

RAMAKRISHNA MISSION VIDYAMANDIRA

BELURMATH, HOWRAH, WEST BENGAL

DEPARTMENT OF ECONOMICS

PROGRAMME OFFERED : B.Sc. ECONOMICS HONOURS

PROGRAMME CODE : ECOA

DURATION : 6 SEMESTERS

TOTAL CREDIT : 148

FULL SYLLABUS WITH COURSE OUTCOME

VALID & ONGOING AS ON 30TH JUNE, 2019

Following is the credit distribution for B.Sc. Economics Hons. Programme:

	CR	CR	CR	CR	CR	CR	Total Credit
	SEM 1	SEM 2	SEM 3	SEM 4	SEM 5	SEM 6	
Core Course / Hons.	14	14	14	14	26	26	108
Generic Elective	6	6	6	6	--	--	24
AECC-Lang.	2	2	2	2	--	--	4
AECC-ENVS	--	--	--	--	--	--	4
SEC- ICSH	1	1	1	1	2	2	8
	23	23	23	23	28	28	148

Following is the Grade Point distribution:

% of Marks	Descriptor	Grade	Grade Point
85 - 100	OUTSTANDING	O	10
70 - 84.99	EXCELLENT	A+	9
60 - 69.99	VERY GOOD	A	8
55 - 59.99	GOOD	B+	7
50 - 54.99	ABOVE AVERAGE	B	6
40 - 49.99	AVERAGE	C	5
35 - 39.99	PASS (HONOURS)	P	4
30 - 34.99	PASS (OTHERS)	P	4
LESS THAN 35	FAILED (HONOURS)	F	0
LESS THAN 30	FAILED (OTHERS)	F	0

Name of the Core Course	Credit for the Core Course	Generic Elective Course and the Credit
Economics Hons		Total Credit : 24 At present, considering the future prospect of the students the college offers following two Generic Elective subjects Courses for all students of this Hons programme: a) Mathematics and b) Statistics

B.Sc. Economics Hons. Programme has introduced Discipline Specific Elective Course (DSE) and/or Project in 5th and/or 6th semester:

Sl. No.	Name of the Programme	Discipline Specific Elective / Project
1	Economics Hons	Project

Students of B.Sc. Economics Hons. Programme must take following courses :

- Ability Enhancement Compulsory Courses (AECC):
 - Environmental Science : 4 Credit
 - English Language and MIL (Bengali Language/ Alternative English) : 4 Credit

- Value-Oriented Course (Indian Cultural and Spiritual Heritage) : 8 Credit

Total Credit to be earned by a student to complete B.Sc. Economics Hons. Programme: 148 Credit

Mark sheet after each semester will be given both with SGPA and detailed marks obtained by the examinee.

Similarly Mark sheet after the final semester will be given with CGPA and detailed marks obtained by the examinee.

Calculation of SGPA = $\frac{\text{Total Credit} \times \text{Total Grade Point} = \text{Total Credit Point}}{\text{Total Credit Points} / \text{Total Credits}}$

Calculation of CGPA = $\frac{\text{Total SGPA} \times \text{Total Credits in each Sem.}}{\text{Total Credits earned in all the semesters}}$

B.Sc. Economics Honours

6 Semester Course

Course Structure

Sl No	Name of the Course	Semester	Course Code	Credit	Marks in the Course	Course outcome
1	Group A: Microeconomics I Group B: Macroeconomics I	1	ECO A-P1	14	100	1. Develops skills of flexibility, problem-solving ability and analysis of microeconomic economic issues 2. Emphasizes on analysis of macroeconomic issues with its subsequent impact on policy making.
2	Group A: Microeconomics II Group B : Macroeconomics II	2	ECO A-P2	14	100	1. Provides a sound training in microeconomic theory to formally analyse the behaviour of individual agents. Mathematical tools are used to facilitate understanding of the basic concepts. 2. Helps to develop the skills of an economist, equipping you to understand how firms interact with the overall economic environment, how government policy affects the economy and how financial systems operate.
3	Group A: Microeconomics – III Group B: Development Economics I	3	ECO A-P3	14	100	1. Development of skills for sound understanding of behaviour of individual agents and realizing the possible implications on social behaviour 2. Links political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

4	Group A: Econometrics – I Group B: Development Economics II	4	ECOA-P4	14	100	1. Provides an introduction to the basic analytical skills of data handling required at academic, corporate and government circles. 2. These courses relates to every aspect of our lives, from the decisions we make as individuals to the policies adopted by governments and the products and services offered by companies.
5	Group A: Indian Economy I Group B: Indian Economic History and West Bengal Economy	5	ECOA-P5	10	100	1. It highlights major policy debates and evaluates their empirical evidence and impacts on Indian economy 2. The course is designed to give the students a basic idea of the background of the transformation of the Indian economy along with the in depth understanding of the transformation of West Bengal
6	Group A: Econometrics II Group B: Open Economy Macroeconomics and Public Finance	5	ECOA-P6	20	100	1. Considers an in-depth analysis of the data handling methods 2. Introduces the students to the functioning of the open economy as well as the government sector. This enables the students to have a deeper insight about the operation of an economy in the globalized world and the relevant policy impacts.
7	Project	5	ECOA-P7 New Course Vide BoS dated : 04.04.2015	6	50	Enables the students to pick up research issues having contemporary relevance. Through project preparation students get their relevant trainings in analysis of issues and data handling methodologies.
8	Group A: Development Planning/ Development III Group B: International Economics: Theory and Policy	6	ECOA-P8	10	100	1. Introduces the students to the process of development along with the evolution of international institutions. This will enable the students analyse the changes in international policies and its implications both at the national and international level 2. By giving an outline to the intricacies of both trade theories and policies this paper enables the students to acquire proper analytical ability about international business decisions.
9	Group A: Mathematical Economics Group B: Indian Economy II	6	ECOA-P9	10	100	1. This paper helps the students to grasp the hard-core mathematical intricacies underlying economic theories 2. This course informs the students about the recent evolution of the Indian economy. Such knowledge is an essential pre-requisite, particularly for the students studying economics

10	Cumulative Assessment	6	ECO-P10	6	50	Shapes the students for competitive entrance examinations at the post graduate level
----	-----------------------	---	---------	---	----	--

B.Sc. Economics Honours
6 Semester Course
Mapping of Employability etc.

Sl No	Name of the Course	Semester	Course Code	
1	Group A: Microeconomics I Group B: Macroeconomics I	1	ECOA-P1	Regular assignment and unit tests methods develop skills related to flexibility, problem-solving ability and analysis of microeconomic and macroeconomic issues which are highly valued by corporate sectors and policy makers related to different economic and market-planning industries.
2	Group A: Microeconomics II Group B : Macroeconomics II	2	ECOA-P2	The macroeconomics course helps to develop the skills of an economist, equipping one to understand how firms interact with the overall economic environment, how government policy affects the economy and how financial systems operate. Allied assignments and discussion fora help students directly to get the taste of strategic economic condition related corporates.
3	Group A: Microeconomics – III Group B: Development Economics I	3	ECOA-P3	It develops skills of flexibility, problem-solving ability and analysis of microeconomic economic issues. This course links political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance. These issues are now attracting interests of employers both at the corporate and government levels.

