SYLLABUS FOR ECONOMICS
FOR TDC B.A./ B.SC CURRICULUM UNDER CBCS

Course structure for Major in Economics

Year	Semester	Courses	Marks	Credits	Classes per week
First	First	M 104 Microeconomics I	100	8	8
		M 105 Macroeconomics I	100	8	8
	Second	M 204 Microeconomics II	100	8	8
		M 205 Macroeconomics II	100	8	8
Second	Third	M 304 Elementary Mathematics for Economics	100	8	8
		M 305 The Monetary System	100	8	8
	Fourth	M 404 Mathematical Applications in Economics	100	8	8
		M 405 Introduction to Development Economics	100	8	8
Third	Fifth	M 501 Elements of Public Finance	75	6	6
		M502 Basic statistics (for BA) / Introduction to Econometrics (for B.Sc)	75	6	6
		M 503 Introduction to Environmental Economics	75	6	6
		M 504 International Trade and Policy	75	6	6
		M 505 History Economics Thought I	75	6	6
		M 506 Policy and the Indian Economy	75	6	6
	Sixth	M 601 Public Economics	75	6	6
		M 602 Applied Statistics (For BA) / Econometric Methods (For BSc)	75	6	6
		M 603 Economics of Natural Resources and Sustainable Development	75	6	6
		M 604 International Economics	75	6	6
		M 605 History of Economics Thought II	75	6	6
		M 606 Planning for Development: India and the Northeast	75	6	6

-Course Structure for Economics (Elective)

Year	Semester	Courses	Marks	Credits	Classes per week
First	First	E-101Elementary Micro Economics	75	6	6
	Second	E-201Introductory Macro Economics	75	6	6
Second	Third	E-303 Money, Banking and Finance	100	8	8
	Fourth	E-403 Indian Economy with Issues of North-East.	100	8	8
Third	Fifth	E-503 Public Finance. E-504 Introduction to Growth and Development Economics.	100	8	8
	Sixth	E-603 International Economics. E-604 Planning and Development in India.	100	8	8

Detailed Course Content of Economics (Major)

M 104 MICROECONOMICS I

Unit 1: INTRODUCTION

The Economic Problem- Scarcity and Choice; Concepts of Equilibrium - Stable and Unstable, Static, Comparative Static, Dynamic, The Basic Market Model; Interfering with the market versus working through the Market.

Unit 2: CONSUMER BEHAVIOUR AND DEMAND

Utility: Cardinal versus Ordinal; Indifference Curve - Assumptions and Properties; Consumer's Equilibrium; Price Effect-Income Effect, Substitution Effect; Engel's Curve; Derivation of the Demand Curve; Giffen Paradox; Merits and Limitations of Indifference Curve Analysis; Consumer's Surplus and Applications and Limitations of the Concept.

Unit 3: THEORY OF PRODUCTION AND COST

Organisation of Production; Production Function and its related concepts; Total, Average and Marginal Products and the Law of Variable Proportions; Production with two variable inputs- Isoquants; Factor Elasticity of Substitution; Returns to Scale; Least cost input combination; Expansion Path; Contract Curve and the derivation of Production Possibility Curve; Cost of Production; Types of Costs- Money Cost, Real Cost, Explicit Cost, Implicit Cost, Sunk Cost, Opportunity Cost, Private Cost, Social Cost; Cost in the Short Run- Fixed Cost, Variable Cost, Total Cost, Average Cost, Marginal Cost and their interrelation; Derivation of the Long Run Average and Marginal Cost Curves; Economies and Diseconomies of Scale.

Unit 4: OUTPUT DECISIONS AND PROFIT MAXIMIZATION

Revenue: TR, AR, MR; Relation between AR, MR, Elasticity of Demand; Comparing Costs and Revenues to maximize Profit.

