

SOPHIA COLLEGE (Autonomous)

DEPARTMENT OF ECONOMICS

TYBA SYLLABUS

COURSE STRUCTURE

(APPLICABLE FROM ACADEMIC YEAR 2020-2021)

TYBA ECONOMICS- (SEMESTER –V)

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 for a combination of any two subjects (Economics and any other subject) in which every semester shall have three papers of each subject.

Allotment of Lectures:

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

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TYBA ECONOMICS- (SEMESTER –V) **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 V:

MICROECONOMICS – III: PAPER IV

SEMESTER V- COURSE CODE SBAECO501

Course Objectives:

1. To improve students' understanding of the microeconomics concepts through applications to oligopoly decision making in the real world.
2. To make students understand the general equilibrium framework of economic analysis & introduce them to the basic principles of welfare economics.
3. To introduce students to the problems resulting from information asymmetry in economic decision making. To familiarize students with the fundamental principles of behavioral economics.

Course Outcomes:

1. Students will be able to identify the difference between the pure & differentiated oligopoly.
2. Students will be able to compare, on the basis of different behavioural assumptions, the various types of duopoly and oligopoly models.
3. Students will be able to draw a diagram/ solve algebraic equations to determine equilibrium level of output & price for the various types of oligopoly models.
4. Students will be able to comprehend the application of game theory concepts in oligopoly

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decision making.

5. Students will be able to distinguish between partial and general equilibrium framework of economic analysis.
6. Students will understand the concept of Pareto Optimality & will be able to state the conditions under which it is attained.
7. Students will be able to draw an Edgeworth box diagram & explain the existence of a general equilibrium in exchange, production & resource allocation.
8. Students will be able to explain the similarities and differences between the perfect competition and Pareto Optimality conditions.
9. Students will be able to understand the principles of maximum social welfare.
10. Students will be able to describe the importance of information & the role of search cost.
11. Students will be able to discuss the problems resulting from information symmetry in the used car market, insurance market, credit market & labor market.
12. Students will be able to understand psychological dimensions of human behaviour & will be able to explain the importance of assumption of rationality in economic decision making.

Syllabus:

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

Course Objectives:

1. This course is designed to acquaint students with diverse concepts related to economic growth and development by giving special emphasis on structural issues related to the process of development.
2. To understand the various theories of development, study development indicators and Sen's views on development.
3. An attempt is made to create an awareness about the pressing problems in the path of development such as inequality, poverty and technological aspects and the policy options to deal with these problems.

Course Outcomes:

1. Students will be able to think critically about the issues related to growth and development.
2. Understand development achievements globally and critically examine the policies undertaken by governments.
3. Students will be able to analyze the role of technology in the development process.

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 - Microfinance - 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.

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ECONOMICS OF AGRICULTURE AND COOPERATION: PAPER VI

SEMESTER V - COURSE CODE SBAECO503

Course Objectives:

1. This paper aims at providing an overview of the role of agriculture in the economic development of the country and the salient features associated with agricultural productivity and agricultural labour.
2. The pertinent aspects related to agricultural credit, agricultural marketing as well as the global problems existing in the marketing are dealt in.
3. Discuss the features of agricultural policy relating to price, agricultural inputs and discuss the issue of agrarian crisis and farmers' suicide.

Course Outcomes:

1. Students will understand the role of agriculture in economic development with reference to the stages of economic development.
2. Students will be able to identify the cropping seasons & the types of crops grown during these seasons.
3. Students will be able to analyse the causes of low agricultural productivity.
4. Students will be able to explain the most important dimensions of effective water management.
5. Students will be able to suggest measures to improve the condition of agricultural labour.
6. Understanding of the rural credit market and practical real life problems of agricultural marketing.

7. Students will be able to critically analyse agricultural price policy in India.
8. Students will be able to evaluate the various schemes of the Food Security Programme in India.
9. Students will be able to appraise the existing policies on agricultural inputs like fertilizer and power.
10. Students will be able to highlight the features of crisis in the agriculture sector and describe the situations of farmers' suicide in India.

Syllabus:

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,

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- 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.

Course Objectives:

1. To introduce students to the basic mathematical & statistical tools, which will enable them to apply these to economic decision making.
2. To equip the students with quantitative skills that will help them in better understanding of economics.
3. To facilitate the description, interpretation and understanding of data.
4. To enhance the computational & numerical skills, ability to interpret numerical data & diagrammatic presentations required to analyse economic concepts.

