B.A. Degree Course in Economics—Revision of Syllabus—Approved—Orders issued.

ACADEMIC (A.II) SECTION


Read:- Minutes of the Meeting of the Faculty of Social Sciences held on 23.4.2005.

ORDER

The Academic Council at its meeting held on 26th and 27th May, 2005, approved the revised syllabus for the BA Degree Course in Economics, as recommended by the Board of Studies in Economics and endorsed by the Faculty of Social Sciences at its meeting held on 23.4.3005.

The following are the compulsory and optional papers of the revised syllabus.

Compulsory Papers

1. Micro Economics
2. Macro Economics
3. Indian Economy
4. Development & Environment Economics
5. Quantitative methods for Eco-Analysis
6. Optional Paper (One)
   a. Money, Banking and Public Finance
   b. International Economics
   c. History of Economic Thought
   d. Mathematical Economics
   e. Econometrics
   f. Demography
   g. Regional Economics
   h. Tourism
   i. Agricultural Economics
   j. Industrial Economics
   k. Computer Application

The Revised syllabus will come into effect from 2005 admission onwards and it shall be brought to the notice of all teachers and students concerned.

The revised syllabi is appended.

Orders are issued accordingly.

Sd/-
R.Lalithamba
Deputy Registrar (Acad.I)
for Registrar

To

1. The Principals of Affiliated Colleges where BA Degree Course in Economics is offered.
2. The Head of Departments of Affiliated Colleges where BA Degree Course in Economics is offered
3. The Dean, Faculty of Social Sciences
4. The Chairman, Board of Studies in Economics (Pass)
5. The Director, IDE, Kariavattom
6. The Controller of Examinations/ EB Section
7. The AR (BA) Tabulation
8. The PRO Section
9. The DOIC/ KUTIC
10. Stock File/File Copy/Office Copy
PREFACE

Higher education plays a pivotal role in shaping the development of human resources and in human capital formation. Today, economics has emerged as most ‘sought after’ subject of study in social sciences, as it immediately communicates with the changing social priorities and needs. The report of the UGC curriculum committee in Economics after considering the ever growing demand of the subject and need for equipping the higher education sector emphasised the need for revising the existing syllabus to suit the changing requirements of the society. According to the report “In the past twenty years or so, many new insights have taken root and become important in economic theory and policy. To name a few - the micro behaviour of economic agents and their adaptations to economic policy, analysis of economic behaviour in the context of imperfect markets and asymmetric information, the theory of second best, primacy of non economic factors in explaining growth differentials among economies, emergence of knowledge as a non ending source of growth, dynamic aspects of trade and industry in imperfect markets, issues of good governance in developing economies, infrastructure development, its rational, importance and financing, gender and other social issues, problem of risk management and insurance as a vehicle of risk management and economics of law find inclusion in courses among various papers or independently.

The discipline of economics has a production function just like an industry: its inputs are the papers and books of professional economists, its output is economic knowledge which is put to use by business and government, taught to students and used for further advancement of the existing knowledge of economics”. Since syllabus provide a framework for course work, it should imbibe latest development in the concerned areas. This is particularly true to economics which has global acceptance. Hence the syllabus must give impetus for academic inputs for preparing students for research / teaching carrier in Economics. Besides, as an applied science the subject throws ample opportunities for business operations of various agents too. In order to meet the requirements of academics and practitioners the young generation have to be equipped adequately.
The ongoing syllabus for BA Economics of Kerala University was framed in 1996. Since then tremendous change has taken place in the national and international economic arena. In this backdrop, the Board of studies in Economics (UG), University of Kerala, decided to revise the syllabus after inviting suggestions from the faculty members in economics of various colleges affiliated to University of Kerala. Accordingly a workshop was organised at University College, Trivandrum on 16th March 2005. Financial assistance for the same was extended by the Honourable Vice Chancellor, University of Kerala vide U.O.No. PL.B/AC. AII/27732/04 dated Thiruvananthapuram 04-03-2005. Thirty teachers from various colleges participated and the entire activities of the workshop were supervised/guided by Dr. K. Ramachandran Nair Prof. & Head (Rtd), Department of Economics, University of Kerala, Prof. S. Narayanan (Rtd) & Dr. Alwin. B. Prakash Professor and Head, Department of Economics, University of Kerala.

