & Money.

Module 3: Post Keynesian Developments

Milton Friedman (1912 - 2006), Don Patinkin (1922 -1995), Robert Lucas (1937), Arthur Laffer (1940)

Nobel Prize Winning work in recent times by: A. K. Sen (1998), Joseph Stiglitz (2001), Paul Krugman (2008), Jean Tirole (2014), Angus Deaton (2015), Richard Thaler (2017), Michael Kremer, Abhijit Banerjee, Esther Dufflo (2019).

References:

1. Gide, O. and G. Rist , A History of Economic Doctrine, George Harrop Co., London, 1956.
2. Roll, E, A History of Economic Thought, Faber Landon, 1973.
3. Dasgupta A. K, Epochs of Economic Theory Oxford University Press. New Delhi, 1985.
4. Schumpeter, J.A, Ten Great Economist, Oxford University Press, New York, 1951.

5. Ghosh and Ghosh, Concise History of Economic Thought, Himalaya Publishers,1996.
6. Puttaswamaiah K, Nobel Economists – Lives and Contributions, Indus Public Co., New Delhi, 1995.
7. Lokanathan. V., A History of Economic Thought 10th Edition, S Chand & Company Limited, New Delhi ,2018.
8. Jürgen Georg Backhaus (ed) , Handbook of the History of Economic Thought: Insights on the Founders of Modern Economics, Springer Science+ Business Med

TYBA ECONOMICS SYLLABUS- (SEMESTER –VI)

COURSE STRUCTURE

(APPLICABLE FROM THE ACADEMIC YEAR 2020-2021)

The following Economic papers would be offered to the TYBA students of Sophia College in Semester VI:

MACROECONOMICS: PAPER IV

SEMESTER VI, COURSE CODE: SBAECO601

Preamble:

This course introduces the students to formal modelling of a macroeconomic theory with analytical tools. It covers goods & financial markets equilibrium in the closed and the open economy. It analysis the implications of openness on goods & financial markets, discusses the Mundell Fleming Trilemma and the benefits and costs of fixed and flexible exchange rates. It also intends

to familiarize students with a brief history of the international monetary system and the role of key international institutions in managing the financial crisis.

Module 1: The Goods Market & Financial Markets in the Closed Economy

Product Market Equilibrium (IS) curve - Derivation of IS Curve: algebraic & graphical method, Factors influencing slope & position of the IS Curve -Fiscal & Monetary Policy & the IS curve.

Assets Markets Equilibrium (LM) curve - Derivation of LM curve: algebraic & graphical method, Factors influencing the slope & position of the LM curve. Fiscal & Monetary Policy & LM curve. General Equilibrium in the IS - LM curves Model. Nature of Equilibrium - Fiscal & Monetary Policy efficacy & slopes of the IS & LM curves.

Module 2: The Goods Market & Financial Markets in the Open Economy and Mundell-Fleming

Trade Balance and its implications for GDP calculations, Export and Import Functions, The Real Exchange Rate and why it matters, why equilibrium GDP is consistent with a trade imbalance, Fiscal and Exchange Rate Policy with a Fixed Exchange Rate. The IS & LM equations for the open economy, Uncovered Interest Parity and its implications for exchange rate determination, the combined IS/LM/UIP model; Fiscal and Monetary Policy under Fixed and Flexible Exchange Rates, The Mundell-Fleming trilemma.

Module 3: International Monetary System and Financial Crisis

A brief history of international monetary system: The Gold Standard (1815 to 1914), The Inter-War Period (1919 – 1939), The Gold Exchange Standard- Bretton Wood (1944 to 1971), the collapse of the Bretton Woods system, The Ushering of Flexible Exchange Rates and Currency Instability (1971-1985), The Current System of Managed Floats and Targeted Inflation: 1985 – Present.

Key institutions: International Monetary Fund & the World Bank.

The choice of exchange rate regime: Fixed vs. Flexible Rates- Exchange Rate Crises, The relation between Exchange Rate crises and other kinds of crises (banking crises, debt, financial crises, etc.).