Recommended books:

1. Karl E. Case, Ray C. Fair, *Principles of Economics*, Pearson Education Asia
2. Dominick Salvatore, *Micro Economics- Theory and Applications*, Oxford University Press
3. Koutsoyiannis. A, *Modern Micro Economics*, ELBS/ Macmillan
4. Sampat Mukherjee, *Modern Economic Theory*, New Age International Publishers
5. Rahul A. Shastri, *Micro Economic Theory*, University Press (India) Limited
6. D. N. Dwivedi , *Micro Economic Theory and Applications*, Pearson Education
7. R. K. Sharma and Shashi K. Gupta, *Management Accounting- Principles and Practice*, Kalyani Publishers.
8. G S Maddala and Ellen Miller, *Micro Economic Theory and Application*, Tata Mc Graw- Hill

M 105 MACROECONOMICS 1

Unit 1: NATIONAL INCOME ACCOUNTING:
Basic Economic Activities-Production, Consumption, Capital Accumulation; Circular Flow of Income in a two sector economy; Concept of National Income and related aggregates, Approaches to measuring National Income, Components of National Income; National Income and Economic Welfare;

Unit 2: **THEORIES OF OUTPUT AND EMPLOYMENT**:
Classical Theory, Keynes' objections to classical theory, Theory of Effective Demand; Simple Keynesian model of Income Determination

Unit 3: CONSUMPTION FUNCTION:
Keynesian Consumption Function, Technical attributes of Consumption Function, limitations of Keynesian Consumption Function, Factors affecting consumption function.

Unit 4: INVESTMENT FUNCTION:
Meaning of Investment, Marginal Efficiency of Capital, Marginal Efficiency of Investment, Relation between MEC and MEI Determination of volume of investment Accelerator Theory; Theory of Multiplier; Concept of super Multiplier.

Recommended Books:
1. Dornbusch, Fisher, Startz : *Macroeconomics*, Tata Mcgraw-Hill; Publising Company Ltd. New Delhi
2.Suraj B.Gupta : *Monetary Economics*, S.Chand and Company Ltd.
3. W.Beckerman : *An Introduction to National Income Analysis*, Universal Book Stall, New Delhi,
4.Raghabendra Jha : *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd.,
5. Dudley Dillard : *The Economics of John Maynard Keynes*,Vikas Publishing House Ltd.
6. Eugene A. Diulio : *Theory and Problems of Macroeconomics* , Schaum's Outline Series, Mcgraw Hill Book Company, 1983
7. Rana and Verma : *Macroeconomic Analysis*, Vishal Publications , Jalandhar , 1998

M 204 MICROECONOMICS II

Unit 1: MARKET STRUCTURE

Perfect Competition: Features; Equilibrium of a Firm and Industry; Price Determination; Derivation of the Supply Curves of Firm and Industry;

Monopoly: Features; Price-Output Determination; Price Discrimination- Meaning and conditions; Price and Output under Market Segmentation; MR, Output, Profit and Consumer's Surplus under different Degrees of Price Discrimination; Comparison between Monopoly Equilibrium and Equilibrium of a Competitive Firm.

Monopolistic Competition: Features; Product Differentiation; Perceived and Proportionate Demand Curves; Price- Output Determination; Excess Capacity.

Unit 2: THEORY OF DISTRIBUTION

Personal versus Functional Distribution; Marginal Productivity Theory of Distribution; Wage Determination under Perfect Competition and Imperfect Competition: Monopoly, Monopsony and Bilateral Monopoly; Collective Bargaining;

Rent: Differential Surplus Approach; Modern Theory of Rent; Quasi Rent; Profit: Economic Profit; Gross and Net Profits; Innovation Theory: Risk and Uncertainty Bearing Theory.

Unit 3: WELFARE ECONOMICS

Basic issues of Welfare Economics; Old Welfare Economics (Pigouvian), Pareto Optimality; Compensation Principle (ideas only)

Unit 4: FINANCIAL MICROECONOMICS

Pay Back Period, Average Rate of Return, Net Present Value, Internal Rate of Return,

Recommended books:

1. Karl E. Case, Ray C. Fair, *Principles of Economics*, Pearson Education Asia
2. Dominick Salvatore, *Micro Economics- Theory and Applications*, Oxford University Press
3. Koutsoyiannis. A, *Modern Micro Economics*, ELBS/ Macmillan
4. Sampat Mukherjee, *Modern Economic Theory*, New Age International Publishers
5. Rahul A. Shastri, *Micro Economic Theory*, University Press (India) Limited
6. D. N. Dwivedi , *Micro Economic Theory and Applications*, Pearson Education
7. R. K. Sharma and Shashi K. Gupta, *Management Accounting- Principles and Practice*, Kalyani Publishers.
8. G S Maddala and Ellen Miller, *Micro Economic Theory and Application*, Tata Mc Graw- Hill
9. R. R. Barthwal, *Micro Economic Analysis*, Wiley Eastern Limited

M 205 MACROECONOMICS-I1

Unit 1: GOODS AND MONEY MARKET EQUILIBRIUM:
Liquidity Preference and the rate of interest: Interaction between the rate of interest and income: the IS-LM framework, Policy implications in IS-LM framework.