The workshop considered the model syllabus of UGC, revised syllabus of MG University, Calicut University and Syllabus of Universities outside Kerala. The participants were divided into different groups and each group discussed the draft syllabus given to them. After considering the draft and syllabus of other Universities including the UGC, the present syllabus is prepared for implementation in the University of Kerala with effect from 2005 admission on wards.

Since elementary aspects in economics and quantitative methods are taught at school level teachers opined that thrust should not be given to basic concepts and elementary aspects Higher weightage should be given to other aspects in the syllabus. However in most compulsory papers basic concepts are given for having an overview of the subject.

The proposed syllabus has made an attempt to give practical works and exposure to case studies also. This is done with a view to link theories with actual experiences so that better understanding of the subject can be ensured.

Dr. B. Vijayakumar
Chairman

[for the Board of Studies in Economics (UG)]

Trivandrum
21.03.05
Proposed papers for three year Degree Course in Economics

Group (iii) Economics

The allocation of papers for the three year Degree course is as follows

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<th>Year</th>
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<th>Subject</th>
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<td>I Year</td>
<td>Paper I</td>
<td>Micro Economics</td>
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<td>II Year</td>
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<td>Paper IV</td>
<td>Development and Environment</td>
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<td>Paper V</td>
<td>Quantitative Methods for Economic Analysis</td>
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<td>Paper VI</td>
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<td>i) Banking and public Economics</td>
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<td>ii) Agricultural Economics</td>
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<td>iii) Financial System and Portfolio Analysis</td>
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<td>iv) Data Management in Economics and Business Decisions</td>
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<td>v) International Economics</td>
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<td>vi) Mathematical Economics</td>
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SUBSIDIARY

Any two subjects form the following

Paper I

Paper II

i) Political Science

ii) History of India Since 1857

iii) Sociology

iv) Mathematics

v) Kerala History

Total 800 marks

No change in the existing syllabus
PAPER I
MICRO ECONOMICS

This paper is designed to provide basic understanding on micro economic concepts, behaviour of an economic agent—a consumer, a producer, a factor owner, and price fluctuations in a market. The modules, included in this paper deal with concepts, consumer behaviour, production, market, factor pricing and welfare economics. Students may be given exposure to practical aspects by enabling them to make analysis and estimation in relevant areas.

Module I Introduction


Module II Consumer Behaviour


Module III Production

Production function-Law of variable proportion -Returns to scale-Internal and external economies-Cobb Douglas Production function. Concept of cost-opportunity cost-Relationship between Total, Average and Marginal cost- Break even analysis-Short Run and Long Run Supply Curves-Producers equilibrium-Empirical Costs.

Module IV Market

Market equilibrium-Cob-web Theorem-Market structure and Pricing of Products. Conditions of equilibrium - Price and Output under Perfect Competition, Monopoly, Monopolistic

Module V Factor Pricing and Distribution

Functional distribution Vs Personal distribution - Concepts of TPP, APP, VMP, Theories of distribution - Marginal Productivity Theory- Euler's Theorem Adding up problem, Wage, Rent, Interest, Profit.

Module VI Welfare Economics


Basic Reading Lists

- KOUTSOYIANNIS. A (1990) Modern Microeconomics, Macmillan
- RAYAN W.J.L. (1962) Price Theory, Macmillan
- DORFMAN, R. Prices and Markets.

Additional Reading Lists

- SALVATOR: Micro Economic Theory
MACRO ECONOMICS

Macro economics deals with the functioning of the economy as a whole, including how the economy's total output of goods and services and employment of resources is determined and what causes these totals to fluctuate. The macro economic background will enable the student to gather a comprehensive view of the economy. The macro economic stabilization policy adopted by the government in the context of globalisation assumed great importance. Besides introducing basic concepts, this paper include national income and social accounts, determinants of output-employment and income, behavioral foundation, wages and unemployment along with macro economic policy. This paper is intended to make an undergraduate student aware of the basic theoretical aspects underlying the field of macro economics. Empirical studies may be promoted for better understanding.

MODULE -I Basic Concepts:

A Macro economic model-Macro and micro economics-Macro economic variables-Stocks and flows - Endogenous and exogenous variables.

Module: II National Income and Social Accounts


Module: III Macroeconomic Analysis

Determinants of output, Income and employment - Classical approach to output and employment determination - Say's Law - Interest rate and saving investment equality - Wage price flexibility labour market equilibrium - Money neutrality and classical dichotomy - Keynes's objections to classical theory - Keynes theory of employment and output - Aggregate supply and aggregate demand - Keynesian cross - The role of effective demand. The interaction between the real sector and monetary sector - The IS - LM model.