References

1. Blanchard, Oliver; Macroeconomics (4th edition, 9th impression), Pearson education, New Delhi, India.
2. Dornbusch R S, Fischer and R Startz; Macroeconomics, 8e Tata Mc Grow Hill, New Delhi 2004.
3. Froyen, R. T.; Macroeconomics: Theory and Policy, Pearson Education Asia, Delhi 2001.
4. Mankiw, Gregory; Macroeconomics, 6e, Worth Publishers, New York, 2003.
5. Salvatore, D.; International Economics, Printice Hall, New York, 1997.
6. Robert Feenstra & Alan Taylor, International Macroeconomics, 2nd ed.

INTERNATIONAL ECONOMICS: PAPER V

SEMESTER –VI COURSE CODE: SBAECO602

***Preamble:** This course develops a systematic exposition of models which explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It deals with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. It analysis the role of trade in economic development and discusses the role of regional trade blocs.*

Module 1: Introduction of International economics and trade theories

Importance of the study of International Economics - Distinction between domestic & international Trade. Adam Smith's Theory of International Trade, The Ricardian Theory - Heckscher- Ohlin Theory of International Trade, Leontief Paradox- Terms of trade, Law of reciprocal demand and offer curves

Module 2: International Trade and Economic Development

An overview of world trade - pattern of trade, gravity model. Trade as an engine of growth, Vent for Surplus- Concepts of terms of trade- Prebisch – Singer thesis - Export Orientation and Import

substitution: India vs South Korea, Understanding China's growth. Trade problems of developing countries, International Capital flows - FDI: The concept and role, FDI Inflows- FDI Outflows, MNC's, BPO's.

Module 3: Trade Policy, Restriction and Economic Integration

Instruments of trade policy; International Commodity Agreements, Protectionism - Why countries cooperate? - GATT, GATS, - Trans – Pacific Partnerships

References:

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, International Economics: Theory and Policy, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012.
2. Dominick Salvatore, International Economics: Trade and Finance, John Wiley International Student Edition, 10th edition, 2011.
3. Gordon Hanson, „The Rise of Middle Kingdoms: Emerging Economies in Global Trade”, Journal of Economic Perspectives, Spring 2012.
4. Melitz M. and Trefler D., “Gains from Trade When Firms Matter”, Journal of Economic Perspectives, Spring 2012.
5. Kindleberger Charles P, International Economics, Homewood, USA, 1978
6. Bo Sodersten and Geoffrey Reed, International Economics, Palgrave Macmillan, 1994.

INDIAN FINANCIAL SYSTEM: PAPER VI

SEMESTER VI, COURSE CODE: SBAECO603

Preamble: The basic purpose of this paper is to acquaint students with various components of the Indian financial system, its working and the trends that have taken place over the years especially since financial sector reforms.

Module 1: Indian Financial System: Structure, Trends and Turns

Meaning and components of the Financial System - Financial System and Economic Development - Indicators of Financial Development: FR, FIR, NIR and IR – Overview of financial sector reforms since 1990s – Trends and turns in Indian financial sector: 1950-2017.

Module 2: Monetary Policy of RBI, NBFI's and NBFC's in India

Monetary policy of the RBI –Changes in RBI monetary policy since 1990s - Monetary Policy Committee (MPC), Management of Non-Performing Assets (NPAs); Capital Adequacy Norms - Basel Accord III. Transmission Channels of Monetary policy

Non-Banking Financial Intermediaries in India, NBFC's in India - Insurance sector, Investment/Merchant banking, Mutual funds, Credit Rating agency, Payment Banks, Mudra Bank

Module 3: Money and Capital Markets in India

Money Market: Components/ Instruments of organized money market – Features of Indian Money Market– Reforms in the money market.