Unit 2: BUSINESS CYCLE:
Meaning, Phases, Characteristics; Theories of Business Cycle –Hawtrey's Monetary Theory , Hicks's Multiplier –Accelerator Interaction Theory;
.

Unit 3: QUANTITY THEORY OF MONEY:
Transaction Approach, Cash Balance Approach, Keynes reformulation of the Quantity Theory of Money.

Unit 4: INFLATION:
Meaning and Impact, Theories of Inflation- Demand pull (Keynesian and Monetarist), Cost Push; Structural Theories of Inflation-Inflation in developing countries.

Recommended Books:
1. Dornbusch, Fisher, Startz : *Macroeconomics*, Tata Mcgraw-Hill; Publising Company Ltd. New Delhi
2.Suraj B.Gupta : *Monetary Economics*, S.Chand and Company Ltd.
3. W.Beckerman : *An Introduction to National Income Analysis*, Universal Book Stall, New Delhi,
4.Raghabendra Jha : *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd.,
5. Dudley Dillard : *The Economics of John Maynard Keynes*,Vikas Publishing House Ltd.
6. Eugene A. Diulio : *Theory and Problems of Macroeconomics* , Schaum's Outline Series, Mcgraw Hill Book Company, 1983
7. Rana and Verma : *Macroeconomic Analysis*, Vishal Publications , Jalandhar , 1998

M 304 ELEMENTARY MATHEMATICS FOR ECONOMICS

Unit 1: BASIC CONCEPTS
Variables, Sets, Functions; Limit and Continuity of a Function; Equations, Identities, Systems of equations; Homogeneous function

Unit 2: MATRIX AND DETERMINANTS
Various types of matrices, Matrix operations-addition, subtraction and multiplication; Rank of a matrix, Determinants; Matrix inversion; Solution of Simultaneous equation system; Crammer's rule; Application to partial equilibrium market model, simple national income model; Structure of input-output table, Static Leontief system

Unit 3: DIFFERENTIAL CALCULUS:
Differentiation of a Function; Basic rules of differentiation- Partial and Total Differentiation
UNIT 4: INTEFRAL CALCULUS:
Integration of a function - basic rules; derivation of total function; definite integral

Recommended Readings:

1. Chiang, A.C. *Fundamentals Methods of Mathematical Economics*, McGraw Hill
2. Baruah, S. *Basic Mathematics and its Economics Applications*, MacMillan
3. Henderson, J.M. and Quandt, R.E. *Micro-Economic Theory-A Mathematical Treatment*, McGraw Hill,
4. Mehta, B.C. and Madnani, G.M. *Mathematics for Economists*, Sultan Chand & Sons, ND, 2000.
5. Allen, R.G.D. *Mathematical Economics*, St. Martin's Press, 1959.
6. Salvatore, D. *Mathematics and Statistics*, Schaum's Series, Tata McGraw Hill

M 305 THE MONETARY SYSTEM

Unit 1: MONEY: BASIC CONCEPTS

Concept of Money, Money and Near Money. Supply of Money: definition and measures.

Unit 2: COMMERCIAL BANKING:

Meaning, functions, assets and liabilities-Balancing liquidity with profitability, process of credit creation by commercial banks.

Unit 3: CENTRAL BANKING:

Meaning, Functions, Methods of credit control, Monetary Policy- Objectives. Promotional role of a Central Bank in a developing economy (with reference to RBI)

Unit 4: THE FINANCIAL SYSTEM

Financial System-Meaning, constituents, functions and importance of financial system. Money market and Capital Market (concepts only), Stock Market-its role in economic development;, Stock market indices,

Recommended Books:

1. Dornbusch, Fisher, Startz : *Macroeconomics*, Tata McGraw-Hill
2. Suraj B.Gupta : *Monetary Economics*, S.Chand and Company Ltd.
4.Raghabendra Jha : *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., 1991
5.Rana and Verma : *Macroeconomic Analysis*, Vishal Publications , Jalandhar , 1998
6. McDougall and Dernburg: *Macroeconomics*, Tata McGraw Hill
7. Preeti Singh and Reena Marwah: *Monetary Economics*, Tata McGraw-Hill

M 404 MATHEMATICAL APPLICATIONS IN ECONOMICS

Unit 1: Calculus in Economics Applications

Application to consumer's and producer's surplus. Problems relating to investment, capital formation and derivation of simple growth process (Domar) Application to elasticity of demand and supply, derivation of marginal functions, Inter-relationships among total, marginal and average functions, tax yield in competitive market; -application to simple market model, national income model, Production Function and Euler's Theorem.