4	Group A: Econometrics – I Group B: Development Economics II	4	ECOAP4	The econometrics course introduces the students to the basic analytical skills of data handling required at academic, corporate and government circles. The course on development economics relates to every aspect of our lives, from the decisions we make as individuals to the policies adopted by governments and the products and services offered by companies
5	Group A: Indian Economy I Group B: Indian Economic History and West Bengal Economy	5	ECOAP5	The course is designed to give the students a basic idea of the background of the transformation of the Indian economy along with the in depth understanding of the transformation of West Bengal. Such and understanding is an essential pre-requisite for undertaking proper actions at the management level.
6	Group A: Econometrics II Group B: Open Economy Macroeconomics and Public Finance	5	ECOAP6	Econometrics II provides an in-depth skill of the data handling methods. Such methods are widely used in academic, government and corporate circles not only for current scenario analysis but also to predict future courses of actions. The second part introduces the students to the functioning of the open economy as well as the government sector. This enables the students to have a deeper insight about the operation of an economy in the globalized world and the relevant policy impacts. At the same time this introduces the students to the important issues at the public level. Such trainings enable them to have an in depth idea about the policy making process.
7	Project	5	ECOAP7	This course is set to enable the students to pick up research issues having contemporary relevance. Through project preparation students get their relevant trainings in analysis of issues and data handling methodologies. This opens up a wide range of careers opportunities enabling them to address organization and government specific issues and make better informed decisions.

8	Group A: Development Planning/ Development III Group B: International Economics: Theory and Policy	6	ECOAP8	This paper develops the skill among the students so that they can dive deep into the process of development along with the evolution of international institutions. This will enable the students analyze the changes in international policies and its implications both at the national and international level. Such an understanding is extremely relevant for both government and corporate level managements. By giving an outline to the intricacies of both trade theories and policies this paper also enables the students to acquire proper analytical ability about internal business decisions. This idea is important not only for corporate level decision making but also in framing appropriate trade policies.
9	Group A: Mathematical Economics Group B: Indian Economy II	6	ECOAP9	This paper helps the students to grasp the hard-core mathematical intricacies underlying economic theories. Such a course is important not only for academics but also for proper analysis of economic data. The second part of the course informs the students about the recent evolution of the Indian economy. Such knowledge is an essential pre-requisite in every job, particularly for the students studying economics
10	Cumulative Assessment	6	ECOAP10	
11	Micro Economics	1	ECOG-P1	
12	Macroeconomics	2	ECOG-P2	
13	Indian Economics	3	ECOG-P3	
14	Development Economics	4	ECOG-P4	

15	DESCRIPTIVE STATISTICS I PROBABILITY THEORY I Practical based on the topics of Group A	1	STSG P1	The course enables them to opt for job market in statistical analysis and to prepare the students for this purpose the teacher involves them in analytical studies through problem solving methods.
16	DESCRIPTIVE STATISTICS II PROBABILITY THEORY II Practical based on the topics of Group A	2	STSG P2	This course also enables them to go to analysis job market and to prepare the students in this avenue the teacher involves them in analytical studies through problem solving methods, quizzes etc.
17	SAMPLING DISTRIBUTIONS AND STATISTICAL INFERENCE ECONOMIC STATISTICS AND TIME SERIES ANALYSIS Practical on selected topics using R.	3	STSG P3	Statistical analytic testing as embedded in this course and as taught through experiential learning by students enable them for different analytic job opportunities using proficient software programmes.
18	SAMPLE SURVEY METHODS AND ANALYSIS OF VARIANCE Project based on the topics taught in semester I-IV ; Practical on Group-A	4	STSG P4	This course opens up the opportunity work innovatively so that they earn skill and work as an entrepreneur in the market of statistical data assessment etc.

Semester I: Paper I (ECOAP1)

Group A

Microeconomics I

Module 1: Introduction to Price Theory

Unit 1: The scope of microeconomics: Scarcity and choice, Types of Microeconomic Analysis, Ten Principles of Economics, Microeconomic Models: Assumptions and Reality.

Basic Text: Mankiw, Principles of Microeconomics, Ch. 1; Maddala & Miller, Ch. 1

Unit 2: Demand and Supply: Individual and Market Demand, Changes in Demand, Individual and Market Supply, Changes in Supply, Market Equilibrium and the Impact of Changes in Demand and Supply, General Principles of Demand and Supply Analysis, Exceptions to the Laws of Demand and Supply.

Unit 3: Price Elasticity of Demand and Supply: Introduction, Price Elasticity of Demand and Supply, Arc and Point Elasticities, Geometric Representation of Point Elasticity, Short-Run and Long-Run Price Elasticities, Income and Cross Elasticity, The Sellers's View: Total Revenues, Average Revenues, and Marginal Revenues, Relationship between Elasticity of Demand, Price (AR), TR, and MR, Applications of the Elasticity Concepts, A Dynamic Demand and Supply Model: The Cobweb Model, Existence, Uniqueness and Stability of equilibrium (the Walrasian approach and Marshallian approach)

Basic Text: (a) Maddala & Miller, Ch. 1, 2 & 3; Ryan & Pearce, Ch. 2.4, 2.5; Hirshleifer, Ch 2; (b) Snider and Nicholson, Ch. 3

References: Gravelle and Rees: Microeconomics; Snyder and Nicholson: Microeconomics, Basic Principles and Extensions; Green: Consumer Theory; Varian: Microeconomic Analysis

Module 2: Theory of Consumer Behaviour – Alternative Approaches

Unit 1: Theory of Consumer Behaviour: The Concept of Utility and Its Relation to the Value of Goods and Services, Cardinal and Ordinal Utility, Indifference Curves, Characteristics of Indifference Curves, Marginal Rate of Substitution and Convexity of Indifference Curves, The Budget Constraints and the Equilibrium of the Consumer, Derivation of Demand Curves from Indifference Curves, The Composite Good Convention, Application: Taxes and Subsidies, Price and Nonprice Rationing and Black Markets.

Unit 2: Analysis of Consumer Demand: Income-Consumption and Engel Curves, Price-Consumption and Demand Curves, Income and Substitution Effects of a Price Change, Giffen Goods and Inferior Goods, Ordinary versus Compensated Demand Functions, Market Demand: Aggregation Problem.

Unit 3: **Revealed Preference approach:** Strong and Weak axioms of Revealed Preference – Properties of Demand Function

Basic Text: (a) Maddala & Miller, Ch. 4 & 5; Ryan & Pearce, Ch. 1 & 2; Hirshleifer, Ch 3 & 4; (b) Intermediate Micro, Varian, Ch. 3, 4, 5, 6, 7, 8, 9, 10; Intermediate Micro, Snider and Nicholson, Ch.2 & 3

References: Gravelle and Rees: Microeconomics; Snyder and Nicholson: Microeconomics, Basic Principles and Extensions; Green: Consumer Theory; Varian: Microeconomic Analysis

Module 3: Theory of Production and Costs

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), Multiple Products: The Product Transformation Curve, 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, Multi-product firm and economies of scope

Basic Text: (a) Maddala & Miller, Ch. 6 & 7; Pindyck, Rubinfeld and Mehta Ch. 6 & 7; Ferguson & Gould, Ch. 6, 7, 8 ; (b) Varian, Ch. 18, 19, 21; Intermediate Micro, Snider and Nicholson, Ch. 6 & 7;

References: Snider & Nicholson: Microeconomics, Basic Principles and Extensions; Ch. 9, 10, 11

Semester I: Paper 1 Group B

MACROECONOMICS I

Module 1: Introduction to Macroeconomics

(What Macroeconomics is about, What macroeconomists do, Debates in Macroeconomics)