Module IV : Behavioural Foundations

Consumption function-Theories of Consumption function-Factors influencing consumption function - Multiplier-Investment function - Theories of investment-Classical and Keynesian

Module V: Wages, Prices and Unemployment

Rate of change in wages and unemployment – The Phillip’s curve – Role of expectations – Long run Phillip’s curve and Natural rate of unemployment – Stagflation.

Module VI: Macro Economic Policy

Macro economic policy – Objectives – Monetary policy, Fiscal policy and Income policy.

Basic Reading List

- STONE AND STONE (1977) National Income and Expenditure - Bowes and Bowes
- THIRWALL: Economic Development

Additional Reading:

- LEVACIC: Macro economics, ELBS, London
- ABEL: Macro Economics, Pearson.
- SALVATRO: Macro Economic Theory
IN INDIAN ECONOMY

In the backdrop of the basic concepts and theories in economics, undergraduate students is given an exposure to Indian economy. Here the students are enabled to have an understanding on the various issues and policies of Indian economy so that they are able to comprehend and critically apprise current economic problems. Concurrently attempt is made to introduce Kerala economy to enable the students to compare it with national economy. The modules in this paper are arranged in such a way to gather insights on colonial period, post independent and post liberalisation period. The last module on Financial and External sector will throw light on current economic scenario.

Module I- Structure of the Economy


Module II- Planning and Economic Policies


Module III Agriculture

Trends in Agricultural production - Productivity and cropping pattern in India, Factors determining productivity- Land Reforms in India - Agricultural strategy and Green Revolution - Agricultural Performance in India during the post reform period. Agricultural production and productivity in Kerala - Changes in cropping pattern in Kerala - Current issues and problems in Agriculture.
Module IV Industry


Module V - Development Issues


Module VI Financial and External Sector

Money, Banking and Finance in India Economy - Role of RBI and SEBI - Fiscal structure and policy, Structure and performance of external sector - Structural Adjustment and Macroeconomic stability - FDI and FIIs - Multinational corporations, India and WTO - Implications for Kerala Economy.

Basic Reading List

• M.A. OOMMEN 1993, Essays on Kerala’s Economy, Oxford and IBH.

Additional Reading Test

• India’s Economic policy, Viking, N. Delhi.
• CHAKRAVARTHY S, Development Planning.
• B.A. PRAKASH (ed) 1994, Kerala’s Economy, Sage publications, New Delhi
• K.K. GEORGE, 1999, Limits to Kerala Model of development, C.D.S.
• T.T. MATHEW, 1997, Employment & Unemployment in Kerala sage publication, New Delhi
• State Planning Board, Economic Review (Annual), SPB, Thiruvananthapuram.
• K.P. KANNAN: Poverty Alleviation as Advancing Basic Human capabilities -Kerala’s Achievements compared, CDS working paper 294, May 1999.
PAPER IV
DEVELOPMENT AND ENVIRONMENT

Modules incorporated in this paper world enable the students to know about theories of growth and development, growth models, approach to development, sectoral aspects, investment criteria, choice of technology, international trade and development and state and market. The relationship between economy and environment is given in the final module. Besides environmental policy some case studies are also indicated to identify the issues related to development and environment.

Module I - Growth and Development

Meaning and measurement of economic growth and development-factors affecting Economic growth. Development and underdevelopment - Characteristics of less developed countries - Per capital income as an index of development - Its measurement, Comparability and limitations - Distribution of world income and it's disparities - Measuring development - Development gap - PQLI, HDI, Poverty index.

Module II- Theories of Growth and Development

Classical theories of development - Smith, Ricardo, Malthus and Marx, Theory of social change- Schumpeter and capitalistic development, Growth models (Fundamentals of Harrod-Domer, Solow, Joan Robinson).

Module III- Approach to Economic Development

The vicious circle's Theory - Dualistic economies - Unlimited supply of labour - Big push-balanced growth - Unbalanced growth - Critical minimum effort thesis - Low level income equilibrium trap.

Module IV Sectoral Aspects of Development

Role of agriculture and industry in economic development. Role of population-Demographic transition - Human resource development - Labour market Manpower planning- Investment, capital formation and economic development - Capital output ratio technical progress and economic development - Choice of techniques - Intermediate technology - Enterprise and
organisation-state and market - Market failure- Need for good governance.