Unit 2 MAXIMA AND MINIMA

Unconstrained maxima and minima with single explanatory variable-application to cost minimization, revenue maximization, tax revenue maximization, profit maximization and equilibrium of firm- unconstrained maxima and minima with more than one explanatory variables-application to discriminating monopoly, multi-product equilibrium, multi-planned equilibrium, equilibrium of firm with advertisement cost and subsidy

Unit 3: ELEMENTS OF LINEAR PROGRAMMING

Inequality Constraint and formulation of a Linear Programming Problem – Graphical Solution

Unit 4: INTRODUCTION TO GAME THEORY

Two person zero sum game –Pure strategies with saddle point, games without saddle point- the rules of dominance- solution of games without saddle point – mixed strategies, basic ideas and examples of non zero sum games – Nash equilibrium, Prisoner's Dilemma and Repeated games.

Recommended Readings:

4. Chiang, A.C. *Fundamentals Methods of Mathematical Economics*, McGraw Hill
5. Baruah, S. *Basic Mathematics and its Economics Applications*, MacMillan
6. Henderson, J.M. and Quandt, R.E. *Micro-Economic Theory-A Mathematical Treatment*, McGraw Hill,

4. Mehta, B.C. and Madnani, G.M. *Mathematics for Economists*, Sultan Chand & Sons, ND, 2000.

6. Allen, R.G.D. *Mathematical Economics*, St. Martin's Press, 1959.

6. Salvatore, D. *Mathematics and Statistics*, Schaum's Series, Tata McGraw Hill

M 405 INTRODUCTIONS TO DEVELOPMENT ECONOMICS

Unit 1: Development: Meaning and Measurement – GDP and PCI as indicators of development, HDI - Structural Changes in the Development Process (Kuznet). - Obstacles to Development

Unit 2: Economic Growth: Meaning and Sources of Economic Growth: Population Growth, Capital Accumulation and Technical Progress; the Notion of Capital-Output ratio; Theories of Economic Growth-Classical Approach: Smith and Ricardo, Harrod-Domar's Theory of Instability of Growth Process.

Unit 3: Development Theories: Theories of Persistence of Underdevelopment: Vicious Circle of Poverty, Cumulative Causation (Myrdal), Strategies for Development; Balanced and Unbalanced Growth Strategy, Development with Unlimited Supply of Labour (Lewis).

Recommended books

1. Todaro and Smith, *Economic Development*, Pearson Education
2. A P. Thirlwall, *Growth and Development*, Macmillan Press Ltd
3. M. L. Taneja and R. M. Myer, *Economics of Development and Planning*, Vishal Publishing Company
4. Mishra and Puri, *Growth and Development*, Himalaya Publishing House

M 501 ELEMENTS OF PUBLIC FINANCE

Unit 1: NATURE AND SCOPE OF PUBLIC FINANCE
Nature and scope of Public Finance; Public Goods and Private Goods; Role of Public Finance; Principles of Public Finance—Principle of Maximum Social Advantage

Unit 2: PUBLIC REVENUE
Concepts of Revenue Receipt and Non-revenue Receipt; Sources and Classification Public Revenue; Tax and Non-tax Revenues

Unit 3: PUBLIC EXPENDITURE
Public Expenditure; Causes for growth of Public Expenditure(Wagnar's Law); Classification of Public Expenditure; Canons of Public Expenditure; Effects of Public Expenditure on ---Production, Distribution and Economic Stability; Importance of Public Expenditure in Developing Countries

Unit 4: PUBLIC DEBT:
Sources of Public Debt--Internal and External Debt; Burden of Public Debt; Redemption of Public Debt; Debt Trap; Role of Public Debt with special reference to developing Countries.