Reference: a) Mankiw: Macroeconomics (Ch1)

b) Hubbard and O' Brien: Macroeconomics (Ch 1, 2)

Module 2: National Income Analysis

(National Product, Components of final output, The system of accounts, Definitions related to National Income Accounting, G.D.P. deflator and C.P.I, National Income and Economic Welfare)

Reference: a) Mankiw: Macroeconomics (Ch 2)

b) Dornbuch, Fisher, Stantz: Macroeconomics (Ch 1, 2)

c) Bakerman: National Income Accounting

Joblessness and unemployment

(Concepts of Unemployment, Types of Unemployment)

Reference: a) Mankiw: Macroeconomics (Ch 6)

Module 3: Economy in the Short Run: Business Cycle Responses

(Income and interest Rates: The Keynesian Cross Model and IS Curve, Strong and Weak policy effects of IS-LM model Financial Markets, Financial Regulation and Economic Instability, The Government Budget, Government Debt and limitations of fiscal policy)

Reference: a) Gordon: Macroeconomics (Ch 3, 4, 5 & 6)

(Short Run analysis of aggregate supply three models of aggregate supply)

Reference: a) Mankiw: Macroeconomics (Ch 13)

Module 4: Microfoundations of Macroeconomics

(Theories of consumption and investment functions)

Reference: a) Mankiw: Macroeconomics (Ch 16, 17)

b) Froyen: Macroeconomics (for Consumption Function)

c) Errol D' Souza: Macroeconomics (for Investment Function)

Semester II

Paper II (ECOAP2)

: Group A

Microeconomics – II

Module 1: Market Behaviour and Market Morphology:

The Methodology of Market Models, Pure Competition, Perfect Competition, A Classification of Markets.

Basic Text: Ryan and Pearce, Ch. 12

Module 2: Perfect Competition:

The Profit Maximization Rule, Perfectly Competitive Market: Assumptions, Choosing output in the Short Run, The Competitive Firm's Short-Run Supply Curve, The Short-Run Market Supply Curve, Choosing Output in the Long-Run, The Long-Run Supply Curve in Constant, Increasing and Decreasing Cost Industries.

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

Basic Text: (a) Pindyck, Rubinfeld and Mehta, Ch. 8, 9; Maddala and Miller, Ch. 10;

(b) J. Perloff, Microeconomics: Theory and Applications with Calculus, Ch. 8, 9, Snider & Nicholson: Intermediate Micro, Ch. 9

Reference: Snider & Nicholson: Microeconomics, Basic Principles and Extensions; Ch. 12

Module 3: Imperfect Competition

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. Applications: Inter-temporal 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, Monopolistic Competition and Advertising.

Basic Text: (a) Pindyck, Rubinfeld and Mehta, Ch. 10, 11, 12; Maddala and Miller, Ch. 11, 12, 13; Cohen and Cyert, Ch. 11; (b) Ferguson and Gould 9, 10, 11, 12; Snider & Nicholson: Intermediate Micro, Ch. 11 & 12

References: Snieder & Nicholson: Microeconomics, Basic Principles and Extensions; Ch. 14 & 15; Perloff, Ch. 11, 12, 13, Varian, 24, 25; Anindya Sen, Microeconomics; Satya R Chakraborty, Microeconomics

Module 4: Strategic Interaction and Oligopoly

Simultaneous Quantity Setting: Cournot Equilibrium; Simultaneous Price Setting: Bertrand Equilibrium and Bertrand Paradox, Product differentiation in Bertrand model; Quantity Leadership: Stackelberg Equilibrium; Price Leadership; Collusion and Formation of Cartel; Cartel Instability, Punishment strategies and Cartel Stability; Price Rigidity: Kinked Demand Curve Model.

Basic Text: (a) Varian, Ch. 27; Pindyck, Rubinfeld, Mehta, Ch. 12; Cohen & Cyert, Ch. 12; (b) Perloff, Ch. 13; Snider & Nicholson: Intermediate Micro, Ch. 12

References: Snieder & Nicholson: Microeconomics, Basic Principles and Extensions; Ch. 15; Anindya Sen, Microeconomics; Satya R Chakraborty, Microeconomics

Paper II: Group B Macroeconomics – II (ECOAP4)

Module 1 The Economy in the Long Run

- Unit 1 National Income- Where it Comes From and Where it Goes: Production, Distribution and Allocation Aspects of National Income.
- Unit 2 Economic Growth I (Solow Model, Concept of Steady State, Golden Rule of Capital Accumulation, Population Growth and Technological Progress, Conditional and Unconditional Convergence).
- Unit 3 Economic Growth II (Solow Model: Policy implications and Extensions including concepts of endogenous growth).
- Unit 4 Money and Inflation (Types and Functions of Money, Quantity Theory of Money, Seigniorage, Inflation and Interest Rates- Fisher Effect, Cost of Holding Money, Social Cost of Inflation).

- References :**
- i) Macroeconomics : Mankiw (Chs. 3,4,5,7)
 - ii) Macroeconomics : Abel & Bernanke (Ch. 6)

Module 2 The Economy in the Short Run

- Unit 1 Concepts of Phillips Curve, Short Run Aggregate Supply Curve and Sacrifice Ratio.
- Unit 2 Rational Expectations, Phillips Curve and Sacrifice ratio under Rational Expectations.,
- Unit 3 Hysteresis.

- References :**
- i) Macroeconomics : Mankiw (Ch. 13)
 - ii) Macroeconomics : Robert J. Gordon (Ch. 9)

Module 3 Macroeconomic Policy Debate

- Unit 1 Macroeconomic Policy Debate : Rules Versus Discretion

- References :**
- i) Macroeconomics : Mankiw (Ch. 14)

Module 4 Money Supply and Money Demand

- Unit 1 Concept of Money Supply, Fractional Reserve System, Control of Money Supply by the Central Bank.
- Unit 2 Portfolio and Transaction theories of Money Demand, Baumol-Tobin Model of Money Demand.

- References :**
- i) Macroeconomics : Mankiw (Ch. 18)
 - ii) Macroeconomics : Abel & Bernanke (Ch. 14)

Module 5 Theories of Real Business Cycle and New Keynesian Macroeconomics: Basic Concepts

- References :**
- i) Macroeconomics : Mankiw (Ch. 19)
 - ii) Macroeconomics : Robert J. Gordon (Ch. 17)

Referred Texts:

1. Macroeconomics: N.G. Mankiw
2. Macroeconomics: A.B. Abel and B.S. Bernanke
3. Macroeconomics: R.J. Gordon

Semester III

Paper III (ECO A P3) : Group A

Microeconomics – III

Module 1 General Equilibrium and Welfare

Perfectly Competitive Price system, A simple graphical model of general equilibrium with two goods, Comparative statics analysis, General equilibrium model and factor prices, Existence of general equilibrium prices, General equilibrium models, Welfare economics, Efficiency in output mix, Fundamental theorems of welfare economics.

- Books :
- i) Snider & Nicholson: Intermediate Micro and its Application, Ch. 10
 - ii) Snider and Nicholson: Microeconomic Theory: Basic Principles and Application, ch. 1
 - iii) Gould and Ferguson: Microeconomic Theory, Richard D. Irwin
 - iv) Perloff, Jeffrey M.: Microeconomics – Theory and Application with Calculus, Addison Wesley
 - v) Jehle, G. and Reny, P.: Advanced Microeconomic Theory, Addison Wesley.
 - vii) Satya R Chakraborty: Microeconomics

Module 2 Uncertainty and Information

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. Applications: 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.