Course Outcomes:

1. Students will be able to apply mathematical approach to study market equilibrium and impact of indirect tax on market equilibrium.
2. Students will be able to differentiate single variable functions and apply the differentiation method to optimise economic functions.
3. Students will be able to solve a system of linear equations using method of matrix
4. Students will be able to apply the method of matrix in Economics.
5. Students will be able to identify the different types of data.
6. Students can classify & present numerical data using tables, graphs & diagrams.

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7. Students will be able to compute mean, median, mode & measures of dispersion (absolute & relative).
8. Students will be able to graphically locate the mode & median.
9. Students will be able to draw graphs showing (based on the relative positions of mean, median & mode) positively skewed & negatively skewed frequency distributions.
10. Students will be able to understand the construction of the Lorenz Curve.
11. Students will be able to describe the merits & demerits of measures of central tendency & dispersion.
12. Students will be able to identify the specific uses of these measures to specific situations/problems.
13. Students will be able to compute the probability of an event using the classical definition of probability.
14. Student will be able solve problems based on application of binomial & normal distributions
15. Students will be able to understand and apply the properties of the probability distributions for the random variable(for discrete & continuous)to solve numerical problems.

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

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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*

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enhance the student's ability to apply theoretical techniques to the problems of the real world.

Course Objectives:

1. To develop a way of thinking in quantitative terms.
2. To impart a basic statistical knowledge that will aid in understanding econometrics.
3. To analyse economic data using the method of regression

Course Objectives: Students will be able to

1. Apply binomial, poisson and normal distribution to calculate probability
2. Conduct test the hypothesis on mean using z and t test
3. Conduct test of hypothesis on variance using chi-square and F -test.
4. Estimate simple regression model using OLS
5. Report and interpret simple regression model results
6. Interpret multiple regression model results

Syllabus:

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

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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)

Course Objectives:

1. The course focuses on the evolution of environmental economics , global environmental problems and measuring sustainability.
2. In particular, students will get acquainted with the economic valuation of environmental goods.
3. To sensitize students about the global & local environmental challenges.
4. To create awareness about environmental policy issues with reference to the developing & developed countries.

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5. To improve understanding regarding the classification and mechanism of the various policy Instruments.
6. To sensitize students about the major concerns related to the effective implementation of the policy.

Course Outcomes:

1. Students will be able to list out and explain the problems in managing the environmental resources.
2. Students will be able to understand the nature of the environmental resources as: public good.
3. Students will develop analytical skills to understand the management of environmental resources using the common pool resource framework.
4. Students will be able to appreciate the complexity of the transboundary environmental challenges.
5. Students will be able to judge the efficacy of the environmental policy based on a specified criteria.
6. Students will be able to describe the relative merits & demerits of the various environmental policy instruments.
7. Students will be able to explain (with diagram) the mechanism involved in the working of the various policy instruments.
8. Students will be able to evaluate a case study related to the design & implementation of environmental policy in the context of developing countries.
9. Students will be able to analyze the difference between rigorousness (or permissiveness) of the environmental policy framework in the developed country & the poor country.

Syllabus:

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, Micro Plastics 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.

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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

Course Objectives:

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1. To expose students to the contributions made by the celebrated economists to the field of economics.
2. To enhance students' understanding about the evolution of economic ideas.
3. To enable students to appreciate the importance of the Nobel Prize winning contribution of the Nobel Laureate.
4. To encourage students to carry out a project/assignment with a presentation exploring life, work and celebrated work & its applications to modern day economics by eminent scholars.

Course Outcomes:

1. Students will be able to describe the main features of Mercantilism, Physiocracy & Classisac School ideology.
2. Students will be able to analyse Adam Smith's views on division of labour, productive & unproductive labour, theory of value and capital accumulation.
3. Student will be able to evaluate Ricardo's views on theory of value, rent & distribution (with diagram).
4. Students will be able to distinguish between the difference between the Smith's & Ricardo's approach to theory of value.
5. Students will be able to comprehend Karl Marx's concepts of dynamics of social changes, theory of values, surplus value, profit and crisis of capitalism and contemporary relevance.
6. Students will be able to critically explain the economic views (taught in the class) of Marshall, Pigou and Keynes.
7. Students will be able to examine & present the life, work and applications of the celebrated work by the post Keynesian economists.

Syllabus:

Module 1: Classical Period

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

David Ricardio (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.

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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

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