Recommended Books:

1.Dalton, H.: *Principles of Public Finance*. Routledge and Kegan Paul.
2. Musgrave, R.A.: *Theory of Public Finance*, McGraw Hill
2 Agarwal, R.C.: *Public Finance—Theory And Practice*, Lakshmi Narayan Agarwal.
3.Choudhury, R.K.: *Public Finance and Fiscal Policy*, Kalyani Publishers.
4.Andley K.K & Sundharam, K.P.M.: *Public Economics and Public Finance*, Rattan Prakashan Mandir.
5. Mithani, D.M.: *Modern Public Finance*, Himalaya Publishing House.

M 502 BASIC STATISTICS FOR ECONOMICS

(*For* Arts *Stream only*)

Unit 1: CENTRAL TENDENCY AND DISPERSION

Measures of Central Tendency-Arithmetic Mean , Median, Mode and Geometric mean; Measures of Dispersion-Range, Mean Deviation, Quartile deviation, Standard Deviation, Coefficient of Variation,

Unit 2: CORRELATION AND REGRESSION

Correlation; Coefficient of linear correlation; Rank Correlation, Partial Correlation; Regression Analysis-Estimation of regression line in a bivariate distribution-Least squares method, properties of regression coefficients.

Unit 3: PROBABILITY

Concept, Rules of probability (Addition and Multiplication); Conditional Probability, concept of discrete and continuous Random variables and mathematical expectation (relating to only discrete random variable), Standard Probability distribution: Binomial, Poisson and Normal (basics only).

Recommended Readings:

1. Gupta, S.P. *Statistical Methods*, Sultan Chand & Sons,
2. Gupta, S.C and Kapoor, V.K., *Fundamentals of Applied Statistics*, Sultan Chand & Sons,
3. Nagar, A.L and Das, R.K, *Basic Statistics*, OUP,
4. Yamane, Taro, *Statistics: An Introductory Analysis*, Harper and Row
5. Salvatore, D. *Mathematics and Statistics, Schaum's Series*, Tata McGraw Hill
6. Hazarika Padmalochan*Essential Statistics for Economics and Commerce* Akansha Publishing House

M 502 ELEMENTARY ECONOMETRICS

(*For* Science *Stream only*)

Unit 1: THEORETICAL DISTRIBUTION

Theoretical frequency Distribution and application of binomial, Poisson and normal

Unit 2: STATISTICAL INFERENCE

Concepts of sampling distribution and standard error of statistic- methods of estimation: Least square and maximum likelihood, characteristics of a good estimator – testing of hypothesis: type I and type II errors, one tailed and two tailed tests- tests based on standard normal, t and chi-square distribution.

Unit 3: LINEAR REGRESSION MODELS

Statistical and deterministic relationship; Two variable linear regression model –the linear specification-standard assumptions and ordinary least squares (OLS) estimations- properties of the OLS estimators decomposition of the sum of square and the co-efficient of determination-tests of hypothesis about regression parameters and their confidence interval- prediction – extension to three variable regression – partial correlation- violation of classical least square assumptions.

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Recommended Books

1. Dougherty, *Introduction to Econometrics*, OUP, 2005
2. Nagar, A.L and Das, R.K, *Basic Statistics*, OUP,
3. Gujrathi, D and Sangetha, *Basic Econometrics*, Tata McGraw Hill, 4th Edition, 2006.
4. Salvatore, Dominick and Reagle, Darrick, *Statistics and Econometrics*, Tata McGraw Hill, 2002.

M 503 INTRODUCTION TO ENVIRONMENTAL ECONOMICS

Unit 1: Nature and scope of environmental economics, Economy-environment interaction
Unit 2: Market failure, externality, public good-Environment as a public good, Tragedy of Commons
Unit 3: Environmental Kuznets's Curve, Pollution Control Policies: Command and control approach, Incentive based approach: Taxes, Liability Law and tradeable permits
Unit 4: Global Environmental Issues: Climate Change – Implications and Mitigation

Recommended Readings

1. Hanley, Shrogram and White, *Introduction to Environmental Economics*, OUP
2. R Bhattacharjee, *Environmental Economics*, OUP

M 504 INTERNATIONAL TRADE: THEORY AND POLICY

Unit 1: THEORIES OF INTERNATIONAL TRADE
Trade Theories-Ricardian Theory of Comparative Cost Advantage; Factor Endowments and Heckscher- Ohlin Theory; Empirical Test of H-O Model- Leontief Paradox; Factor Intensity Reversal
Unit 2: TERMS OF TRADE AND GAINS FROM TRADE
Concepts of Terms of Trade; Factors affecting Terms of Trade; Gains from Trade; Offer Curves, Distribution of gains from trade in terms of Offer Curves,Trade as an Engine of Growth.
Unit 3: INTERNATIONAL TRADE POLICY
Free Trade and Protection- Arguments for and against Free Trade and Protection; Tariffs- Classifications of Tariffs, Effects of Tariffs- Partial Equilibrium analysis, Concept of Optimum Tariff and Retaliation; Quotas- Types, Effects; Tariffs versus Quotas.