Capital Market: Structure of the Indian Capital Market – Recent Developments in the Capital Market – Role of SEBI - Interlink between Money Market and Capital Market - Overview of Debt Market in India

References:

1. Pathak, Bharati, The Indian Financial System –Markets, Institutions, and Services, Pearson Education, New Delhi, 2008.
2. Bhole, L. M, Financial Institutions and Markets, Growth and Innovation, Tata McGraw-Hill, New Delhi, 2008.
3. Khan, M.Y, Financial Services, Tata McGraw Hill, New Delhi, 2007.
4. Reserve Bank of India (various issues) Report on Currency and Finance, RBI, Mumbai. rbi.org.
5. Rakesh Mohan & Partha Ray, Indian Financial Sector: Structure, Trends & Turns; IMF Working Paper (WP/17/7). <https://www.imf.org>> Issues > 2017/01/20

MATHEMATICAL AND STATISTICAL TECHNIQUES FOR
ECONOMIC ANALYSIS: PAPER VII
SEMESTER VI -COURSE CODE-SBAECO604

Preamble: This paper proposes to equip the students with analyzing skills with sound footing of relevant mathematical and statistical techniques. Economic analysis and interpretation of data cannot be carried out in the absence of knowledge of these techniques narrated here.

Module1: Techniques and applications of partial derivatives

Functions of several variables and partial derivatives

Second order partial derivatives

Optimisation of multivariable functions

Constrained optimisation with Lagrange multiplier and its economic interpretation.

Marginal productivity, Income and price elasticities of demand

Homogeneous production functions and returns to scale

Cobb-Douglas production function

Module 2: Integral Calculus

Integration and Definite integral

Using integration to find area under the curve

Economic applications

Present value of cash flows (present value of a sum to be received in future and present value of a stream of future income)

Consumer's and Producer's Surplus

Learning curve

Module 3: Correlation and Regression

The meaning and significance of Correlation Analysis

Scatter plot of Bivariate Distributions: Correlation and Causation

Karl Pearson's coefficient of correlation

Spearman's rank correlation coefficient

Simple regression analysis- Method of Least Squares

Regression Lines and Regression Coefficients

Relationship between correlation coefficients and regression coefficients.

Module 4: Index Numbers and Time Series

Simple and composite index numbers

Construction, uses and problems of index numbers

Laspeyre's, Paasche's and Fisher's Index numbers

Cost of living index numbers-real income – wholesale price index number

Splicing of index numbers

Components of time series

Estimation and forecasting of trend by the Least Squares Method

References:

1. Dowling Edward T: Introduction to Mathematical Economics, Schaum's Outline Series in Economics, Tata McGraw Hill, New Delhi, 2004
2. Lerner Joel J and P. Zima: Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986.
3. Dowling Edward T: Theory and Problems of Mathematical methods for Business and Economics, McGraw –Hill, 1993
4. Gupta S.P.: Statistical Methods, S. Chand, New Delhi.

5. Sancheti D. C. and V. K. Kapoor: Statistics-Theory, Methods and Applications, S. Chand, 4New Delhi

THEORY AND PRACTICE OF ECONOMETRICS: PAPER VIII(A)

SEMESTER VI - COURSE CODE SBAECO605(A)

Preamble: The paper aims to help students understand the art of model building. It focuses on building the appropriate model and testing it statistically to apply it to the practical problems in forecasting and analysis.

Module 1: Generalised Least Squares

Autocorrelation & Heteroscedasticity: Meaning, implication, tests, remedy: FGLS & GLS

Multicollinearity: Nature of the problem, sources, consequences, detection: VIF and remedial measures

Module2: Regression and Causality

Errors in measurement of independent variable

Omitted Variable Bias

Instrumental variables , estimation and inference

Simultaneity bias, identification and instrumental variables

Module 3: Topics in Econometrics

Introduction to Panel data: Fixed and random effects

Introduction to time series models; Classical decomposition of time series, moving average models, linear and log linear trends.

Distributed lag model

References:

1. Gujarati Damodar (2012), Basic Econometrics, Tata McGraw Hill Education Private Limited, New Delhi.
2. Hatekar Neeraj (2010), Principles of Econometrics An Introduction [Using R], Sage Publications India Pvt Ltd.
3. A.H. Studenmund (2017), A Practical Guide to using Econometrics, Pearson India Education Services Pvt. Ltd.
4. Dougherty Christopher , (2011), Introduction to Econometrics, Oxford University Press.
5. Salvatore Dominick, Theory and Problems of Statistics and Econometrics, Schaum's outline series.

