PRESIDENCY UNIVERSITY
KOLKATA

ECONOMICS DEPARTMENT

SYLLABUS
for
B.Sc. Economics Major

UG SYLLABUS

DEPARTMENT OF ECONOMICS
PRESIDENCY UNIVERSITY

Under Graduate Syllabus

Major/Honours

FIRST SEMESTER
ECON 0101: Microeconomics I [50 marks; Credit 4]
ECON 0191: Mathematical Analysis for Economics I [50 marks; Credit 6]

SECOND SEMESTER
ECON 0201: Macroeconomics I [50 marks; Credit 4]
ECON 0291: Statistics I [50 marks; Credit 6]

THIRD SEMESTER
ECON 0301: Microeconomics II [50 marks; Credit 4]
ECON 0302: Macroeconomics II [50 marks; Credit 4]
ECON 0391: Mathematical Analysis for Economics II [50 marks; Credit 6]

FOURTH SEMESTER
ECON 0401: Microeconomics III [50 marks; Credit 4]
ECON 0402: Macroeconomics III [50 marks; Credit 4]
ECON 0491: Statistics II [50 marks; Credit 6]

FIFTH SEMESTER
ECON 0501: International Economics [50 marks; Credit 4]
ECON 0502: Development Economics I [50 marks; Credit 4]
ECON 0503: Evolution of the Indian Economy [50 marks; Credit 4]
ECON 0591: Introductory Econometrics [50 marks; Credit 6]
ECON 0592: Applied Statistics (Sessional) [50 marks; Credit 6]
       (*Computer Application based course*)

SIXTH SEMESTER
ECON 0601: Public Economics [50 marks; Credit 4]
ECON 0602: Development Economics II [50 marks; Credit 4]
ECON 0603: Environment and Resource Economics [50 marks; Credit 4]
ECON 0691: Basics of Personal Investment in Financial Market [50 marks;
       Credit 6]/
       International Economic Order [50 marks; Credit 6]
ECON 0692: Project \ Term Paper (Sessional) [50 marks; Credit 6]

FIRST SEMESTER

[Figures in extreme right indicate the number of contact hours]
ECON 101: Microeconomics I [50 marks; Credit 4]

Module 1   Introduction to Price Theory   14

Unit 1   The scope of microeconomics.

Scarcity and choice - production possibility curve – trade off, opportunity cost and decision making; incentives and information – prices (absolute and relative prices) property rights and profits.

Decision takers- households, firms and central authorities; choice by command and choice by market.

Alternatives to the price system – Rationing by Queues, Rationing by Lotteries, Rationing by Coupons.

Unit 2   Elementary concepts of market demand and market supply curves.

Market equilibrium - Existence, Uniqueness and Stability of equilibrium (the Walrasian approach and Marshallian approach).

Government Interventions and their Effects on market equilibrium – price ceiling, price floor and commodity taxation.

Black market

Applications: Rent Control Laws, Minimum Wage Legislation.

Unit 3   Determinants of market demand and market supply – comparative statics.

Suggested readings*:

Lipsey and Chrystal: An Introduction to Positive Economics, OUP

Stiglitz and Walsh: Economics, W.W. Norton & Company

Mankiw: Principles of Economics, Thomson

Stockman: Introduction to Economics, The Dryden Press

Module 2   Theory of Consumer Behaviour – Alternative Approaches   30

Unit 1   Cardinal utility; law of diminishing marginal utility; derivation of the Marshallian demand curve and its elasticity implications.

Unit 2   Ordinal utility – axioms; indifference curves, budget constraint and consumer's equilibrium; comparative static: price – consumption curve, income-consumption curve and Engel's curve; demand elasticities and classification of commodities: normal, inferior and Giffen goods; substitution and income-effects and law of demand; compensating and equivalent variation, and consumer surplus.

Applications: Labour Supply, Intertemporal Choice.

Unit 3   Revealed Preference approach: Strong and weak axioms of revealed preference – properties of demand function.

Suggested readings:
Varian H.R: Intermediate Microeconomics: A Modern Approach, East–West Press
Green: Consumer Theory, The Macmillan Press Ltd.
Friedman: Price Theory, Aldine Transaction
Gravelle and Rees: Microeconomics, Pearson
Breit and Hochman (ed.): Readings in Microeconomics, Holt, Reinehart & Winston, Inc.

Module 3	**Theory of Production and Costs**	**20**

Unit 1   Technology and technological efficiency – general concept of production function – concepts of total product, average product and marginal product –return to factor and returns to scale - isoquants and diminishing rate of factor substitution – elasticity of substitution –some examples of technology (fixed proportion, perfect substitute, Cobb – Douglas Production Function, CES Production Function), General concept of homogenous and homothetic production function and their properties.

Unit 2   Economic / Opportunity cost and accounting cost, concept of sunk cost; time dimension of cost – cost in the short run – total cost – fixed and variable cost – marginal cost – average cost – derivation of short run cost - long run cost function - functional coefficient and shape of long run average cost.— relation between short run and long run cost; expansion path; relation between expansion path and long run total cost curve.

Unit 3   Producer's equilibrium
Application: Multi-product firm and economies of scope

Suggested readings:
Varian H.R: Intermediate Microeconomics: A Modern Approach, East–West Press
Varian H.R: Microeconomic Analysis, W.W. Norton
Gould and Ferguson: Microeconomic Theory, Richard D. Irwin, Inc.
Pindyck, Rubinfeld and Mehta: Microeconomics, Pearson Education Asia
Maddala and Miller: Microeconomics- Theory and Applications, McGraw Hill.

ECON 191: Mathematical Analysis for Economics I
[50 marks; Credit 6]

Module 1	**Sets and Functions**	**10**
Unit 1	Basic Set operations	
Unit 2	Real Numbers	
Unit 3	Convex Sets and Functions	
Unit 4	Limit and Continuity	
Unit 5	Differentiation and Integration	
Module 2	**Real Linear Algebra**	**18**
Unit 1	Vector Spaces, Sub-spaces, Linear Dependence, Rank of a Sub-space, Matrices	
Unit 2	Solution to Equations and Inequalities	
Unit 3	Determinants, Characteristic Roots and Vectors, Quadratic Forms	
Unit 4	Non-negative Square Matrices, The Leontief System	
Module 3	**Functions of Several Variables**	**16**
Unit 1	Differentiability	
Unit 2	Separation Theorems	
Module 4	**Optimisation**	**20**
Unit 1	Optimisation in a Static Framework	
Unit 2	Optimisation in a Dynamic Framework	

Suggested Readings:

A. Mukherji and S. Guha: Mathematical Methods and Economic Theory

Tom Apostol: Calculus Volumes 1 and 2

Sydsaeter & Hammond: Mathematics for Economic Analysis, Pearson Education.

Simon & Blume, Mathematics for Economists, Viva Books.

A. Chiang: Dynamic Optimisation.

M. Kamien and N. Schwartz: Dynamic Optimisation

SECOND SEMESTER

Honours/Major

[Figures in extreme right indicate the number of contact hours]

ECON 201: Macroeconomics I [50 marks; Credit 4]

Module 1	**Introduction to Macroeconomics**	**04**
Unit 1	Introduction to macroeconomic variables	
Unit 2	Microeconomic and macroeconomic approaches	

Suggested readings:

Samuelson and Nordhaus, Economics, McGraw Hill

Mankiw, Economics : Principles and Applications, Cengage Learning

Blanchard, Macroeconomics, Pearson Education

Module 2	**National Income Accounting**	**15**
Unit 1	GDP, GNP, NDP, NNP and NI	
Unit 2	Circular flow of income	
Unit 3	Measurement of National Income – problems encountered	
Unit 4	CPI, WPI and GDP deflator	
Unit 5	National income as a measure of welfare	

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Dornbusch and Fischer, Macroeconomics, McGraw-Hill

Hicks, The Social Framework, Clarendon Press

Sikdar, Principles of Macroeconomics, O.U.P.

Maiti, "National Income Accounting: Theory and Indian Estimates" in Amitava Bose,

Debraj Roy and Abhirup Sarkar (ed) Contemporary Macroeconomics, O.U.P.