10

Unit 2 Markets with Asymmetric Information – Principal Agent Model, Adverse selection and Moral hazard in insurance, Asymmetric information in Competitive markets, Signalling

- Books :
- i) Snider & Nicholson: Intermediate Micro and its Application, Ch. 4 and 15
 - ii) Snider and Nicholson: Microeconomic Theory: Basic Principles and Application, Ch. 7, 18
 - iii) Varian H.R: Intermediate Microeconomics: A Modern Approach, East West Press
 - iv) Pindyck, Rubinfeld and Mehta: Microeconomics, Pearson Education Asia
 - v) Perloff, Jeffrey M. (2007): Microeconomics - Theory and Application with Calculus, Addison Wesley
 - vi) Kreps, D. M.: A Course in Micro Economic Theory, Prentice Hall of India
 - vii) Satya R Chakraborty: Microeconomics

Module 3 Factor Market

- 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.

- Books :**
- i) Snider & Nicholson: Intermediate Micro and its Application, Ch. 13, 14
 - ii) Snider and Nicholson: Microeconomic Theory: Basic Principles and Application, Ch. 16, 17
 - iii) Varian H.R: Intermediate Microeconomics: A Modern Approach, East West Press.
 - iv) Pindyck, Rubinfeld and Mehta: Microeconomics, Pearson Education Asia.
 - v) Gould and Ferguson: Microeconomic Theory, Richard D.Ir.
 - vi) Satya R Chakraborty: Microeconomics

Paper III Group B:
Development Economics I

Module I: Economic Development: Overview

Unit 1: Growth and Development: Definition and measurement issues

Unit 2: The many faces of underdevelopment: Human Development, An index of human development, Physical Quality Life Index, Goulet's three core values of development, Development as Freedom

Unit 3: Patterns of structural Change

Readings: Debraj Ray, Ch 1, Todaro Ch 1, Perkins, Radelet, Lindaur Ch 1, Human Development Report, Handbook of Development Economics, Vol. 1, Ch. 7(selected portion)

Module II: Development Strategies

Unit 1: Complementarity and Coordination

Unit 2: Poverty Trap of Nurkse and Big Push Theory of Rosenstein-Rodan

Unit 3: Unbalanced Growth, Linkages—backward and forward

Unit 4: Choice of technique

Readings: Debraj Ray, Ch. 5, Todaro Ch 5, Thirlwal Ch 12

Module III: Population Growth and Economic Development

Unit I: Basic concepts of population, Population growth and the quality of life- Facts about World population, Effects of population growth on the process of development

Unit II: The demographic transition, concept of optimum population, A model of the low-level equilibrium trap and the critical minimum effort thesis

Readings: Debraj Ray Ch. 9, Todaro Ch. 5, Thirlwal Ch. 8

Module IV: Development, Inequality and Poverty

Unit I: Meaning of inequality, inequality measures, four criteria for inequality measurement, Lorenz curve, Range, Coefficient of Variation, Gini-coefficient, Kuznet's Inverted U hypothesis

Unit II: Meaning and measures of poverty, Poverty: empirical observations, the functional impact of poverty, Poverty as capability failure

Readings: Debraj Ray, Ch. 6, 8, Todaro Ch. 2

Books

1. Amartya Sen, Development as Freedom, Oxford, New Delhi
2. Cypher & Dietz, The Process of Economic Development, 2nd edition, Routledge, 2004.
3. Debraj Roy, Development Economics, Oxford, 1998
4. Handbook of Development Economics, Volume I
5. Kaushik Basu, Analytical Development Economics, Oxford, 1998
6. Meier and Rauch, Leading Issues in Economic Development, Seventh & Eighth Edition,
7. D. Perkins, S. Radelet & D. L. Lindauer, Economics of Development, W W Norton, 2006
8. Subrata Ghatak, Introduction to Development Economics, Fourth Edition, Routledge, 2007.
9. Thirlwall, Growth and Development, Eighth Edition, Palgrave, 2006.
10. Todaro and Smith, Economic Development, Eighth Edition, 2003.
11. Walter Elkan, Introduction to Development Economics, ELBS, 1973.
12. Wayne Nafziger, Economic Development, 4th edition, Cambridge University Press, 2006.
13. Yujiro Hayami, Development Economics, Oxford 2000.

Semester IV

Paper IV (ECO A P4)

Group A:

ECONOMETRICS – I

Module -1 Two-Variable Regression Model

Unit-1 The method of Ordinary Least Squares – Classical Linear Regression Model : The Assumptions Underlying the Method of Least Squares – Standard Error of Least-Square Estimates – Properties of Least Square Estimators : The Gauss-Markov Theorem- The Coefficient of Determination : A measure of 'Goodness of Fit'.

Unit-2 Statistical inference in the linear regression model – Analysis of Variance for the simple regression model – Outliers – Alternative functional forms for regression equations

Text

1. G.S Maddala & Kajal Lahiri: Introduction to Econometrics (Chapter 3 - Selected Sections)
2. Damodar N Gujarati , Dawn C Porter , Sangeetha Gunasekar : Basic Econometrics (Chapter 3 ,Chapter 4 & Chapter 5 - Selected Sections)

Module -2 Three-Variable Regression Model

A model with two explanatory variables – Statistical inference in the multiple regression model – Interpretation of the regression coefficients – Partial Correlations & multiple correlation coefficients - Prediction in the multiple regression Model

Text

1. G.S Maddala & Kajal Lahiri : Introduction to Econometrics (Chapter 4 - Selected Sections)
2. Damodar N Gujarati , Dawn C Porter , Sangeetha Gunasekar : Basic Econometrics (Chapter 7 & Chapter 8 - Selected Sections)

Module -3 Heteroskedasticity

Detection of heteroskedasticity – Consequences of heteroskedasticity – Solutions to heteroskedasticity problem - Heteroskedasticity and the use of deflators

Text

1. G.S Maddala & Kajari Lahiri : Introduction to Econometrics (Chapter 5 - Selected Sections)
2. Damodar N Gujrati , Dawn C Porter , Sangeetha Gunasekar : Basic Econometrics (Chapter 11 - Selected Sections)

Module -4 Autocorrelation

The Durbin-Watson test - Estimation in levels versus first differences – Estimation procedures with auto correlated errors – Effect of AR (1) errors on OLS estimates

Text

1. G.S Maddala & Kajari Lahiri : Introduction to Econometrics (Chapter 6 - Selected Sections)
2. Damodar N Gujrati , Dawn C Porter , Sangeetha Gunasekar : Basic Econometrics (Chapter 12 - Selected Sections)

Group B: DEVELOPMENT ECONOMICS II

Module 1: Rural and Urban

Unit 1: Surplus labour in a Utility-Maximization model

Unit 2: Economic Development with Unlimited supplies of labour

Unit 3: Rural –urban migration and urban unemployment

Readings: Kaushik Basu, *Analytical Development Economics*; Thirlwall, *Growth and Development*, Wadwha, *Some Problems on Indian Economy*

Module 2: Markets in Agriculture

Unit 1: An Introduction

Introduction and some examples, Land and labor, Capital and credit

Readings: Debraj Ray, *Development Economics*, Ch 11

Unit 2: Land

Introduction, Ownership and tenancy, Land rental contracts, Land ownership & Land reforms

Readings: Debraj Ray, *Development Economic*, Ch. 12

Unit 3: Labor

Introduction, Labor Categories, A familiar model, Poverty, nutrition and labor markets: the basic model