Module V Trade and Growth

International trade as an engine of growth-static and dynamic gains from trade - Prebisch, singer, Myrdal thesis- Free and fair trade - WTO and developing countries.

Module VI Environment and Ecology

Environment - Economy inter linkages-environment as a public good-concept of commons and property rights- Environmental pollution (Air, water, sound) - Environmental resource management- Environmental legislation - Environmental policy of India - Case study of experience of Kerala (Silent valley, Plachimada, Rivers and mining, Deforestation)

Basic Reading List

- **THIRWALL (1999)** Growth and development
- **ADELMAN. I (1961)** Theories of Economic Growth and Development Stauford.
- **B. HIGGINS (1969)** Economic Development
- **CHAKRAVARTHY. S (1987)** Development Planning, Oxford
- **KOLSTAD C.D. Environmental Economics**

Additional Reading List

- **TIETENBERG**: Environmental and Natural resource Economics.
- **TODARO. M**: Economic Development.
In order to understand economic problems clearly, an application of quantitative techniques in economics is needed. Students are introduced to basic concepts, calculus and other statistical tools to enable them to understand economic problems with empirical evidences. The course is meant to train the students on correlation, regression, index numbers and probability.

Module I Basic Concepts

Variable (discrete, continuous, exogenous, endogenous) constants- Sets (union and intersection - Functions (Linear, and non linear, single bivariate and multivariate functions, Homogeneous and non homogeneous- Concepts only).

Equations (single, quadratic with solutions and polynomial)- Identities (definitions)- Systems of equation - Simultaneous equations- Ratio-proportion-logarithms-matrix - Basic concepts of matrix - Types of matrix - Determinants.

Module II Calculus

Differentiation of a function - Slope-maxima and minima- (unconstrained) elasticities; Total, average and marginal concepts - Constrained optimization equilibrium of a firm and consumer - Integration of a function.

Module III Central Tendency and Dispersion

Measures of central tendency, Mean, Median, Mode Geometric Mean, and Harmonic Mean - Measures of dispersion, Range, Quartile deviation, Mean deviation, Standard deviation, coefficient of variation Skewness and Kurtosis.

Module IV Correlation and regression

Correlation, Simple coefficient of correlation-Karl Pearson’s and Rank correlation coefficient- Partial and Multiple correlation Analysis- Simple egression analysis - Estimation of regression in a variate distribution - Least square method-interpretation of regression co-efficients.
Module V Time series and Index Numbers

Time series analysis - Concept and components - Determination of secular trend and seasonal indices; Index Numbers - Laspeyre's, Paasche's and Fisher's Tests - An ideal Index number consumer price- Index Number (Applications)

Module VI Probability


Basic Reading List


Additional Reading List

Banking and Public finance constitutes important components towards understanding of economies. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realise how monetary forces operate through a multitude of channels—market, non-market, institutions and, among others, the state. In modern times, the activities of State have considerably increased and the theoretical understanding of different State activities through the budgetary mechanism is essential. Accordingly, the Paper on 'Banking and Public Economics as optimal integration of monetary theory, banking institutions and government which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.'

Module I Commercial Banking

Types and functions of commercial banking – Process of credit creation. Balance Sheet: commercial banks in India Nationalisation of commercial banks Portfolio Management, Recent reforms: New products of commercial banks ATM, Credit Card, Debit card, e-Banking, reforms and Emerging issues – Disinvestment, Entry of FDI.

Module II Central Banking

Principles, Functions of central bank: objectives of credit control – Methods of credit control; qualitative and quantitative – Structure of money and capital markets. Money and capital markets in India: Role of central Banking in a developing economy with special reference to India

Module III Nature and Scope of Public Economics

Meaning and scope: Public and private Finance: The principle of Maximum social advantage, the role of government in a developing economy

Module IV Public Revenue and Expenditure

Tax and Non Tax revenue in India – Cannons of Taxation Taxable capacity–Impact and kinds of Tax and Non Tax Revenue in India, states and local Bodies. Meaning, classification and
importance of public expenditure: principles of public expenditure: Economic effects of public expenditure on production employment distribution and consumption.

Module V Public Debt

Sources of public borrowing: Internal and external – Cost management and redemption of public debt – Role of public debt in underdeveloped and developing countries.