Module 3	**Determination of Income – Simple Keynesian Model**	**12**
Unit 1	Keynesian consumption function	
Unit 2	Autonomous investment and Income-Expenditure equilibrium	
Unit 3	Multiplier	
Unit 4	Paradox of thrift	

Suggested readings:

Blanchard, Macroeconomics, Pearson Education

Dornbusch and Fischer, Macroeconomics, McGraw-Hill

Froyen, Macroeconomics : Theory and Policy, Pearson Education

Mankiw, Macroeconomics, Worth Publishers

| Module 4 | **Determination of Income and Interest Rate – IS-LM Model** | **15** |

Unit 1   Investment function and IS curve

Unit 2   Asset market equilibrium and LM curve

Unit 3   Determination of equilibrium income and interest rate

Unit 4   Comparative Statics - Monetary policies and fiscal policies

Suggested readings:

Dornbusch and Fischer, Macroeconomics, McGraw-Hill

Froyen, Macroeconomics : Theory and Policy, Pearson Education

Mankiw, Macroeconomics, Worth Publishers

Hicks, J., 1937 "Mr. Keynes and the 'Classics'; A Suggested Interpretation",
Econometrica **5** (2), April, pp. 147-159.

Blog of Paul Krugman

| Module 5 | **Inflation and Unemployment** | **6** |

Unit 1   Theory of inflation - Costs of inflation - Sources of inflation - Remedies to inflation

Unit 2   Phillips Curve

Unit 3   Concepts of unemployment - Natural rate of unemployment - Structural unemployment - Frictional unemployment - Cyclical unemployment - Involuntary and voluntary unemployment

Suggested reading:

Mankiw, Macroeconomics, Worth Publishers

| Module 6 | **AD-AS Model** | **12** |

Unit 1   Derivation of the aggregate demand curve and the aggregate supply curve

Unit 2   Explanation of aggregate supply curve - Sticky price model - Sticky wage model - Imperfect information model - Worker misperception model

Unit 3   Solution of Complete Keynesian model

Unit 4   Comparative Statics

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Froyen, Macroeconomics : Theory and Policy, Pearson Education

ECON 291: Statistics I [50 marks; Credit 6]

Module 1	**Data Presentation**	**04**

Unit 1   Collection of Data- Variable and Attribute - Population and Sample. Classification and presentation of data.

Unit 2   Frequency distribution and its diagrammatic representation.

Suggested readings:

Goon, Gupta, Dasgupta: Fundamentals of Statistics, Vol I, World Press Private Limited

Nagar and Das: Basic Statistics, OUP

Bowen & Starr, Basic Statistics for Business and Economics, McGraw Hill.

Module 2	**Descriptive Statistics for Univariate Data**	**34**

Measures of Central Tendency:

Unit 1   Arithmetic Mean, Median and Mode for grouped and ungrouped data, Comparison of Mean, Median and Mode, Geometric and Harmonic Mean, Composite Mean.

Unit 2   Measures of Dispersion:

Range, Mean Deviation, Quartile Deviation and Standard Deviation, Measures of Relative Dispersion, Curve of Concentration

Measurement of Economic Inequality: Gini Coefficient and Lorenz Curve.

Moments, Skewness, Kurtosis:

Unit 3   Central and non central moments, different measures of skewness and kurtosis

Module 3	**Descriptive Statistics for Bivariate Data**	**10**

Definition of bivariate data, scatter diagram, Covariance as a measure of association; Coefficient of Simple Correlation- Properties and the method of calculation; Rank correlation (Spearman's Rank Correlation);

Difference between the correlation approach and the regression approach.

Output Indices- Herfindahl Index of Industrial Concentration

Module 4	**Economics Statistics**	**10**

Index Numbers:

Index number as weighted averages, Price and quantity index numbers, Problems in the Construction of Index Numbers, Tests for index Numbers, Chain based Index, Cost of Living Index Number, Wholesale Price Index and Cost of Living Index in India, Uses of Index Numbers, Index numbers as indices of well-being, Stock market indices.

Module 5   Population Statistics   **06**

Unit 1   Measurements of mortality: Crude Death Rate, Specific Death Rate, Standardised Death Rate, Mortality Index, Infant Mortality Rate.

Unit 2   Measurements of Fertility: Crude Birth Rate, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate.

Unit 3   Life Table: its uses.

Suggested readings:

Goon, Gupta, Dasgupta: Basic Statistics, World Press Private Limited

Nagar and Das: Basic Statistics, OUP

THIRD SEMESTER
Honours/Major
[Figures in extreme right indicate the number of contact hours]
ECON 201: Microeconomics II [50 marks; Credit 4]

Module 1   Organization and Management of the Firm   **04**

Defining a firm – firm's legal form.

Profit maximization hypothesis – shareholder goals, managerial goals, capital market control and notion of takeover (with selected examples of takeovers in India). Contractual theories and organizational theories of firm (concepts only).

Suggested readings:

Baumol, W. J.: Economic Theory and Operation Analysis, Prentice Hall, India

Sen, A.: Microeconomics – Theory and Applications, OUP

Module 2   Perfect Competition   **12**

Assumptions - economic vs. accounting profit; short-run profit maximization – short-run supply curve of the firm and the industry.

Output choice and competitive equilibrium in the long run – economic rent and profit; long-run industry supply curve under constant, increasing and decreasing costs.

Consumer's and producer's surplus – effects of tax and subsidy – deadweight losses.

Application: Free trade vs. protection.

Suggested readings:

Varian H.R: Intermediate Microeconomics: A Modern Approach, East West Press

Perloff, Jeffrey M. (2007): Microeconomics - Theory and Application with Calculus, Addison Wesley

Pindyck, Rubinfeld and Mehta: Microeconomics, Pearson Education Asia

Maddala and Miller: Microeconomics- Theory and Applications, McGraw Hill

Module 3   **Imperfect Competition**   30

Unit 1   Monopoly:

Profit maximization of a single plant monopolist – effects of tax – the multiplant monopoly.

Measuring monopoly power - sources of monopoly power – social costs of monopoly power – rent seeking, price regulation and natural monopoly; limiting market power – antitrust laws.

Monopoly equilibrium under sales maximization - comparison between profit maximization and sales maximization.

Unit 2   Different Pricing Strategies:

Capturing consumer surplus; price discrimination – first, second and third degree price discrimination.

<u>Applications</u>: Intertemporal price discrimination and peak-load pricing, two-part tariff (concept with examples), bundling (concept with examples), quality discrimination, dumping in international market.

Unit 3   Monopolistic Competition:

Assumptions – product differentiation and demand curve – concept of product group – equilibrium of the firm – excess capacity and its interpretation

Advertising and informational product differentiation

Suggested readings:

Varian H.R: Intermediate Microeconomics: A Modern Approach, East– West Press

Pindyck, Rubinfeld and Mehta: Microeconomics, Education Asia

Belleflamme, Paul and Peitz, Martin: Industrial Organization –Markets and Strategies, Cambridge University Press

Maddala and Miller: Microeconomics- Theory Applications, McGraw Hill

Perloff, Jeffrey M. (2007): Microeconomics - Theory and Application with Calculus, Addison Wesley

Cohen and Cyert, Theory of the Firm, Prentice Hall of India

Shy, Oz: Industrial Organization: Theory and Applications, MIT Press.

Module 4   **Factor Market**   20

Unit 1   Labour demand and supply: competitive labour market – demand for labour when labour is the only variable input- demand for labour when several inputs are variable - Adding–up problem; monopsony; exploitation and role of trade union

Unit 2	Capital – demand for rented capital – the rental rate and the interest rate – nominal and real interest rate – market for bonds and market for stocks
Unit 3	Natural Resources – renewable and exhaustible resources - rent and quasi-rent for land
Unit 4	Entrepreneurship

Suggested readings:

Varian H.R: Intermediate Microeconomics: A Modern Approach, East West Press

Pindyck, Rubinfeld and Mehta: Microeconomics, Pearson Education Asia

Gould and Ferguson: Microeconomic Theory, Richard D. Irwin

Perloff, Jeffrey M. (2007): Microeconomics - Theory and Application with Calculus, Addison Wesley

ECON 302: Macroeconomics II [50 marks; Credit 4]

Module 1	**Classical Macroeconomics**	**16**
Unit 1	Say's law – saving and investment	
Unit 2	Quantity theory of money	
Unit 3	Labour market	
Unit 4	Determination of income, employment, wage and interest rate	
Unit 5	Dichotomy between real sector and monetary sector ; neutrality of money	
Unit 6	Complete classical system and complete Keynesian system	

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Dornbusch and Fischer, Macroeconomics, McGraw-Hill

Ackley, Macroeconomics : Theory and Policy, Macmillan Publishing Company

Surrey (ed), Macroeconomic Themes, Oxford University Press

Mueller (ed), Readings in Macroeconomics, Holt, Rinehart and Winston, Inc.