Readings: Debraj Ray, *Development Economics*, Ch. 13

Unit 4: Rural Credit

The limits to credit and insurance, Sources of demand for credit, Rural Credit markets, Theories of informal credit markets, Alternative credit policies: Vertical formal-informal links, Microfinance

Readings: Debraj Ray, *Development Economics, Ch. 14*

Module 3: Development & Institutions

Unit 1: Role of Institutions in Economic development

Unit 2: Economic roles of Government, Government failures, rent seeking activity, issue of corruption

Readings: Hendrik Van Den Berg, *Economic Growth and Development, McGraw Hill, Chapter 12 &13 (Selected sections)*

Readings:

1. Debraj Roy, *Development Economics, Oxford, 1998*
2. Hendrik Van Den Berg: *Economic Growth and Development, McGraw Hill*
3. Kaushik Basu, *Analytical Development Economics, Oxford, 1998*
4. Thirwall, *Growth and Development, Palgrave*
5. Wadwha, *Some Problems on Indian Economy*

Semester V

Paper V(ECOA P5)

Revision Vide BoS dated : 04.04.2015

Paper V: Group A: Indian Economy I

Module 1 Indian Economy at the time of Independence

Unit 1 Features of Indian Economy around 1947-1950 and characteristics of economic underdevelopment of India (with reference to colonial rule of India)

Readings: Bipan Chandra in Jalan (ed). Uma Kapila, Chapter 1.

Module 2 Planning: Evolution of India's Development Goal and Strategy

Unit 1 The background and Structure of Indian Planning.

Unit 2 Structural Constraints and India's development strategy – Choice of industrialization strategies – public vs. private sector, capital goods versus consumer goods – Mahalanobis Plan Model (basic argument), import substitution vs. export promotion strategy.

Unit 3 Poverty Eradication, foreign aid and self-reliance – Fifth Five Year Plan Model (basic argument)

Unit 4 Regional inequality in India – causes; policies for balanced regional development.

Unit 5 Planning deficiencies and its abandonment– 7th five year plan and Indian economic crisis.

Unit 6 New Economic Policy – liberalisation, market and state (introduction)

Readings:

Unit 1: Uma Kapila, Chapters 1 and 2. Chakravarty, Chapter 1.; Unit 2 Uma Kapila, Chapter 3. Chakravarty Chapters 2 and 5; Unit 3 Chakravarty, Chapter 3. Wadhwa Chapters 5 and 7;; Unit 4 Chakravarty Chapter 4 ; Unit 5 Chakravarty Chapter 4 , Bardhan in Jalan (ed). ; Unit 6 Rangarajan in Uma Kapila, Chapter 5. Uma Kapila, Chapter 20. Bardhan in Jalan (ed).

Module 3. Land and Agriculture

3.1 Land and tenancy system- sharecropping- Different dimensions of Land Reform – Productivity Debate – Marketable Surplus.

S.K. Ray in Uma Kapila, Chapter 12. Wadhwa Chapters 19, 20, 21, 22, 23 and 31.

3.2 Green Revolution – features of green revolution – positive and negative impacts of green revolution. Performance of Indian agriculture.

Vaidyanathan. 1994. Chakravarty Chapter 3 (24-27). Wadhwa Chapters 29 and 30.

3.3 Agricultural Policies and Pricing – Agricultural Price commission – support price vs. procurement price – Public investment in agriculture - agricultural subsidies and tax.

Hanumantha Rao in Jalan (ed). Uma Kapila Chapter 11. Wadhwa Chapters 24, 25, 26 and 27.

Module 4 Major issues in Indian Industry and their impact

Unit 1 Industrial stagnation – causes and remedies

Unit 2 Industrial licencing – justification and problems

Suggested readings; Uma Kapila, Indian Economy, Academic Foundation, Chapter 18.

Rakesh Mohan in Bimal Jalan (ed.) Indian Economy: Problems and Prospects, Penguin Books India Pvt. Ltd.; Bagchi and Banerjee, Change and Choice in India Industry, K.P. Bagchi and Co.; Bhagwati and Desai, Planning for Industrialization, OUP.

Module 5 Poverty and Unemployment in India

Unit 1 Measurement of poverty

Unit 2 Programmes for removal of poverty

Unit 3 Different types of unemployment in India

Module 6 The external sector of the Indian Economy – Pattern of export and import trade prior to 1991 – Various problems

Suggested readings: Uma Kapila, Indian Economy, Academic Foundation; Bhagwati and Srinivasan, Foreign Trade Regimes and Economic Development ; India, Macmillan

Group B: Indian Economic History and West Bengal Economy

Indian Economic History

1. Basic features of the colonial economy in India.
2. Ideas Economic Drain – the concept, constituents and consequences of economic drain in India.
3. Commercialisation of Indian agriculture – the process, causes and consequences.
4. Land Policy in British India: Permanent and other settlements
5. Deindustrialisation in India: the debate – causes and consequences.
6. Railway Vs. Irrigation controversy in India.

Reference: a) Dhires Bhattacharyya: A Coincise Economic History of India

b) V.B. Singh (ed): Economic History of India

c) Bagchi: Private Investment in India (1900 – 1939)

d) Dharma Kumar (ed): Cambridge Economic History- vol II

e) Tirthankar Roy: The Economic History of India

West Bengal Economy

Course Name	Course Content	Lectures (No.)
West Bengal Economy	<p>1. West Bengal economy in comparison to other state-economies preliminary ideas. Ref- Bagchi 1998, West Bengal Development Report 2010.</p> <p>2. Agricultural sector in the state: Changes in cropping pattern, Growth of production, yield and acreage of major crops. Distribution of land holding, land reform. Ref- West Bengal Development Report 2010, Khasnabis 2008.</p> <p>3. Industrial Sector: Share of West Bengal to all-India level in terms of value added. Employment and number of factories Characteristics of Manufacturing industries in the registered sector output and employment growth, industrial strategy. Ref- Banerjee and others 2002, West Bengal Development Report 2010.</p> <p>4. Social Sector : Health and Education Ref- West Bengal Development Report 2010.</p>	<p>4</p> <p>8</p> <p>6</p> <p>4</p>

--	--	--

Readings

1. West Bengal Development Report, Planning Commission, 2010.
2. Studies on the Economy of West Bengal since Independence, A Bagchi, *EPW*, 1998.
3. The Economy of West Bengal, R Khasnabais, *EPW*, 2008.
4. Agrarian Impasse in Bengal, James K Boyce, *Oxford University Press*, 1987.
5. West Bengal Human Development Report, 2004, Development & Planning Dept. Govt of West Bengal.