Recommended Books

1. Dominick Salvatore, *International Economics*, Wiley India
2. Francis Cherunilam, *International Economics*, Tata Mc Graw- Hill
3. K. C. Rana and K. N. Verma, *International Economics*, Vishal Publishing Company
4. Mannur, H.G., *International Economics, Theory & Practice,* Vikash
5. Bo Sodersten and Geoffrey Reed, *International Economics*, Macmillan
6. P. T. Ellsworth and J. Clark Leith, *The International Economy*, Macmillan

M 505 HISTORY OF ECONOMIC THOUGHT I

Unit 1: EARLY PERIOD:
Mercantilism: Tenets, Rise & Fall.
Physiocracy: Tableau Economique of Quesnay, concept of Natural Order, Produit Net, Taxation, Trade.

Unit 2: CLASSICAL PERIOD:
Adam Smith: Views on division of labour, theory of value, capital accumulation, istribution, trade, and economic development; David Ricardo**:** Main Contributions in brief;Thomas Robert Malthus: Theory of Population, Theory of Glut; J. B. Say: Laws f Market; J. S. Mill: Restatement of the Classical Theory.

Unit 3: SOCIALIST THOUGHTS: Contributions of Karl Marx: Theory of Value, Theory of Surplus, Theory of Economic Development.

Recommended Books:
1. Guide, C. & C. Rist: A History of Economic Doctrine.
2. Roll, Eric.: A History of Economic Thought.
3. Hajela, T.N.: History of Economic Thought.
4. Bhatia, H,L.: History of Economic Thought
5. Vohra, Munish: History of Economic Thought

M 506 DEVELOPMENT POLICY AND THE INDIAN ECONOMY

Unit 1: Basic Features of Indian economy: Trend and Composition of National Income and Per Capita Income, Occupational Distribution, Basic Demographic features, Increasing Importance of the Tertiary Sector: Trend and Composition within the Tertiary Sector.

Unit 2: Poverty, Inequality and Unemployment: Conceptual and Measurement Issues – the Indian Situation

Unit 3: Role of Agriculture in Economic Development: Barriers to Agricultural Growth; Land Reforms in India – Rationale, Measures and Impact; Green Revolution and Indian Agricultural Growth; Food Security and Public Distribution System.

Unit 4: Role of Industries in the Development Process: Large vs. Medium, Small and Micro Enterprises (MSME); An overview of the India's Industrial Progress – Overview of the Industrial Development Strategy before Reforms, Industrial Policy of 1991 and Liberalization.

Recommended Readings;
1. Todaro and Smith, *Economic Development*, Pearson Education
2. A P. Thirlwall, *Growth and Development*, Macmillan Press Ltd
3. R Dutt and K P M Sundharam, *Indian Economy*
4. Mishra and Puri, *Growth and Development*, Himalaya Publishing House

M 601 PUBLIC ECONOMICS

Unit 1: TAXATION

Canons of Taxation; Principles of Taxation; Benefit Principle and Ability to Pay Theory,
Direct Tax and Indirect tax: Meaning and concepts; Rate schedule of taxation Proportionate Tax, Progressive Tax, Regressive tax,
Impact, Incidence and Shifting of Tax; Sharing of Tax between Buyers and Sellers;
Taxable Capacity; Relative and Absolute Taxable Capacity; Factors determining Taxable Capacity;
Effects of Taxation on Production and Distribution;
Characteristics of a Good Tax System; Role of Taxation in Developing Countries.

Unit 2:GOVERNMENT BUDGET

Concept of Government budget ;Classification of Public Budget—Balanced and Unbalanced Budget, Capital and Revenue Budget; Brief Ideas on Performance Budgeting, Zero Base Budgeting.