Module 2	**Consumption Function**	**14**
Unit 1	Keynesian consumption function and Empirical findings on consumption-income relationship	
Unit 2	Theory of inter temporal choice	
Unit 4	Permanent income hypothesis	
Unit 5	Life cycle hypothesis	
Unit 6	Real balance effect	

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Froyen, Macroeconomics: Theory and Policy, Pearson Education

Barro, Macroeconomics, PHI Learning Private Limited

Module 3	**Investment**		**14**

Unit 1   Classification of investment - Business fixed investment - Inventory investment - Residential investment

Unit 2   Theories of business fixed investment - Neoclassical theory - Tobin's Q

Unit 3   Theory of inventory investment – acceleration principle

Unit 4   Theory of residential investment

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Dornbusch and Fischer, Macroeconomics, McGraw-Hill

Ackley, Macroeconomics : Theory and Policy, Macmillan Publishing Company

Module 4	**Supply of Money**		**10**

Unit 1   Definitions of money – M1, M2, M3 and M4

Unit 2   Money creation by commercial banks

Unit 3   Money multiplier

Unit 4   Control of money supply by the central bank

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Dornbusch and Fischer, Macroeconomics (3rd edition), McGraw-Hill

Sikdar, Macroeconomics, Oxford University Press

Module 5	**Demand for Money**		**10**

Unit 1   Keynesian theory of speculative demand for money

Unit 2   Tobin's theory of speculative demand for money

Unit 3   Baumol-Tobin model of transaction demand for money

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Dornbusch and Fischer, Macroeconomics (3rd edition), McGraw-Hill

Laidler, The Demand for Money:Theories and Practice,Allied Publishers Private Ltd

Ackley, Macroeconomics : Theory and Policy, Macmillan Publishing Company

ECON 391: Mathematical Analysis for Economics II
[50 marks; Credit 6]

Module 1	**Dynamic Analysis**	**28**
Unit 1	Discrete Time Framework	
Unit 2	Continuous Time Framework	

Suggested Readings:

Chiang & Wainwright: Fundamental Methods of Mathematical economics, McGraw Hill.

Sydsaeter & Hammond: Mathematics for Economic Analysis, Pearson Education.

Simon & Blume: Mathematics for Economists, Viva Books.

Silberberg & Suen: The Structure of Economics, McGraw Hill.

Module 2	**Game Theory**	**26**
Unit 1	Categories of games, normal form and extensive form presentation	
Unit 2	Nash equilibrium and Refinements: Dominant strategy Nash equilibrium, Rationalizable strategy, Equilibrium in Oligopoly.	
Unit 3	Sequential games	
Unit 4	Repeated games	
Unit 5	Introduction to Co-operative Games	

Suggested readings:

Dixit, Skeath, Reiley, Games of Strategy, W. W. Norton

C. Aliprantis & S. Chakrabarti, Games and Decision Making, OUP

P. K. Dutta: Strategies and Games

M. J. Osborne: An Introduction to Game Theory

D. Kreps: A Course in Microeconomic Theory

FOURTH SEMESTER

Honours/Major

[Figures in extreme right indicate the number of contact hours]

ECON 401: Microeconomics III [50 marks; Credit 4]

Module 1	**Strategic Interaction and Oligopoly**	**30**

Unit 1   Prisoner's dilemma and oligopolistic interdependence - concept of Nash equilibrium

Unit 2   Simultaneous Quantity Setting: Cournot Equilibrium; Simultaneous Price Setting: Bertrand Equilibrium and Bertrand Paradox, Product differentiation in Bertrand model.

Unit 3   Sequential game with perfect information - Quantity Leadership: Stackelberg Equilibrium.

Unit 4   Implications of the Prisoners' dilemma for oligopolistic pricing: Price Rigidity – Price Signaling and Price Leadership

Unit 5   Collusion and Formation of Cartel; Cartel Instability.

Threats – Commitments - Credibility and Cartel Stability.

Unit 6   Entry Deterrence

Selected Readings:

Belleflamme, Paul and Peitz, Martin: Industrial Organization –Markets and Strategies, Cambridge University Press

Pindyck, Rubinfeld and Mehta: Microeconomics, Pearson Education Asia.

Tirole, J.: The Theory of Industrial Organization, Pretice Hall

Gravelle and Rees: Micro Economics, Pearson Education

Sen, A.: Microeconomics – Theory and Applications, OUP

Module 2	**Uncertainty and Information**	**16**

Unit 1   Expected utility theorem and attitude towards risk - utility function and expected utility; risk preference and risk aversion; concept of risk premium and certainty equivalence.

<u>Applications</u>:

Risk spreading: Role of the stock market - demand for risky assets – measuring risk - trade off between risk and return.

Reducing risk: demand for Insurance – fair premium, co-insurance, co-payments/ deductibles; Risk Pooling.

Unit 2   Markets with Asymmetric Information - quality uncertainty and the market for Lemons: adverse selection and moral hazard

<u>Applications</u>:
Some examples of adverse selection and moral hazard

Selected Readings:
Varian H.R: Intermediate Microeconomics: A Modern Approach, East West Press
Pindyck, Rubinfeld and Mehta: Microeconomics, Pearson Education Asia
Perloff, Jeffrey M. (2007): Microeconomics - Theory and Application with Calculus, Addison Wesley
Kreps, D. M.: A Course in Micro Economic Theory, Prentice Hall of India

Module 3	**Economic Efficiency in a General Equilibrium Framework**	18
Unit 1	Pareto optimality and welfare, 2X2 Exchange: Pareto efficiency, Utility Possibility Frontier; 2X2 Production: Pareto efficiency, Production Possibility Frontier; Social Indifference Curve, Grand Utility Possibility Frontier; Competitive equilibrium and Pareto efficiency.	
Unit 2	Externalities and market inefficiency – difference between social costs and private costs – positive and negative externalities – private solution to externalities - Coase Theorem; Public policy towards externalities – regulation, Pigovian tax and subsidies, tradable permits. Introducing common property resources and public goods.	

Suggested readings:
Perloff, Jeffrey M.: Microeconomics – Theory and Application with Calculus, Addison Wesley.
Jehle, G. and Reny, P.: Advanced Microeconomic Theory, Addison Wesley.
Mankiw and Taylor: Microeconomics, CENGAGE

ECON 402: Macroeconomics III [50 marks; Credit 4]

Module 1	**Open Economy Macroeconomics**	20
Unit 1	Balance of Payment accounts	
Unit 2	Determination of national income in an open economy	
Unit 3	Mundell–Fleming model	
Unit 4	Foreign exchange market	
Unit 5	Effect of devaluation, tariff and export subsidy on output and trade balance	
Unit 6	Internal and external balance and assignment problem with fiscal policy and exchange rate	

Suggested readings:

Krugman and Obstfeld, International Economics : Theory and Policy, Education

Dornbusch, Open Economy Macroeconomics, Basic Books, Inc. Publishers

Caves and Jones, International Economics : Theory and Policy, Pearson Education

Mankiw, Macroeconomics, Worth Publishers

Module 2	**Alternative Schools of Macroeconomics**	**14**
Unit 1	Rational Expectations Hypothesis	
Unit 2	Real Business Cycle	
Unit 3	Introduction to New Keynesian Economics	

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Dornbusch, Fischer and Startz, Macroeconomics,

Froyen, Macroeconomics : Theory and Policy, Pearson Education

Module 3	**Theory of Growth**	**30**
Unit 1	Harrod model of growth and knife-edge instability	
Unit 2	Neoclassical theory of growth	
Unit 3	Introduction to endogenous growth	

Suggested readings:

Mankiw, Macroeconomics, Worth Publishers

Barro and Sala-i-Martin, Prentice Hall of India Private Ltd

Sen (ed), Growth Economics, Penguin Education

ECON 491: Statistics II [50 marks; Credit 6]

Module 1	**Probability Theory**	**16**
Unit 1	Elements of Probability Theory: Sample Space, Probability Space, Events, Classical Definition of Probability	
Unit 2	The Addition Rule, The Multiplication Rule, Theorems of Total Probability, Conditional Probability and Statistical Independence	
Unit 3	Limitations of the Classical definition, Frequency definition, Axiomatic Approach, Bayes' Rule	

Module 2   **Random Variables and Probability Distributions**

Unit 1   Definition of random variable: discrete and continuous random variable, probability mass function and probability density functions, Expectation and Variance of random variables, Joint Probability Distribution: Concept of Independence, Marginal and Conditional Distribution. Expectation of the product of two variates.