Module VI Financial Administration


Basic Reading List

- **R.S. SAYERS** – Modern Banking
- **S.K. BASU** – A Survey of contemporary Banking Trends
- **DE COCK** – Central Banking
- **RESERVE BANK OF INDIA** – Report on currency and Banking
- **NARASIMHAN REPORT**
- **MUSGRAVE. R and R.B.** – MUSGRAVE – Public Finance Theory and practice
- **MITHANI. D.M** – Modern Public Finance
- **BHARGAVA. R.N** – The timing and working of woman finance in India
- **GOVT. OF INDIA** – Economic Survey

Additional Reading List

- **BROWNING** – Public Finance and the price systems, Pearson.
AGRICULTURAL ECONOMICS

The importance of agriculture in the Indian Economy hardly needs to be emphasised. The primacy sector has undergone drastic changes since independence. This paper highlights the various aspects of agricultural development in India and Kerala. It is divided into five modules each discussing a separate aspect of agriculture.

Module I Agriculture and Economic Development


Module II – Agriculture and Allied Activities

Diversification of agriculture, agriculture and allied activities (Fisheries, horticulture) Forestry in India—its growth, problems and state policies, Cattle wealth of India- Commercialisation of agriculture.

Module III Agricultural Productivity and Technological change


Module IV – Agricultural Finance and Marketing

Agricultural credit in India sources—types–NABARD, Role of co-operatives–Rural indebtedness, causes and remedies – Agricultural marketing – Markets and marketing functions– Producer’s co–operatives – Regulated markets.

Module V – State and Agriculture


Basic Reading List

- SADHU, A.N & SINGH, J (2000) Agricultural problems in India Himalaya publishing House
FINANCIAL SYSTEM AND PORTFOLIO ANALYSIS

In the modern economy, finance has assumed great importance as it has significant influence on resource allocation, production and distribution. Issues of economic stability are also closely related to developments in the financial system. This paper gives the student an overview of the nature, structure and functioning of the financial system and capital market, besides helping him to understand the basic theories of investment analysis and portfolio management.

Module I Overview


Module II Capital Market


Module III Secondary Market


Module IV Portfolio Management

Meaning—importance—objectives—Tools—Portfolio Balance—Factors influencing it—Term structure of Interest Rates—Short Term and Long Term Interest Rate, spread liquidity—Tax
Module V Investment Analysis


Basic Reading list

- V.A. AVADHANI: Investment analysis and Portfolio Management.
- M.Y. KHAN: Indian Financial Systems
- S.D. GUPTA: Moniroty Economics
- PATHAK: Indian Financial System.
- KEN, Indian financial system (4th ed) Tata Mc Graw Hill
DATA MANAGEMENT IN ECONOMIC AND BUSINESS DECISIONS

In the present era of information technology, the knowledge and handling of computers is very essential for a graduate student. Computers are being used extensively for data analysis to take appropriate economic and business decisions. In the present context, the paper mainly aims at appraising basic tools in economics and business analyses and equipping them to use these tools by processing information collected from the actual field with the help of computers.

Module 1: Introduction to Computers

Importance of computer in data management, computer memory, operating system, DOS and Windows, MS Word, MS Excel, MS Access, MS Power Point and Fox Pro.

Module 2: Data needs in Economy and Business

Definition of data, data and information, data type (numbers, characters, strings etc), sources of data, various methods of collection and representation of data. Main sources of economic and business data in India and Kerala. (Official and Nonofficial)

Module 3: Statistical Package for Social Science

SPSS - data files, editor, data transformations, data tabulation, exploring data, descriptive statistics, correlation, regression, parametric and non parametric tests, various charts and diagrams.

Module 4: Managing market information data

Assessing market information needs, estimating demand elasticity, statistical estimation of demand equation (single and multiple regression), forecasting market demand.

Business and economic forecasting - Prerequisite of a good forecast, forecasting techniques (expert opinion surveys, economic indicators, projections, econometric methods), current forecasting practices in business.
Module 5: Managing firm level data

The production function, statistical estimation of production function (one variable and two variable case), estimation of cost function (short run and long run cost), break-even point.

Capital budgeting decisions methods of capital project evaluation, estimating financial ratios.