6. Economy of West Bengal Ed. Ajitava Roychowdhury and Debjani Sarkar.
7. West Bengal Economy some contemporary issues: Ed. Ajitava Roychowdhury and Tuhin Kumar Das.
8. Economic Survey different volumes.
9. EPW relevant articles

Paper VI (ECOAP6)

Revision Vide BoS dated : 04.04.2015

Group A

ECONOMETRICS – II (Full Marks 50)

Module -1 Dummy Variables in Regression

Basic Ideas – Dummy Variables for changes in the intercept term – Dummy Variables for changes in the Slope coefficient – Dummy Variables under Heteroskedasticity and

Autocorrelation - The Probit and Logit Models

Text

1. G.S Maddala & Kajal Lahiri: Introduction to Econometrics (Chapter 8 - Selected Sections)
2. Damodar N Gujarati , Dawn C Porter , Sangeetha Gunasekar : Basic Econometrics (Chapter 9 - Selected Sections)
3. Jeffrey M. Woolridge : Econometrics (Chapter 7 – Selected sections)

Module -2 Multicollinearity

The nature of Multicollinearity — Practical Consequences of Multicollinearity – Detection of Multicollinearity - Remedial Measure - Estimation in the presence of Multicollinearity

Text

1. G.S Maddala & Kajal Lahiri : Introduction to Econometrics (Chapter 7 - Selected Sections)
2. Damodar N Gujarati , Dawn C Porter , Sangeetha Gunasekar : Basic Econometrics (Chapter 10 - Selected Sections)

Module -3 Multiple Regression using matrix algebra

Least Square estimates for the population regression coefficients - Variance-Covariance matrix for estimated regression coefficients - Inferences on the coefficients

Text

1. G.S Maddala & Kajal Lahiri : Introduction to Econometrics (Chapter 4 - Appendix 4.1)
2. J.Johnston, J.Dinardo. : Econometric Methods (Chapter -5)
3. Jeffrey M. Woolridge : Econometrics (Appendix D – The Linear Regression Model in matrix form)

Module -4 Computer Applications in Regression problems

Introduction to computer use and applications in Econometrics: Use of Regression package in STATA for data analysis involved in 1) Simple Linear Regression 2) Multiple Regression 3) overcoming the issues in Heteroskedasticity , Auto correlation & Muticollinearity.

Text Christopher F. Baum : An Introduction to Modern Econometrics Using Stata

Paper VI: Group B: Open Economy Macroeconomics and Public Finance

Unit I

Open Economy Macroeconomics

- | | Lectures required |
|--|-------------------|
| 1. National Income and Balance of Payment :
BOP accounting, Determination of National Income and Trade Balance,
Foreign Trade Multipliers with and without repercussion effects
Ref : Krugman and Obstfeld – Ch 12
Caves, Frankel, Jones – Ch 18 | 15 |
| 2. Theory of Exchange Rate, Devaluation and Trade Balance
Imports, Exports and the foreign exchange market, demand-supply
framework and stability, introductory analysis of different types of
exchange rate regimes clean float, dirty/managed float, pegged regimes,
asset approach to exchange rate-interest parity condition, Nominal
Devaluation and trade balance : Marshall-Lerner condition, J-curve
phenomenon.
Expenditure switching and expenditure reducing policies, Swan Diagram
and Assignment Policies.
Ref : Krugman and Obstfeld – Ch 19
Caves, Frankel, Jones – Ch 17 | 15 |
| 3. Monetarist Model of Balance of Payments | |

Unit II

Public Finance

Module 1 Role of the Government

- Unit 1 Different perspectives of the role of the government, Thinking like Public
Sector Economist

Unit 2 Market Efficiency and Market Failure, Efficiency Vs Equity, Externality, Incomplete Markets, Information Failure, Merit Goods

Text Book : i) Stiglitz , Chapters- 1,3,4,5 ; Ghosh and Ghosh- Chapter 2

Module 2 Public Goods – Concept and Pricing

Text Book : i) Stiglitz , Chapter- 6 ; Ghosh and Ghosh- Chapter 2

Module 3 Indian Public Finance

Unit 1 Sources of Revenue and Expenditure of Central and State Governments
(concepts only)

Text Book : i) Mishra and Puri (30th Ed), Chapters 50-51

Module 4 Taxation

Unit 1 Principles of taxation, Efficiency of taxation-Excess Burden and Dead-Weight Loss

Unit 2 Concepts of Personal Income Tax, Corporate Income Tax and Sales Tax including VAT

Text Book : i) Ghosh and Ghosh, Chapters 3,4,6,7,8

Module 5 Public Debt

Unit 1 Different concepts of Deficit in Government Budget, Burden of Public Debt, Richardian Equivalence

Text Book : i) Ghosh and Ghosh, Chapter 9

- References :
- i) Economics of the Public Sector – Joseph E. Stiglitz
 - ii) Economics of the Public Sector – Ambar Ghosh and Chandana Ghosh

Paper VII Project (ECO A P7)

Semester VI

Paper VIII (ECO A P8)

Group A: Development Planning/ Development III

1. Stages of Growth – Genesis of Capitalism

Basic Idea about Stage Theory: Marx Vs Rostow – Transition from Mercantilism to industrial Capitalism – Industrial Revolution in Britain – Causes and consequences.

Reference: a) Dutta, Bagchi, Southgate

2. Planning for Development

Rationale for planning – plan failure – Decentralised planning – Market failure and Govt. failure.

Reference: a) Todaro & Smith (Ch 16)

3. Trade and Development

Trade as an engine of growth – Prebisch-Singer Thesis and T.O.T. debate.

Import substitution versus export promotion – Dependency theory: The Basics Ideas.

Reference: a) Todaro & Smith (Ch 12), Thirlwall (Ch 16), Roy (Ch 7), Sodersten and Reid

4. Foreign Capital and Economic Development

Role of Portfolio Capital & FDI in economic development – the myth and reality.

Role of MNC and international transfer of technology.

Reference: a) Todaro & Smith (Ch 15), Thirlwall (Ch 10)

5. The Global Institutions

IMF, World Bank of WTO – Origin function and role in the context of the developing countries.

Reference: a) Thirlwall (Ch 17), Krugman and Obstfeld (Ch 18), Sodersten and Reid

6. Gender Issues and Development

Meaning and implication of gender discrimination – Missing Women Mystery – discrimination with reference to work, health and education – Women and poverty.

Reference: a) Michael P Todaro & Smith (Ch 9), Mayer and Rauch (Sec IVD)

Gr. B: International Economics: Theory and Policy

Section – I: Trade Theory

1. Basic Model of International Trade (Gains from trade, sources of gains, terms of trade, welfare effects of changes in terms of trade, offer curve – derivation and equilibrium).

References:

1. Caves, Frankel, Jones (Ch 2, 3 & 4)
 2. Krugman, Obstfeld (Ch 5)
2. The Ricardian Trade Model (Comparative Advantage, One factor economy and gains from trade).

References:

1. Krugman, Obstfeld (Ch 2)
 2. Caves, Frankel, Jones (Ch 5)
3. Factor Endowments and Trade (Heckscher-Ohlin model, Rybeznski and Stolper Samuelson Theorem)

References:

1. Caves, Frankel, Jones (Ch 7)
 2. Krugman, Obstfeld (Ch 4)
4. Economics of Scale, Imperfect Competition and International Trade (Basic Concepts only)

References:

1. Krugman, Obstfeld (Ch 6)

Section – II: Trade Policy

1. Instruments of Trade Policy (Tariff in small and large countries, optimum tariff, quota, export subsidy, voluntary export restraints, local content requirement, tariff-quota equivalence).

References:

1. Krugman, Obstfeld (Ch 8)

2. Caves, Frankel, Jones (Ch 10)
2. Political Economy of Trade Policy

References:

1. Krugman, Obstfeld (Ch 9)
2. Paul Krugman and Maurice Obstfeld: International Economics
3. Caves, Frankel, Jones: World Trade and Payments

Paper IX (ECO A P9)

Group A: Mathematical Economics

Module 1: Optimization Technique

Unit – 1 Convex, quasi Convex, Concave and Quasi Concave functions

Unit – 2 Unconstrained Optimization: General Structure, derivation of first order and second order conditions, envelope theorem.