DEVELOPMENT THEORY AND EXPERIENCE: PAPER VIII (B)**SEMESTER VI, COURSE CODE: SBAECO605B**

Preamble: This is the second paper of economic development sequence. The course begins with demographic concepts and their evolution during the process of development. Then it focuses on the structural transformation theories, the theory migration and discusses the link between migration and development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The course ends with the issues related to environment and development.

Module I: Demography and Development

Demographic concepts; birth and death rates, age structure, total fertility rates, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality and fertility choices; Aging population- Social & Economic Challenges & Policy Implications. Population Stabilization; Population policy in India

Module II: Structural Transformation

The Lewis model –Clark-Fisher model of structural change, Urbanization: Trends and Projections with reference to India, Urbanization and Development, Causes of urbanization, Urban informal sector, Policies for the urban informal sector, Migration and development, Economic theory of rural-urban migration: Harris-Todaro migration model.

Module III:

(A) Modern Development Economics

RCT and its Applications; Role of Agriculture in Economic Development, Market Failure and Agriculture, The distribution of land ownership; Land reform and its effects on productivity; contractual relationships between tenants and landlords; Land Acquisition; Nutrition and Labor Productivity; Rural Credit Market; Inter-linkages between Rural Factor Markets

(B) The Environmental Policy Debates –

The relationship between economic development and environmental quality. The causes of over-use of environmental capital by humans: common pool resources, Development & Forests, Ground Water Policy, Air Pollution. Nordhaus' model examining the consequences of climate policy interventions, for example carbon taxes.

References-

1. Debraj Ray, Development Economics, Oxford University Press,2009.
2. Partha Dasgupta, Economics: A Very Short Introduction, Oxford University Press,2007.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty, Oxford University Press,2006.
4. Amartya Sen, Development as Freedom, Oxford University Press,2000.
5. Daron Acemoglu and James Robinson, Economic Origins of Dictatorship and Democracy, Cambridge University Press,2006.
6. Michael Todaro and Stephen Smith: Economic Development,12th edition, (2015) Pearson Publication

7. 8. A P Thirlwall, Growth & Development, with special reference to developing countries, 5th edition, (1994), The Macmillan Press Ltd.
8. Field, Barry C., | Field, Martha K, Environmental Economics, An Introduction, 7th edition, (2017), Published by McGraw-Hill.
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INTERNATIONAL TRADE, POLICY AND PRACTICE

PAPER IX

SEMESTER VI, COURSE CODE: SBAECO606

***Preamble:** This course is designed for exploring contemporary issues related to the International Trade Policy and Practice. The main objective of this course is to familiarize students with current issues in the field of International Trade Theory and Policy.*

Module 1: Introduction to advances in International Trade Theory

The three basic theorems of the Heckscher-Ohlin-Samuelson model: the factor-price equalization theorem, Stolper-Samuelson theorem, the Rybczynski theorem, Specific Factors and Income

Distribution: The Specific Factor Model, New Trade Theories: trade theories based on economies of scale, imperfect competition, and differences in technological changes among nations.

Module 2: International Trade Policy & Emerging New international Economic Order

The political economy of trade policy: Case for and against free trade, Protectionist Trade Policy, Instruments for regulating trade: Tariffs, Non-Tariff Instruments - Import Quota, Voluntary Restraints of Exports, Export Subsidies, technical, administrative, and other regulations. International Negotiations and trade policy: Regional Integration Versus Multilateralism - Regional Trade Blocs- Types -WTO, EU & G 20.

Module 3: International Monetary Relations

Foreign Exchange Rate: Concepts - Spot and Forward rates - Foreign Exchange rate determination: short run and long run – Fixed and flexible exchange rate system,

Balance of Payments: Current Account, Capital Account, Currency Convertibility.

Emerging Global Financial Architecture: Meaning of the term “global financial architecture”- emerging trends, Analysis of the three aspects of the trilemma- monetary independence, exchange rate stability, and financial openness.

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