Unit 2   Univariate Probability Distributions: Binomial, Poisson, Normal and Standard Normal Distribution –Recursive relations - Mean,Variance, Skewness and Kurtosis.

Unit 3   Moment Generating Functions, Limiting form of Binomial distribution (with proof), Limiting form of Poisson distribution (no proof), Importance of Normal Distribution in Statistics, Central Limit Theorem (statement only).

Suggested readings:

Hoel, Paul, G.: Introduction to Mathematical Statistics, Wiley Series in probability and statistics

Paul G. Hoel, Sidney C. Port, Charles J. Stone: Introduction to Probability Theory, Universal Book Store, Delhi

Mathai and Rathie: Probability and Statistics, The Macmillan Company of India Limited

Goon, Gupta, Dasgupta: Fundamentals of Statistics, Vol I, World Press Private Limited

Nagar and Das: Basic Statistics, OUP

Bowen & Starr, Basic Statistics for Business and Economics, McGraw Hill.

Module 3   **Sampling Theory**

Unit 1   Population and Sample, Parameter and Statistic, Random Sampling: Methods of Drawing Random samples (with and without replacement). Basic Concepts of different methods of sampling –Stratified Sampling, clustered sampling, multi-stage sampling, purposive sampling

Unit 2   Sampling Distribution, Standard Error.

Unit 3   Sampling Distributions associated with Normal Population, Expectation and Standard Error of Sample Mean (with and without replacement)

Unit 4   Derived Distributions: Chi-Square Distribution, Student's t Distribution, F-Distribution (definition and important properties), Fisher's t distribution, concept of degrees of freedom.

Suggested readings:

Cochran, W. G.: Sampling Techniques, 3rd ed. Willey Edition

Goon,Gupta,Dasgupta: Fundamentals of Statistics, Vol I, World Press Private Limited

Mood, A.M., F.A.Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill

Module 4   **Classical Statistical Inference**   **20**

Unit 1   Basic concepts of estimation: Desirable properties of estimators (Unbiasedness, Minimum Variance, Consistency and Sufficiency), Methods of Point Estimation - Maximum Likelihood Estimators and their properties, Maximum Likelihood estimation of the parameters of Binomial, Poisson and Normal Distributions.

Unit 2   Testing of Hypothesis: Confidence Intervals, p-values, Type-I and Type-II Errors, Simple applications of tests for the Mean and Variance of a Univariate Normal Population.

Suggested readings:

Goon, Gupta & Dasgupta: Fundamentals of Statistics, Vol I, World Press Limited

Bowen & Starr, Basic Statistics for Business and Economics, McGraw Hill.

Mood, A.M., F.A.Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill

FIFTH SEMESTER
Honours/Major
[Figures in extreme right indicate the number of contact hours]

ECON 501: International Economics [50 marks; Credit 4]

Module 1   **Basis for and Gains from trade**   **08**

Unit 1   Arbitrage and basis of trade; Comparative (price) advantage; different sources of Comparative Advantage; Absolute versus comparative Advantage

Unit 2   Gains from Trade: Trade as a positive-sum game - Gains from Trade theorem, illustration and its meaning; GFT theorem and Pareto optimality;

Decomposition of GFT; substitution possibilities in production and consumption and magnitudes of GFT; Necessary and sufficient conditions of GFT: Tangency and convexity conditions

Suggested readings:
Caves, Frankel, Jones, World Trades and Payments: (9th ed.) Pearson Education
Jagdish N. Bhagwati, Arvind Panagariya, and T. N. Srinivasan, (2nd ed.) Lectures on International Trade.

Module 2	**International Equilibrium**	**06**
Unit 1	Offer curve under increasing opportunity costs: Derivation and Elasticity; International Equilibrium and determination of terms of trade; Offer curve under constant opportunity cost and distribution of GFT between large and small countries	
Unit 2	Stability of International Equilibrium: Marshal-Lerner Condition	

Suggested readings:
Krugman, Paul R. and Obstfeld, Maurice. International Economics: (8th ed.) Pearson Education
Caves, Frankel, and Jones, World Trades and Payments: (9th Ed.) Pearson Education
Salvatore, Dominick. International Economics (8th Ed.), Wiley India.

Module 3	**Ricardian Model of Trade**	**10**
Unit 1	Doctrine of Comparative *Cost* Advantage and GFT	
Unit 2	One-factor economy: Production Possibility Frontier, Relative demand and supply, Autarkic terms of trade	
Unit 3	Trade in Ricardian model: Technology as basis of trade; complete specialization; Large and small countries revisited	
Unit 4	Extensions of Ricardian model: Many commodity extension; many country extension.	

Suggested readings:
Krugman, Paul R. and Obstfeld, Maurice. International Economics: (8th Ed.) Pearson Education
Caves, Frankel, Jones, World Trades and Payments: (9th Ed.) Pearson Education
Salvatore, Dominick. International Economics (8th Ed.), Wiley India.
Gandolfo, G. International Trade Theory and Policy, Springer.

Module 4 **Factor Abundance, Trade and Income Distribution** 13

Unit 1 Two factor economy: Factor abundance, factor intensity reversal; Relation between Factor Endowment and Output (Rybsczynski Effect or the supply *shift*); Heckscher-Ohlin theorem: Factor abundance as basis for international trade

Unit 2 Relation between Commodity Price and Factor-Price (One-to-one correspondence); Factor Price Equalization theorem and its sources of disruptions (complete specialization; factor intensity reversal; factor immobility; non-traded good); Effect of trade on income distribution (price magnification effect)

Unit 3 Leontief Paradox: Testing the model empirically.

Suggested readings:

Krugman, Paul R. and Obstfeld, Maurice. International Economics: (8th ed.) Pearson Education

Caves, Frankel, and Jones, World Trades and Payments: (9th Ed.) Pearson Education

Heller, H R., International Trade; Theory and Empirical Evidence*,* Prentice Hall.

Gandolfo, G. International Trade Theory and Policy, Springer.

Module 5 **Specific Factor Model** 05

Unit 1 Specific Factor Model: Commodity Price, Factor Price, Factor Allocation; maintaining full employment under flexible-coefficient production; Alternative interpretation: Specific Factor model as "short run" Heckscher-Ohlin model.

Unit 2 Relative price change and Income Distribution

Suggested readings:

Krugman, Paul R. and Obstfeld, Maurice. International Economics: (8th ed.) Pearson Education.

Caves, Frankel, Jones, World Trades and Payments: (9th Ed.) Pearson Education.

Gandolfo, G. International Trade Theory and Policy, Springer.

Module 6 **Commercial Policy** 16

Unit 1 Partial equilibrium analysis of tariff; Tariff and Quota, Tariff-Quota equivalence (under perfect competition and monopoly), Effective Rate of Protection

Unit 2 General Equilibrium Analysis: Tariff in small and large country, Optimum

Tariff, Metzler's Paradox

Unit 3   Tariff and income distribution; Wage gap debate; Tariff and alternative policy measures for special objectives, Infant industry argument for protection

Unit 4   Domestic distortion and policy interventions.

Unit 5   Other trade and non-trade barriers (Concepts only): VER; environmental regulations as non-tariff barriers.

Suggested readings:

Krugman, Paul R. and Obstfeld, Maurice. International Economics: (8th Ed.) Pearson Education

Caves, Frankel and Jones, World Trades and Payments: (9th Ed.) Pearson Education

Salvatore, Dominick. International Economics: (8th Ed.), Wiley India.

Gandolfo, G. International Trade Theory and Policy, Springer.

Module 7	**Effect of Growth on Trade**	**06**

Unit 1   Factor growth and production possibility; Trade and Growth induced by technical progress

Unit 2   Growth, terms-of-trade and welfare

Suggested readings:

Caves, Frankel, Jones, World Trades and Payments: (9th ed.) Pearson Education

Gandolfo, G. International Trade Theory and Policy, Springer.