Unit – 3 Constrained Optimization-Equality Constraints: General Structure with two independent variables, n-variable case, derivation of first order and second order conditions, envelope theorem. Applications: Utility maximization and derivation of demand function and some extensions of consumer behaviour including consumption-labour choice and intertemporal choice; cost minimization and derivation of factor demand function

Unit – 4 Constrained Optimization-inequality Constraints:

First order and Second Order Conditions, Kuhn-Tucker Conditions

Unit – 5 Duality Approach: A). Duality in the theory of consumer behaviour: Indirect Utility Function and Roy's identity, expenditure function and its properties, derivation of Slutsky equation. B) Properties of cost function and Shepard's Lemma, duality between production and cost.

References:

1. Eugene Silberberg and Wing Suen: The Structure of Economics: A Mathematical Analysis
2. Knut Sydsaeter and Peter J. Hammod: Mathematics for Economic Analysis
3. Alpha C. Chiang and Kevin Wainwright: Fundamental Methods of Mathematical Economics
4. M.D. Intriligator: Mathematical Optimization and Economic Theory

5. C.P Simon and L. Blume: Mathematics for Economists
6. Hall Varian: Microeconomic Theory

Module – 2: Economic Dynamics

Unit – 1 Techniques of integration: Definite and indefinite integral. Applications: Consumer surplus, Producer surplus, presents value, investment and capital stock, marginal cost and total cost. .

Unit – 2 Applications of Difference equations

A. First order non-homogenous linear difference equation: Cobweb Model, market model with inventory.

B. Second Order non-homogenous linear difference Equation: Samuelson’s model of Multiplier-Accelerator interaction,

Unit – 3 Applications of Differential Equations

A. First order non-homogenous linear differential equation: Excess demand functions and price adjustment

B. Second order non-homogenous linear differential equation: Price adjustment and time path of price (basic demand-supply framework with (a) inventories and (b) entry and exit); Inflation unemployment trade off.

References:

1. Alpha C. Chiang & Kevin Wainwright: Fundamental Methods of Mathematical Economics
2. Hoy, Livernois, McKenna, Rees and Stengos: Mathematics for Economics

Module – 3: Input-Output Model

Leontief Static Open Model and Leontief Static Closed Model- Price and Output Systems, Hawkins-Simon Condition, Derivation of Consumption Possibility Locus

References:

1. Mukherjee and Pandit: Mathematical Methods for Economic Analysis
2. Miller and Blair: Input-Output Analysis: Foundations and Extensions
3. Dorfman, Samuelson and Solow: Linear Programming and Economic Analysis

Group B: Indian Economy II

Module 1: Economic Reforms in India – Background, Rationale, First and Second Generation of Reforms, Post Reform Economic Performance

References:

1. Uma Kapila and Raj Kapila ed. Understanding India’s Economic Reforms

- Vol. 1- Chapter 2; Vol. 2- Chapter 4; Vol. 4- Chapter 4
2. Shankar Acharya and Rakesh Mohan ed. India's Economy; Performances and Challenges Chapters by Shankar Acharya and C. Rangarajan
 3. Ruddar Dutt – Second Generation Economic Reforms in India Chapters 1 and 2
 4. D.M. Nachane ed. India Development report 2011, Chapters 1 and 2

Module 2:

Reforms in the Fiscal Sector- Tax Reforms, Fiscal Sustainability and Debt Management, issues related to GST, Fiscal Federalism

References:

1. Joshi, Malcom and Little ed.- India's Economic Reform 1991-2001-Ch. 3
2. Kapila and Kapila ed.- Vol. 2, Ch. 10,17
3. T.N. Srinivasan-Eight Lectures on India's Economic Reforms-Ch. 4
4. Bimal Jalan ed.- The Indian Economy-Problems and Prospects- Chs. by Chelliah , Sudipta Mundle and Govinda Rao
5. H.L. Bhatia- Public Finance –Chs. on Federal Finance
6. R.B.I. Bulletin –Issues on Finance Commissions
7. EPW- Topics on GST
8. Supriyo De -Fiscal Policy in India: Trends and Trajectory - Ministry of Finance – Working Paper

Module 3: Monetary Policy and Financial Sector Reforms: Reforms and Evolution of Monetary Policy of RBI, Banking Reforms, Financial Inclusion, Reforms in Capital Market and Insurance Sector

References:

1. R.B.I. –Reports on Currency and Finance.2006
2. Partha Roy- Monetary Policy, Oxford
3. Bimal Jalan ed.- The Indian Economy-Problems and Prospects- Chs. by Rangarajan and Nagendra Jadav
4. Kaushik Basu ed.- India's Emerging Economy- Ch. By Y.V. Reddy
5. T.N. Srinivasan-Eight Lectures on India's Economic Reforms-Ch.7
6. Kapila and Kapila ed.- Vol. 4 Ch. 20, Vol. 6 Ch. 8,9,10,11,13
7. India Development Report, 2002- Ch.13

Module 4: External Sector Reforms- evolution of the Export-Import Policies, India's BOP scenerion since reforms, Convertibility of Rupee, FDI and FPI related issues, India and WTO

References:

1. Kapila and Kapila ed.- Vol. 3 Ch. 6, 10 Vol. 5 Ch. 84, 5, 6, 18
2. India Development Report, 2004-05 - Ch.11
3. Soumyen Sikdar- Capital Flow and Exchange Rate Management, Oxford
4. M. Purohit- Issues in the introduction of goods and service tax –EPW, Jan 2010
5. K.S. Rao and B. Dhar- India's FDI Flows-Trends and Concepts- 2011-SSRN Paper

6. N.Sethi- International Capital Flows and Growth in India, 2007, SSRN papers
7. Rajwade-Risks and Rewards of Capital Account Convertibility- EPW, Jan. 2007

Module 5: Service Sector Revolution- Reasons, Performance and Prospects

References:

1. Reshmi Banga- Critical Issues in India's Service Sector Growth- ICRIER Working Paper
2. Eichengreen and Gupta-The Service Sector as India's Road to Economic Growth, NBER Working Paper 2011
3. Nirvankar Singh-Services led Industrialization in India: Assessment and Lessons, Papers SSRN
4. G. Nayar- The Service Sector in India's Development, Cambridge
5. A. Mitra- Insights to Inclusive Growth , Employment and Well Being in India, Springer

Paper X (ECO P10)

Cumulative Assessment(Format: Competitive exams like DSE, JNU, ISI, IGIDR) 50

B.Sc. Economics Generic Elective

Course Structure

Sl No	Name of the Course	Semester	Course Code	Credit	Marks in the Course	Course outcome
1	Micro Economics	1	ECOG-P1	3	75	Develops skills of flexibility, problem-solving ability and analysis of microeconomic economic issues. This paper develops basic skills related to flexibility, problem-solving ability and analysis of microeconomic issues which are highly valued by corporate sectors and policy makers.
2	Macroeconomics	2	ECOG-P2	3	75	Emphasizes on analysis of macroeconomic issues with its subsequent impact on policy making. This paper develops basic skills related to flexibility, problem-solving ability and analysis of macroeconomic issues which are highly valued by corporate sectors and policy makers.
3	Indian Economics	3	ECOG-P3	3	75	The course is designed to give the students a basic idea of the background of the transformation of the Indian economy. This paper develops a basic understanding of the issues of Indian economy. That is highly valued by policy maker.
4	Development Economics	4	ECOG-P4	3	75	Links political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance. This paper introduces the students to the process of development. This will enable the students analyze the changes in international policies and its implications both at the national and international level.