Basic Reading List

- A.K. SHARMA: Introduction to computer science-
- LEAVING AND YOUNG: Tata Mc Graw Hill Windows, complete reference
- GREG FERRY: Tech Media Teach yourself MS office
- Master PageMaker for Windows-BPB Publication
- ANDREWS N TANNENBAUMN Computer networking
- PageMaker, a complete guide-BPB publication
- SATHISH JHA: Introduction to Computer Science
- P.K. SINHA: Computer Fundamentals BPB publication
- PAUL G KEAT, and PHILIP. K.Y. YOUNG: Managerial Economics, Economic tools for today’s decision makers- Pearson Education, New Delhi

Additional Reading List

- Fox Pro-BPB publication
INTERNATIONAL ECONOMICS

This course provides the students an understanding about the basic principles that tend to govern the trade in goods and services at the global level. The contents of the paper, spread over various modules, lay stress both on theory and applied nature of the subject which has registered rapid changes during the last decade. Besides this, the contents prepare the students to know the impact of free trade and tariffs on the different sectors of the economy as well as at the macro level. The students would also be helped to assess the rationale of recent changes in the export-import policies of India. This paper has become relatively more relevant from the policy point of view under the present waves of liberalization and globalization.

Module 1: Importance of Trade and Trade Theories

Importance of the study of international economics; Inter-regional and international trade; Theories of absolute advantage, comparative advantages and opportunity cost; Heckscher-Ohlin theory of trade-its main features, assumptions and limitations.

Module 2: Gains from Trade

Gains from trade-Their measurement and distribution; Trade as an engine of economic growth; Concepts of terms of trade and their importance in the theory of trade; Doctrine of reciprocal demand- its importance and limitations in the theory of trade.

Module 3: Tariffs and Quotas

Types of tariffs and quotas; Their impact in partial equilibrium analysis; Free trade and policy of tariffs in relation to economic growth with special reference to India: Concept of optimum tariff.

Module 4: Balance of Trade and Balance of Payments

Concepts and components of balance of trade and balance of payments; Equilibrium and disequilibrium in balance of payments; Consequences of disequilibrium in balance of payments; Various measures to correct deficit in the balance of payments; Relative merits, demerits and limitations of devaluation; Concept and implicators of foreign trade multiplier; Functions of IMF, World Bank and GAT/WTO; Reform of the international monetary system and India.
Module 5: Foreign Trade in India

- Recent changes in the composition and direction of foreign trade; Causes and effects of persistent deficit in balance of payments; Measures adopted by the government to correct the deficit before and after 1991 Need for and rationale of trade reforms in India (including partial and full convertibility of rupee) Instruments of export promotion and recent export and import policies of India; Role of multinational corporations in India.

Basic Reading List

- SALVATORE, D.L (1997), International Economics, prentice-Hall, Upper Saddle Rivewr, N.J,

Additional Reading List

MATHEMATICAL ECONOMICS

Economics has increasingly become the most scientific of all social sciences these days. An important reason for this is that most economic analysis and theorizing are easily amenable to mathematical tools and techniques. A student of economics can make much headway in understanding the subject with basic mathematical logic. The student is exposed to economic concepts in mathematical format through simple illustrations and prepares the ground for more scientific study.

Module I: Quantitative Methods

Variable, constants and parameters; Simple functional relationship and their graphs; Elementary ideas of differential and integral calculus; Matrix and determinants; Solution of simultaneous equations; Quadratic equations; Difference and differential equations.

Module II: Consumer Theory

Utility function; budget line; Constrained optimization; Consumer's equilibrium; Income effect; substitution effect and price effect; Slutsky equation; Derivation of demand curve; Elasticity of demand; Consumers surplus.

Module III: Theory of Production

Properties of production function-Homogeneous and non-homogeneous; Cobb-Douglas, CES, Returns to scale; Technology progress and production function; Choice of optimal combination of factors of production; Cost and revenue functions; Derivation of cost curves; Relation between total, average and marginal cost and revenue; Producer's surplus; Production possibility curve; Adding up theorem.

Module IV: Market Structure / Pricing

Concept of equilibrium; Equilibrium of the form perfect competition, monopoly, price discrimination, monopolistic competition; Subsides and taxes; Economies of scale; Market equilibrium; Economic interpretation of time margin function; Cobweb model.

Module V: Input-Output Analysis, Linear Programming

Input-output analysis; The simple closed and open model; Linkages, concepts and measurement; Dynamic input-output model; Linear programming-Basic concepts, primal and dual; Basic theorem of linear programming; Graphic and simplex method.

Module VI: Game Theory

Introduction and concepts- simple and mixed strategy; saddle point solution; Prisoner's dilemma; Payoff matrix of a game- two-person-two-commodity and zero-sum game.

Basic Reading List