ECON 502: Development Economics I [50 marks; Credit 4]

Module 1	**Meaning of Economic Development**	**18**

Unit 1   The Income Approach: per capita income and distribution of income—the measurement issues.

Unit 2   The capability approach: development of the approach (preceding approaches like utility approach, minimum needs approach), entitlement and functionings, standard of living as opposed to well-being and commitment. Attempts at and levels of aggregation (literacy rates, life-expectancy at birth, child mortality rates etc.; HDI, GDI).

Unit 3   International comparison using both approaches. Usefulness as well as problems of Income Approach. The Income Mobility matrix, the six stylized facts a la Kuznets about structural shifts in output and employment , role of technology in

enhancing the productivity of social labour.

A very brief introduction to the industrial revolution in Western Europe, spread of the industrial economy across the world in Asia, Africa and Latin America -- The Stages theories: Rostow and Marx.

Suggested readings:

A.K Sen: The Standard of Living, Cambridge University Press

Debraj Ray: Development Economics, OUP

Partha Dasgupta: An Inquiry into Well-Being & Destitution, OUP, 1995

Amartya Sen: Commodity and Capability, OUP

A. K Sen: Poverty and Famine, OUP

K.Shiva (eds): Readings in Human Development (OUP) HDR 1995 and subsequent issues

 S. Kuznets "Modern Economic Growth: Findings and Reflections": (Nobel Lecture, 1971)

W.W.Rostow: The Stages of Economic Growth, Cambridge University Press

Y.S. Brenner: Theories of Economic Development and Growth, George Allen & Unwin

Irma Adelman: Theories of Economic Growth and Development, Stanford University Press

P. Deane: The First Industrial Revolution, Cambridge University Press

E.J. Hobsbawm: Industry and Empire, Penguin

Y. Hayami: Development Economics, OUP

Module 2   Alternative approaches to development   **23**

Unit 1   Sectoral transformation - Lewis' model of growth with unlimited supply of labour – Sen's model on condition of existence of surplus labour. Attendant problems- (i) Harris-Todaro model of rural-urban migration, (ii) terms of trade problem -- the Bukharin- Preobrazhensky debate (ii) Trade and Development

Unit 2   Different worldviews: Modernism, ECLA and Dependency School.

Suggested readings:

D. Ray: Development Economics, OUP

K. Basu: Analytical Development Economics, OUP

Y. Hayami & Y. Godo: Development Economics, OUP

Rune Skarstein: Development Theory, OUP

P.W. Preston: Development Theory, Oxford-Blackwell

H. Mynt: The Economics of the developing Countries, B.I. Publications

A.K. Sen: Resources, Values and development, OUP

Agarwala and Singh (eds.): The Economics of Underdevelopment, OUP

A. Brewer: Marxist Theories of Imperialism, Routledge
Alec Nove: An Economic History of the USSR, Allen Lane-Penguin

Module 3   The role of History and Expectations   13

Unit 1   Concept of complementarity, multiple equilibria and coordination failure- role of
the State and role of the Community. Balanced and Unbalanced Growth-- the
role of the cotton textile industry in Britain during the industrial revolution.
Critical linkages in economy wide transformations.
(b) Increasing returns and the problem of market access.

Unit 2   The Theory of Induced Innovation and historical path dependency—barriers to
Induced Innovation.

Suggested readings:

D. Ray: Development Economics, OUP

Y. Hayami & Y. Godo: Development Economics, OUP

H. Mynt: The Economics of the Developing Countries, B.I. Publications

P. Deane: The First Industrial Revolution, Cambridge University Press

Module 4   Market and the State   10

Unit 1   The historical perspective– The laissez faire then and globalization-cum-
liberalization now

Unit 2   Market failure and Government failure, the problem of sustainable development

Suggested readings:

P. Deane: The First Industrial Revolution, Cambridge University Press

E.J. Hobsbawm: Industry and Empire, Penguin

Y. Hayami & Y. Godo: Development Economics, OUP

B. Jalan: India's Economic Crisis, OUP

Sunanda Sen: Globalization and Development, National Book Trust, India

J. E. Stiglitz: Globalization and its Discontents, Penguin

J. E. Stiglitz: Making Globalization Work, Allen Lane

J.N. Bhagwati: In Defense of Globalization, OUP

P. Dasgupta: Economics, a Short Introduction, OUP

P. Dasgupta: Human Well-being and the Natural Environment, OUP

ECON 503: Evolution of the Indian Economy [50 marks; Credit 4]

Module 1 Introduction   **4**

Suggested readings:

Habib, I. (1975): "Colonization of the Indian Economy 1757-1900", Social Scientist, Vol. 3, No. 8

Module 2 Impact of colonial rule on certain areas in the Indian Economy   **16**

Unit 1 Indian Agriculture from Cornwallis to commercialization

Unit 2 Theory of economic drain and its impact on Indian economic development Deindustrialization; Emergence of Economic Nationalism, Laissez Faire; Policy of Discriminating Tariff Protection

Unit 3 Early industrial development of India: Capital and Labour

Unit 4 Currency and India's Monetary Policy

Suggested readings:

Bagchi, A.K. (1972): Private Investment in India, 1900-39, Cambridge: Cambridge University Press.

Chandra B. (2010): Rise and Growth of Economic Nationalism in India, Har Anand Publications, 2010.

Gadgil, D.R. (1938): The Industrial Evolution of India in recent times (out of print).

Jathar and Beri: Indian Economics, vols. I and II

Kumar, D. (1983): Cambridge Economic History of India Vol. II, (eds.) Cambridge University Press.

Sen, N. (1992): India in the International Economy 1858-1913, Orient Longman Limited.

Module 3 Planning: Evolution of India's development goals and strategies   **10**

Unit 1 Nationalism, Planning and rise of Indian State

Unit 2 Structural constraints and Indian development strategy: Debates between Public sector vs. Private sector, Consumer goods vs. Capital goods, Import substitution vs. Export promotion

Suggested readings:

Bardhan, P. (1984) : The Political Economy of Development in India, Basil

Blackwell, Oxford.

Bhagwati J. and Chakraborty S, (1969): Contributions to Indian Economic Analysis, Lalvani Publishing House

Chakravarthy, S. (1987): Development Planning: The Indian Experience, OUP
Chaudhuri, P (1978): The Indian Economy: Poverty and Development, Crosby Lockwood Staples.

Ray, R. (1979): Industrialization In India, Oxford University Press.

Sarkar, S. (1973): Swadeshi Movement in Bengal 1903-1908, People's Publishing House.

Streeton and Lipton (1968): The crisis in Indian Planning, OUP

Module 4	**Major issues and their impact in Indian Agriculture**	10
Unit 1	Land Reforms	
Unit 2	Tenancy of different kinds and their effects	
Unit 3	Marketable Surplus	
Unit 4	Green Revolution in India	
Unit 5	Minimum Agricultural Prices and Public Distribution System	

Suggested readings:

Chaudhury, P. (1972): Readings in Indian Agricultural Development, (eds.) George Allen and Unwin Ltd.

Cheung, S (1969): Theory of Share Tenancy, University of Chicago Press

Jalan, B. (1992): Indian Economy; Problems and Prospect, (ed.), Penguin Books India Pvt. Ltd.

Khusro, A.M (1968): Readings in Indian Agricultural Development(eds.), Allied Publishers

Rao, C.H.(1975): Technological Change and Distribution of Gains in Indian Agriculture, Macmillan

Vaidyanathan: The Indian Economy: Crisis, Response, and Prospects, Orient Blackswan

Wadhwa, C. (1977): Some Problems of India's Economic Policy, (eds.) Tata Mcgraw Hill Publishing Co. Ltd.

Module 5	**Major issues in Indian Industry and their impact**	8
Unit 1	Industrial licensing – justification and problems	
Unit 2	Industrial stagnation and crisis of Indian economy, New Industrial policy, and	

the changing Indian State in the era of globalization

Suggested readings:

Bagchi and Banerjee (1981): Change and Choice in India Industry, K.P. Bagchi and Co.