Unit3: FISCAL POLICY

Meaning and Objectives; Components of Fiscal Policy; Role of Fiscal policy in a developing economy.

Unit 4: FEDERAL FINANCE

Meaning; Principles of Federal Finance; Current Finance Commission of India- a brief overview.

Recommended Books:

1.Dalton, H.: *Principles of Public Finance*. Routledge and Kegan Paul.
2. Musgrave, R.A.: *Theory of Public Finance*, McGraw Hill
2 Agarwal, R.C.: *Public Finance—Theory And Practice*, Lakshmi Narayan Agarwal.
3.Choudhury, R.K.: *Public Finance and Fiscal Policy*, Kalyani Publishers.
4.Andley K.K & Sundharam, K.P.M.: *Public Economics and Public Finance*, Rattan Prakashan Mandir.
5. Mithani, D.M.: *Modern Public Finance*, Himalaya Publishing House.

M 602 APPLIED STATISTICS

(*For* Arts *Stream only*)

Unit 1: INDEX NUMBERS

Concept, uses of Index numbers, Problems in the construction of Index numbers, Methods of constructing Index numbers-Laspeyres', Paasche's and Fisher's, Chain base Index number, Wholesale price and cost of living index numbers.

Unit 2: TIME SERIES ANALYSIS

Time Series Analysis-Concept and Components-Measurement of Trend, Graphical Method, Moving average and Least square method, Fitting of linear and exponential trend curves.

Unit 3: VITAL STATISTICS

Concepts and Measurement of fertility-crude birth rate, general fertility rate, age specific fertility rate, total fertility rate, Net reproduction rate, gross reproduction rate, Measurement of Mortality-

crude death rate, specific death rate, standardized death rate, Life Table (Basic features).

Unit4: SAMPLE SURVEY

Population, sample, parameter; sample versus complete enumeration; Types of samples-simple random, stratified random and systematic sampling.

Recommended Readings:

7. Gupta, S.P. *Statistical Methods*, Sultan Chand & Sons,
8. Gupta, S.C and Kapoor, V.K., *Fundamentals of Applied Statistics*, Sultan Chand & Sons,
9. Nagar, A.L and Das, R.K, *Basic Statistics*, OUP,
10. Yamane, Taro, *Statistics: An Introductory Analysis*, Harper and Row
11. Klein, L.R. *An Introduction to Econometrics,* Prentice Hall of India
12. Salvatore, D. *Mathematics and Statistics, Schaum's Series*, Tata McGraw Hill
13. Hazarika Padmalochan*Essential Statistics for Economics and Commerce* Akansha Publishing House

M 602 ECONOMETRIC METHODS

(*For* Science *Stream only*)

Unit 1: PROBLEMS IN OLS ESTIMATION

Heteroscedasticity(Concept and consequences); Auto correlation (Concept and consequences); Multicollinearity-concept, their consequences, detection and remedies**.**

Unit 2: LAG MODELS AND DUMMY VARIABLES

Lags in Econometric models-Concepts, Koyck model; Partial adjustment and adaptive expectation models; qualitative data; seasonal analysis; use of dummy variables.

Unit 3: TIME SERIES ANALYSIS

Time Series Analysis-Concept and Components-Measurement of Trend, Graphical Method, Moving average and Least square method, Fitting of linear and exponential trend curves.

Recommended Books

5. Dougherty, *Introduction to Econometrics*, OUP, 2005
6. Gujrathi, D and Sangetha, *Basic Econometrics*, Tata McGraw Hill, 4th Edition, 2006.
7. Salvatore, Dominick and Reagle, Darrick, *Statistics and Econometrics*, Tata McGraw Hill, 2002.

M 603 ECONOMICS OF NATURAL RESOURCES AND SUSTAINABLE DEVELOPMENT

Unit 1: Natural Resources: Types and Characteristics

Unit 2: Economics of Non-renewable Resources: Conditions for optimal depletion, Market forms and rate of depletion, Role of a backstop

Unit 3: Economics of Renewable Resources: The Idea of sustainable yield, Economically optimal rate of harvest

Unit 4: Development-environment Trade-off, Sustainable development- Indicators and policy issues – Integrated economic and environmental accounting

Recommended Readings

1. Hanley, Shrogram and White, *Introduction to Environmental Economics*, OUP
2. R Bhattacharjee, *Environmental Economics*, OUP