Jalan, B. (1992): Indian Economy; Problems and Prospect, (ed.), Penguin Books India Pvt. Ltd

Module 6   Changing nature of Economic Policy and structural change   6

Unit 1   The fiscal and monetary policy changes
Unit 2   Policy towards land acquisition and natural resource management
Unit 3   Structural transformation of Indian economy

Suggested readings:

Kaviraj S. (1991): On State, Society and Discourse in India, in Manor J (eds.), Rethinking Third World Politics
Mukherjee , R. (2014): Political Economy of Reforms in India
Economic Survey of India
Reports on Currency and Finance, Government of India

Module 7   International Trade: Capital and Land   6

Foreign Trade Policy
Special Economic Zones
Foreign Investment Inflows since 1991 – FII and FDI
Recent changes in Exchange Rate Policy – the question of Capital Account Convertibility

Suggested readings:

Report of the Tarapore Committee, 2006
EXIM Policy of the Government of India, 2009 onwards
Singh, K. (2005): Foreign Direct Investment in India: A Critical Analysis of FDI from 1991-2005, Centre for Civil Society, New Delhi.

Module 8	Poverty and Inequality	4
Unit 1	Growth and poverty	
Unit 2	Poverty versus inequality; The State and social programmes	

Suggested readings:

Chaudhuri, P.(1993): Changing Perceptions to Poverty in India: State & Poverty, Indian Journal of Statistics.

Sen, A. and Dreze (2013): An Uncertain Glory: India and its Contradiction, Princeton University Press

ECON 591: Introductory Econometrics [50 marks; Credit 6]

Module 1	Simple Linear Regression Model	20

Specifications of the Model – Assumptions – Deriving the Ordinary Least Squares (OLS) Estimates – Gauss Markov Theorem – Estimation of the Error Variance – Reverse Regression - Statistical Inference in the Linear Regression Model – Confidence Intervals for the Estimated Parameters and the Testing of Hypotheses – Coefficient of Determination – Prediction with the Simple Regression model.

Suggested readings:

Maddala, G. S.: Introduction to Econometrics, Wiley

Ramanathan, R.: Introductory Econometrics with Applications, Harcourt Publishers.

Woolridge, J. M: Econometrics, CENGAGE

Johnstone & Dinardo, Econometric methods, McGraw Hill

Module 2	Problems in OLS Methods	20

Analysis of Residuals – Heteroschedasticity and Autocorrelation Problems – First Order Autoregressive Process – Consequences of applying OLS under Heteroschedasticity and Autocorrelation – Durbin-Watson Test, Glesjer Test, Goldfeld-Quandt Test.

Suggested readings:

Maddala, G. S.: Introduction to Econometrics, Wiley

Ramanathan, R.: Introductory Econometrics with Applications, Harcourt Publishers.

Woolridge, J. M.: Econometrics, CENGAGE

Johnston and Dinardo, Econometric methods, McGraw Hill

| Module 3 | **Introduction to Multiple regression and problem of Multicollinearity** | **10** |

Motivation for Multiple Regression - Examples – Problem of Multicollinearity

Suggested readings:

Maddala, G. S.: Introduction to Econometrics, Wiley

Ramanathan, R.: Introductory Econometrics with Applications, Harcourt Publishers.
Woolridge, J. M: Econometrics, CENGAGE
Johnston and Dinardo, Econometric methods, McGraw Hill

| Module 4 | **Time-Series Analysis** | **14** |

Models of Time Series: Purely Random Process, Random Walk, Moving Average, Auto Regressive Process, Auto Regressive Moving Average Process.
Different components of time series and their measurements.

Suggested readings:

Maddala, G. S.: Introduction to Econometrics, Wiley

Nachane, D. M.: Econometrics: Theoretical foundations and empirical perspectives, OUP

ECON 592: Applied Statistics [50 marks; Credit 6]
(*Computer Application Based Course*)

| Module 1 | **Basics of Excel** | **10** |

Introduction to Excel
Excel Basics needed for Statistical Analysis of the Data
Data Presentation and Data Management
Formulas and Functions
Sort and Filter

| Module 2 | **Using Excel for Statistical Analysis** | **16** |

Methods for Describing Univariate Data Set: Graphical, Numerical (Measure of Center, Spread, Relative Standing, Skewness, Kurtosis, etc.), Use of both the graphical and numerical techniques to present and interpret economic data
handling bivariate data
Correlation
Classical Regression
Detection and Solution of Heteroscedasticity and Autocorrelation
Concept of Multivariate Regression and Detection of Multicollinearity

| Module 3 | **Using Excel to solve equation systems** | 04 |
| | Use of Solver | |

| Module 4 | **Use of other software like R / Stata for statistical analysis** | 34 |

SIXTH SEMESTER
Honours/Major
[Figures in extreme right indicate the number of contact hours]

ECON 601: Public Economics [50 marks; Credit 4]

Module 1	**Objectives of government budget**	21
Unit 1	Musgrave's three branches: allocation, distribution, stabilization	
Unit 2	Public goods (social wants) provisioning: The problem of preference revelation:	

(i) The voting route: Majority voting and the voting paradox, Arrow's Impossibility Theorem, single-peaked preferences, the median voter, the inefficiency of majority voting equilibrium.

(ii) The tax route: The Benefit Approach to taxation and expenditure, Lindahl model & Pareto efficiency, preference revelation mechanism revisited.

Suggested readings:

Hindriks & Myles, Intermediate Public Economics, MIT Press, 2006

Musgrave, The Theory of Public Finance, MCGraw Hill

Stiglitz, J., Economics of the Public Sector, W.W. Norton

Ghosh & Ghosh, Economics of the Public Sector, Prentice Hall.

Module 2	**Tax Incidence and Principles of Taxation**	30
Unit 1	Incidence of taxation	
Unit 2	Economic efficiency, optimal taxation.	
Unit 3	Administrative simplicity, Flexibility, political responsibility	
Unit 4	Fairness: The Benefit Approach, Ability-to-pay Approach (horizontal and vertical equity).	

Suggested readings:

Hindriks & Myles, Intermediate Public Economics, MIT Press, 2006

Musgrave, The Theory of Public Finance, McGraw Hill

Stiglitz, J., Economics of the Public Sector, W.W. Norton

Ghosh & Ghosh, Economics of the Public Sector, Prentice Hall.

Allan, C.M., The Theory of Taxation, Penguin.

Atkinson, D. & Stiglitz, J., Public Economics, McGraw Hill.

Bagchi, Amaresh (ed) Readings in Public Finance, OUP.

Module 3	**Budget, Public Debt, Fiscal Federalism and Indian Budget**	13
Unit 1	Budget items and different concepts of deficits and surpluses	
Unit 2	Public Debt	
Unit 3	Principles of fiscal federalism with reference to India	
Unit 4	Indian Central and State budgets in practice	

Suggested readings:

Stiglitz, J., Economics of the Public Sector, W.W. Norton

Ghosh & Ghosh, Economics of the Public Sector, Prentice Hall.

GOI, Budget documents including 'An Economic and Functional Classification of Central Government Budget'.

Houghton, R.W. (ed) Public Finance, Penguin.

Atkinson & Stiglitz, Public Economics, McGraw Hill.

Bagchi, A. (ed) Readings in Public Finance, OUP.

Tapas Mazumdar (ed) Man, Nature & the Indian Economy, OUP.

ECON 602: Development Economics II [50 marks; Credit 4]

Module 1	**Inequality and Poverty**	16
Unit 1	Meaning of inequality – Measures (Lorenz curve, Gini Coefficient) - Kuznets inverted U hypothesis.	
Unit 2	Relative and absolute deprivation with respect to income - Concept of poverty line - Measures (HCR, PGR, Human Poverty Index) - Social dimensions of poverty (rural, ethnic minorities and indigenous population) - class decomposable poverty measure by Foster-Greer-Thorbecke - World Bank approach to tackling poverty.	
	How serious is the Neglect of Intra-Household Inequality? - Improving Health and Education: Why Increasing Income is not Sufficient	

Suggested readings:

Partha Dasgupta: An Inquiry into Well-Being & Destitution, OUP, 1995

Todaro & Smith: Economic Development, Pearson.

Debraj Ray: Development Economics. Oxford.

World Development Report, 2001

Subramanian, S. (ed.): Measurement of Inequality and Poverty

Banerjee, A. V., Benobou, R. and Mookherjee, D. (Ed.): Understanding Poverty

A.K. Sen: Inequality Reexamined. Oxford.

Module 2   Economics of the Household and Gender Disparities   14

Traditional models of household decision-making – Cournot-Nash bargaining approach – Intra-household resource allocation and disparities – Gender issues - Measuring Intra-household inequality; Gender inequality and economic growth.

Suggested readings:

A.K. Sen: "Economics of the family" republished in Patricia Uberoi ed Family, Kinship and Marriage in India, OUP, 1994.

Bina Agarwal: Field of one's own: gender and land rights in South Asia, Cambridge University Press (Chapter 2)

Partha Dasgupta: An Inquiry into Well-Being & Destitution, OUP, 1995

Alderman, Harold, Lawrence Haddad and John Hoddinott, eds. (1997): "Intra-household Resource Allocation: Models, methods and policy." Johns Hopkins University Press.

Blackden, C.M., and C. Bhanu (1999): 'Gender, Growth, and Poverty Reduction', *World Bank Technical Papers* 428, Special Programme of Assistance for Africa, 1998 Status Report on Poverty, World Bank: Washington DC.

Klaasen, S. (1999): Does Gender Inequality Reduce Growth and Development? Evidence from Cross-Country Regressions. Policy Research Report on Gender and Development Working Paper Series, No. 7.

Social Watch (2005) Roars and Whispers, Gender and Poverty: Promises versus Action, Social Watch, Montevideo.

Module 3   Human Development   20

Unit 1   Importance of Health and Education – Education and Health as Joint Investments for Development – Human capital approach

Unit 2   Inequality in Health and Health Care - Poverty, inequality and health in international perspective - Global burden of disease - Government Intervention – Role of health care systems - Equity in distribution of health care – measurement – horizontal inequity and vertical equity – health concentration curve; Equity in health care financing – vertical equity, Kakwani's Progressivity Index, the relationship between progressivity and health care financing systems, horizontal equity

Unit 3   Inequality in education - Demand and supply of education - Cost of education - Education financing – Teaching and outcomes - Gender inequalities - Child Labor - Educational Systems and Development.

Unit 4   Incorporating gender issues in Human Development - Gender-Related Development Index (GDI), Gender Empowerment Measure (GEM) and their limitations – moving towards Gender, Institutions and Development (GID) - Social Institutions and Gender Index (SIGI).

Unit 5   Millennium Development Goals

Suggested readings:

Deaton, A: The Great Escape – Health, Wealth and the Origins of Inequality, Princeton University Press, 2013.

Todaro & Smith: Economic Development.

Partha Dasgupta.: Measuring the Quality of Life, *World Development*, 20(1): 119-131.

A.V. & Duflo, Esther: Poor Economics, Public Affairs, NY, 2011

Abu-Ghaida, D., and S. Klasen (2004). 'The Costs of Missing the Millenium Development Goals on Gender Equity', *World Development* 32: 1075-1107.

Dijkstra, A.G. and Hanmer, L.C. (2000) 'Measuring socio-economic gender inequality: Towards an alternative to the UNDP Gender-Related Development Index', Feminist Economics, 6(2), pp. 41–75.

Jütting, J. P., Morrisson, C., Johnson J. D. and Drechsler, D. (2006). Measuring Gender (In) Equality: Introducing the Gender, Institutions and Development Data Base (GID), OECD Development Centre Working Paper No. 247.

Branisa, B., Klasen, S. and Ziegler M. (2009) New Measures of Gender Inequality: The Social Institutions and Gender Index (SIGI) and its Subindices. Courant Research Centre, Georg-August-Universität Göttingen Discussion Papers on 'Poverty, Equity and Growth in Developing and Transition Countries: Statistical Methods and Empirical Analysis' No. 10.

S. Anand, F. Peter and A. Sen (ed.): Public Health, Ethics and Equity (Papers 1 and 2)

D. Leon and G. Walt (edtd.): Poverty, Inequality and Health: An International Perspective (Papers 1 and 9)

Morris, Devlin and Parkin: Economic Analysis in Health Care (Chapter 5 and 7)

Gwatkin, D. R . (2000): "Health Inequalities and the Health of the Poor: What do we know? What can we do?" *Bulletin of the World Health Organization* 78(1): 3-18. http://www.who.int/docstore/bulletin/pdf/2000/issue1/bu0287.pdf

Orazem, Peter F. and Elizabeth M. King (2009). "Schooling in Developing Countries: The Roles of Supply, Demand and Government Policy." In Schultz, T. and John Strauss, eds., Handbook of Development Economics, Volume 4. Amsterdam: North

Holland, Chapter 55, pp. 3475-3559.

Glewwe, Paul, and Michael Kremer (2008). "Schools, Teachers, and Education Outcomes in Developing Countries." In Hanushek, Eric and Finis Welch, eds., Handbook of the Economics of Education, Volume 2. Amsterdam: North Holland, Chapter 16, pp. 945-1017.

Module 4	**Development Policies and Practice**	14
Unit 1	Evolution of Social and Political Institutions	
Unit 2	Institutions and Electoral Choices	
Unit 3	Development Interventions: Role of NGOs	

Suggested readings:
Acemoglu, Daron & James A. Robinson: Why Nations Fail, Crown, New York, 2012
Persson, T. & Tabellini, Guido: Political Economics, MIT Press, 2000
Banerjee, A.V. & Duflo, Esther: Poor Economics, Public Affairs, NY, 2011
Hindriks & Myles, Intermediate Public Economics, MIT Press, 2006
Scoones, Ian: Sustainable Rural Livelihoods – A Framework for Analysis, IDS Working Paper 72, University of Sussex, 1998

ECON 603: Environment and Resource Economics [50 marks; Credit 4]

Module 1	**Changing perspectives on the environment**	12
Unit 1	An ecological perspective: Environment as natural capital—Issue of macroeconomic scale—Economy and the environment.	
Unit 2	Sustainable Development: Club of Rome Report—Entropy Laws—Economics of the coming spaceship earth—Daly's steady state growth—Growth versus Environment: Environmental Kuznets' curve—Brundlandt Commission Report.	

Module 2	**Theory of environmental externalities**	14
Unit 1	Theory of externalities: Pollution as externality	
Unit 2	Economic theory of efficient pollution control: Regulatory instruments and strategies to control pollution—Tax, Standard and Marketable permits—Property rights	
Unit 3	Trans-boundary pollution: Distinctive features of trans-boundary pollution—Climate change and Planetary boundary conditions—Institutional response—	

Pollution Haven hypothesis

Module 3	**Optimal exploitation of natural resources**	**14**
Unit 1	Natural resource: Types and classification	
Unit 2	Non-renewable resource: Hotelling's rule and discounting over time	
Unit 3	Principles of renewable resource management—Selected examples from bio-diversity loss, fisheries, forests and water.	
Unit 4	Common property, open access and property rights	

Module 4	**Valuing the environment**	**12**
Unit 1	Valuing the environment: Total economic value—Overview of valuation techniques	
Unit 2	Economic Benefit-Cost analysis: principles—Incorporating environment into the exercise—Discounting	

Module 5	**National income and environmental accounting**	**12**
	Principles: Greening the National Income Accounts— Environmentally adjusted Net Domestic Product	
	Alternative indicators: Genuine Savings—Environmental asset accounts—Gross Eco-system product—Ecological footprint	

Suggested readings:

J. Harris and B. Roach (2013) *Environmental and Resource Economics—A contemporary approach*, 3/e, Routledge.

B. Field and M. Field (2013) *Environmental Economics*, 6/e, The Mcgraw-Hill.

D. Pearce, R.K. Turner and I. Bateman (1993) *Environmental Economics—An elementary introduction*, John Hopkins Press.

Kolstad C.D. (2011): Intermediate Environmental Economics, OUP

D. Kitchen, Global Climate Change: Turning Knowledge Into Action, Prentice Hall

Lord Nicholas Stern, Stern review: The Economics of Climate Change

Fourth IPCC review: Intergovernmental Panel on Climate Change

Stockholm Resilience Centre, (2009) Ecology and society

ECON 691(A): Basics of Personal Investment in Financial Market

Module 1	**Introduction**	**04**
	Investment environment, investment process, concepts of buying and selling securities, concepts of security markets	
Module 2	**Valuation of financial assets and investment decisions**	**10**
Unit 1	Valuation of common stock and bonds using different investment criteria – capitalization of income method of valuation, the dividend discount model, price-earning-ratio models; stock valuation based on earning.	
	Some practical applications – estimating the intrinsic value of stocks, implied return of stock market, rate of convergence of investors' prediction, empirical regularities in the stock market	
Module 3	**The portfolio selection problem**	**15**
Unit 1	Risk and return for portfolios	
Unit 2	*Portfolio Analysis* - the efficient set theorem, diversification, determining the composition of the optimal portfolio	
Unit 3	*Riskless borrowing and lending* - riskless borrowing, lending and the optimal portfolio – allowing for different borrowing and lending rates	
Unit 4	Capital Asset Pricing Model and some alternative theories	
	Some practical applications - Validity and extensions of CAPM, determining the security market line, identifying mispriced securities	
Module 4	**Fundamentals of financial analysis & evaluation of investments**	**10**
Unit 1	Reasons for financial analysis	
Unit 2	*Evaluation investment systems* – failure to (i) adjust for risk, (ii) consider transaction cost, (iii) consider dividends; Spurious fit, reliance on misleading visual comparison, Ex-post selection bias.	
Unit 3	*Technical analysis* – momentum and contrarian strategies, moving average and trading range breakout strategies, the bottom line.	