M 604 INTERNATIONAL ECONOMICS

Unit 1: INTRODUCTION

International Economics as a distinct branch of Economics; Its Nature and Scope

Unit 2: BALANCE OF PAYMENTS

The Structure of BOP; Accounting Principle; Disequilibrium in BOP- Types of Disequilibrium; Causes of Disequilibrium; Adjustment Mechanism- Correction under Fixed and Flexible Exchange Rate regimes

Unit 3: FOREIGN EXCHANGE MARKET AND EXCHANGE RATES

Functions of Foreign Exchange Market; Determination of Equilibrium Exchange Rate; Concepts of Spot and Forward Rates.

Unit 4: ECONOMIC INTEGRATION

Forms of Economic Integration; Customs Union- Partial Equilibrium Analysis of Customs Union - Trade Creation and Trade Diversion (concepts only).

Unit 5: INTERNATIONAL INSTITUTIONS

Objectives and functions of IMF, IBRD, WTO

Recommended Books

5. Dominick Salvatore, *International Economics*, Wiley India
6. Francis Cherunilam, *International Economics*, Tata Mc Graw- Hill
7. K. C. Rana and K. N. Verma, *International Economics*, Vishal Publishing Company
8. Mannur, H.G., *International Economics, Theory & Practice,* Vikash Publishing House
5. Bo Sodersten and Geoffrey Reed, *International Economics*, Macmillan Press Ltd
6. P. T. Ellsworth and J. Clark Leith, *The International Economy*, Macmillan Publishing Inc.

M 605 HISTORY OF ECONOMIC THOUGHT II

Unit 1: SOME FAMOUS SCHOOLS OF THOUGHT: Marginalist school--W.Jevons, J. B. Clark.; **Austrian school**: C.Menger, Bohm-Bowark, F.Wiser,V. Pareto;Mathmatical school--L.Walras, W.Leontief, Hicks; **Neo-classical economics**: Alfred Marshall, Irving Fisher, Wickshell; **Welfare economics of** A.C. Pigou.

Unit 2: KEYNESIAN ECONOMICS: Departure from the Classical School, Aggregate Approach to Economics, Policy Prescriptions.

Unit 3: INDIAN ECONOMIC THOUGHT: Main themes of Kautilya's Arthasashtra; Modern Economic Ideas: Dada Bhai Naoroji, Ranade, Gokhle; M.K. Gandhi's ideas on —Village, Swadeshi, Khadi, Cottage Industries and place of Machine, Welfare of Labour, Non-violent Economy, Decentralisation, Trusteeship, Sarvodaya.

Recommended Books:

1. Guide, C. & C. Rist: A History of Economic Doctrine.
2. Roll, Eric.: A History of Economic Thought.
3. Hajela, T.N.: History of Economic Thought.
4. Bhatia, H,L.: History of Economic Thought
5. Vohra, Munish: History of Economic Thought

M 606 PLANNING FOR DEVELOPMENT: INDIA AND THE NORTHEAST

Unit 1: Planning: Concept and Justification, Types of Planning; Overview of Planning Process in India: 1951-90: Strategies, Goals, Achievements and Failures, Planning in the Post-liberalization Period; Planning for Inclusive Growth; Role of the Community and Voluntary Organizations.

Unit 2: India in the Global Economy: Basic Features and Consequences of Economic Globalization; Trend, Composition and Direction of Foreign Trade in India before and after Liberalization; Capital Flows - Foreign Direct Investment (FDI) and Foreign Institutional/Portfolio Investment (FPI).

Unit 3: Economic Problems of North-East India: Comparative Development Experience of North Eastern States vis-à-vis all India Average – Growth Rates, Per Capita Income, Human Development Attainments (Literacy and Health); Specific Problem of Industrialization in the Region and Industrial policies for North-East; Problem of Agricultural Transition in the Hill Areas (Shifting Cultivation to Commercial Crops).

Recommended Readings:

1. Todaro and Smith, *Economic Development*, Pearson Education
2. M. L. Taneja and R. M. Myer, *Economics of Development and Planning*, Vishal Publishing Company
3. R Dutt and K P M Sundharam, *Indian Economy*
4. Government of India, *Economic Survey* (recent issue), Ministry of Finance (available from http://indiabudget.nic.in)
5. P Nayak, *Growth and Human Development in Northeast India*, OUP

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