Unit 4	*Fundamental analysis* – top down versus bottom up approach, probabilistic forecasting, financial statement analysis	
	Some practical applications	
Module 5	**Investment management**	**10**
Unit 1	*Setting investment policies* – risk tolerance and its estimation, certainty equivalent return	
Unit 2	*Security analysis and portfolio construction* – security selection, allocation and market timing	
Unit 3	*Portfolio revision* – cost-benefit analysis, swap	
Unit 4	*Portfolio performance evaluation* – risk-adjusted measure of performance, market timing	
	Some practical applications.	
Module 6	**Investment and Risk management**	**15**
Unit 1	Why manage risk? - concept of derivatives	
Unit 2	Managing international risks – exchange risk and international investment decisions	
	Some practical applications.	

Suggested readings:

Brealey, R.A., Myers, , S.C., Allen, F. and Mohanty, P. (2007), Principles of Corporate Finance, McGraw-Hill, 8th Edition.

Sharpe, W.F, Alexander, G.J. and Bailey, J.F. (2000), Investments, Prentice Hall of India Pvt. Ltd., 5th Edition.

Shapiro, A.C. (2003) Multinational Financial Management, John Willey and Sons, Inc., 7th Edition.

ECON 691(B): International Economic Order [50 marks; Credit 6]

Module 1	**Salient features of globalization**	**04**

Different world views about the global economy and its dynamics – Neo-liberal versus the more radical positions

Suggested readings:

Sinha, Anup: "Globalization: Features and Possibilities" in A. Sen and P.K. Sett (ed.) Managing Business in the 21st Century Oxford India Paperbacks, New Delhi 2006

Module 2	**Rise of the Modern Welfare State**	**04**

The Great Depression and the rise of the Welfare State

Suggested readings:

Barr, N.: Economics of the welfare state. New York: Oxford University Press

Module 3	**Global Institutions and New Economic Order**	**06**
Unit 1	The Bretton Woods Institutions	
Unit 2	GATT and the advent of the WTO	**08**

Suggested readings:

Sabine, Dammasch: The Bretton Woods Institution: A Lesson from History.
Stiglitz, J: Globalization and its discontents. W.W. Norton & Co.

Module 4	**Globalization and Innovations**	**06**

Globalization and Innovations - social and economic consequences

Suggested readings:

Dorf, Richard: Technology, Humans and Society: Towards a Sustainable World Academic Press, UK 2001 (pages 174-190)
O'Brien, Roberts and Marc Williams: Global Political Economy: Evolution and Dynamics Palgrave Macmillan, NY, 2007. Chapter 6 (pages 174-207)

Module 5	**Globalization and Market Integration**	**06**

Globalization and Market Integration – rise of corporate power

Suggested readings:

Krugman, P. and M. Obstfeld International Economics, 6th Edition, Pearson Education, 2005. Chapters14 and 15 (pages 389 to 464).

O'Brien, Roberts and Marc Williams: Global Political Economy: Evolution and Dynamics Palgrave Macmillan, NY, 2007. Chapter 5 (pages 137-173)

Dornbusch, Rudiger: Open Economy Macroeconomics Basic Books New York, 1980. (pages 175-214)

Module 6	**Instability of Growth**	**06**

Globalization and Instability of GDP growth – crisis and contagion

Suggested readings:

Ellis, Joseph: Ahead Of The Curve: A Commonsense Guide To Forecasting And Market Cycles Harvard Business School Press, 2005 Chapters 1-6, (pages3-72)

Casti, John: Complexification Abacus, 1994 Chapter 1 (pages 1-42)

Krugman, P. The Return Of Depression Economics Penguin Books 2000 Chapters 5-7 pp 85-136

Rakshit, M. K.: "The Subprime Crisis: A Primer" in Money and Finance Volume 3, Number 3, May 2008 (pages 75-124)

Krugman, P. and M. Obstfeld International Economics, 6th Edition, Pearson Education, 2005. Chapter 21 (pages 668 - 696).

Rodrick, D. Growth after the Crisis. http://www.growthcommission.org/ storage/ cgdev/ documents/financial_crisis/rodrikafterthecrisis.pdf

Carmen Reinhart and Ken Rogoff, This Time is different: Eight centuries of financial folly. Princeton University Press 2009

Module 7	**Inequality of Income and Wealth**	**06**

Globalization and Inequality – intra- versus inter-generational resource use

Suggested readings:

Wade, Robert H. "Globalization, Poverty and Inequality" in John Ravenhill (ed.) Global Political Economy Oxford University press Oxford, 2005 (pages 291-316)

Dasgupta, P: Human Well-being and the Natural Environment Oxford University Press, New Delhi 2001 (pages 86-161)

Stern, N. "The Economics of Climate Change" American Economic Review Volume 98, Number 2, May 2008

Starke, Linda (ed.): 2008 State of the World: Innovations for a Sustainable Economy (pages 75 – 150)

| Module 8 | **Globalization and Environment** | 06 |
| | Environmental issues - economics of climate change | |

Suggested readings:

Panayotou, T. Globalization and the environment.

Lord Nicholas Stern, Stern review on the economics of climate change

Lord Nicholas Stern, What is the economics of climate change, World
Economic Affairs, 7(2), 2006: 1-10

| Module 9 | **Millennium Development Goals** | 04 |
| | Millennium Development Goals | |

Suggested readings:

UNDP: Millenium Development Goals Report: An assessment, Vol 1.

| Module 10 | **Possible future scenarios** | 08 |

Unit 1   Future of the Nation State and Global Governance
Unit 2   Individual, Society and Economy
Unit 3   Economic possibilities for our grandchildren

Suggested readings:

"Towards Global Governance" in Nayyar, Deepak (ed): Governing
Globalization Oxford University Press, New Delhi 2002 (pages 3-18)

You, Jong-Il: "The Bretton Woods Institutions:Evolution, Reform, and
Change" in Nayyar, Deepak (ed.): Governing Globalization Oxford
University Press, New Delhi 2002 (pages 209-237)

Stiglitz, Joseph: "Globalization and the Logic of International Collective
Action: Reexamining the Bretton Woods Institutions" in Nayyar, Deepak
(ed.): Governing Globalization Oxford University Press, New Delhi 2002
(pages 238-253)

Costanza, Robert: "Four Visions of the Century Ahead: Will it be Star Trek,
Ectopia, Big Government, or Mad Max?" in Dorf, Richard: Technology,
Humans and Society: Towards a Sustainable World Academic Press, UK
2001 (pages 190-197)

Korten, David: "System Design for a Post-Corporate World" in Dorf,
Richard: Technology, Humans and Society: Towards a Sustainable World
Academic Press, UK 2001 (pages 197-201)

Laubacher, Robert and Thomas Malone: Two Scenarios for 21st Century
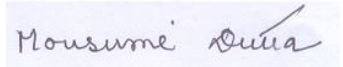Organizations: Shifting Network of Small Firms or All-Encompassing

"Virtual Countries"? Working Paper 21C WP #001 (1997) Sloan School of Management, MIT.

NOTE: *Optional Papers will be offered following the availability of the resource persons.*

ECON 692: Project [50 marks; Credit 6]

Guidelines for Project

1. Each student will prepare a term paper not exceeding 5000 words (excluding charts, diagrams, tables etc.).

2. The term paper may be descriptive or empirical.

3. The selection of the topic will be from the subjects covered in the undergraduate economics Major courses.
e economics Major courses.

Mousumi Dutta
Professor and Head
Economics Department
Presidency University