Economics General Syllabus Semester I

Micro Economics (ECOG-P1)

Develops skills of flexibility, problem-solving ability and analysis of microeconomic economic issues. This paper develops basic skills related to flexibility, problem-solving ability and analysis of microeconomic issues which are highly valued by corporate sectors and policy makers.

Module 1	Basic Concepts of Price Theory	Lectures 7
Unit 1	Scarcity and choice; price system as an economic mechanism.	(2)
Unit 2	Elementary concepts of demand, supply and price determination.	(2)
Unit 3	Elasticities of demand.	(3)
Module 2	Theory of consumer's Behaviour	Lectures 10
Unit 1	Ordinal utility – Indifference curve analysis; budget constraint and consumer's equilibrium; decomposition of price effect into substitution effect and income effect.	(10)
Module 3	Theory of Production and Cost	Lectures 16
Unit 1	Concept of production function; derivation of TP, AP and MP curves; stages of production; returns to factor and returns to scale.	(4)
Unit 2	Concept of Isoquants and Isocost; producer's equilibrium.	(4)
Unit 3	Concept of different types of costs; shape of short-run cost curves and long-run cost curves.	(8)
Module 4	Market Morphology	Lectures 13
Unit 1	Elementary concepts of different form of markets (i.e. Perfect Competition, Monopoly, Monopolistic Competition and Oligopoly).	(1)
Unit 2	Perfect competition – Assumptions; short-run and long-run equilibrium.	(6)
Unit 3	Monopoly – Price-output determination; idea of price discrimination.	(4)
Unit 4	Basic concepts of Oligopoly and Monopolistic Competition.	(2)
Module 5	Theory of Distribution	Lectures 14
Unit 1	Rent – Concepts of rent – Ricardian Theory and Modern Theory; Quasi rent.	(4)

- Unit 2 Wage – Distinction between money wage and real wage; factors determining real wage; role of trade union (Elementary idea only). (4)
- Unit 3 Interest – Concepts of gross, net, nominal, real, administered and market-determined interest rate; causes behind the difference in interest rate. (3)
- Unit 4 Profit – Concepts of gross, net, historical, anticipated profit; profit and other factor incomes. (3)

References:

1. Samuelson and Nordhaus : Economics.
2. Lipsey : An Introduction to Positive Economics.
3. Stonier and Hague : A Text Book of Economic Theory.
4. < eüöi " î çî ûöi .œ f xí Å:î " Äy
5. çÁ™e > ::.y< Å:ç ç ö" öi îÿ > ::.y< Å:ç f ç „pyœ:~ xí Å:î " Äy
6. £::î û" yç xy%pyeÅ f xy• :::~ „p xí Å:î " Äy

Semester II (General)

Macroeconomics (ECOG-P2)

Emphasizes on analysis of macroeconomic issues with its subsequent impact on policy making. This paper develops basic skills related to flexibility, problem-solving ability and analysis of macroeconomic issues which are highly valued by corporate sectors and policy makers.

Module 1 Lectures 18

- Unit 1 National Income : Concepts of GNP, NNP, NI, GDP; Different methods of measuring National Income; Problems associated with these measures. (10)
- Unit 2 Money : Function of money; value of money; Different concepts of money (i.e. M₁, M₂, M₃ & M₄); Quantity Theory of Money – fisher's version and Cambridge version (8)

Module 2 Lectures 22

- Unit 1 Banking : Functions of Commercial Banks; Credit Creation by Commercial Banks; Functions of Central Bank; Credit Control Methods of Central Bank; Concepts of Development Banks (12)

Pattern of development since independence – impacts of economic reform – industrial policy since independence – public sector : role, problems and reforms. (10)

Module 4 Labour market in India Lectures 8

Problem of unemployment : nature and causes – employment policy under the plans – Exit Policy. (8)

Module 5 Monetary policy and banking Lectures 8

Monetary policy of the RBI – Indian banking structure and banking sector reforms. (8)

Module 6 Foreign trade Lectures 8

Balance of payments in recent past – changes in the pattern, volume and direction of trade in the post-reform period. (8)

Module 7 Indian Public Finance Lectures 6

Concept of budget – fiscal and budget deficit – sources of revenue and items of expenditure of the central and the state govts. (6)

Module 8 Indian Planning Lectures 6

Achievements and failure of Indian five year plans. (6)

References:

1. Indian Economy : Datt & Sundharam
2. Indian Economy : Mishra & Puri
3. xy• ::::~ „p | pyî û“ p::ëû xí Å ::::“ pî û î û::p™î î û.y f x< ëû „ ::p> yî û ~“ ::
4. | pyî ûöi “ pî û xí Å ::::“ p f ßp°p™ „ ::p> yî û î ûyëû ç < ëûöi ”î çî ûöi .œ
5. ç „ pyœ:~ | pyî û“ p::ëû xí Å ::::“ p f çÁ™e > ::.y< Å:: ç ö” öi î ÿ > ::.y< Å::

Semester IV (ECOG-P4)

Development Economics

Links political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance. This paper introduces the students to the process of development. This will enable the students analyze the changes in international policies and its implications both at the national and international level.

Topic 1	Full Marks 75
----------------	----------------------

- Unit 1 Distinction between economic growth and economic development— Per capita income as an indicator of growth— Concept of HDI and GDI. Vicious cycle, big-push low level equilibrium trap— basic ideas (14)
- Unit 2 Development planning and its necessity— balanced vs. unbalanced growth— centralized and decentralised planning. (10)
- Unit 3 Population and economic development : The two-way relationship— Unemployment and choice of technique. (8)
- Unit 4 Alternative methods of financing economic development— Domestic capital formation in an underdeveloped economy. (10)
- Unit 5 International Trade or Economic Development. (8)
- Unit 6 Foreign investment : Different forms— their role in economic development— foreign aid and economic development. (8)
- Unit 7 The role of I.M.F, World Bank and WTO in development of the less developed countries. (12)

References:

1. Todaro, M.P : Economic Development in the Third World.
2. Sarkhel, Salim & Bhukta : Economic Development : Institutions, Theory and Policy
3. *çî ûöì .œ öç::œ— | ::p::« f xí Å÷ì ~ ::“ p,,p vþzŞ-ëû~ - 2ì ::“ þÛþy~ - “p::’ ç 2ì òì ëûy†*
4. *£î ûÿ, „þî û | þ::y%þyëÅ ç †~ þ™::“ þ >< ::>” yî û f vþzŞ-ëûöì ~ î û xí Å ~ ::::“ þ*

Sl No	Name of the Course	Semester	Course Code	Credit	Marks in the Course	Course outcome
1	DESCRIPTIVE STATISTICS I PROBABILITY THEORY I Practical based on the topics of Group A	1	STSG P1	3	75	This course would enable the students 1. to analyse both univariate and bivariate data in terms of measures of central tendency, dispersion, correlation and regression 2. to compute basic probabilities in the context of both discrete and continuous random variables
2	DESCRIPTIVE STATISTICS II PROBABILITY THEORY II Practical based on the topics of Group A	2	STSG P2	3	75	This course would enable the students to fit probability distributions such as binomial, poisson, Normal, hypergeometric to empirical data. Also the students will have exposure to non-linear regression.
3	SAMPLING DISTRIBUTIONS AND STATISTICAL INFERENCE ECONOMIC STATISTICS AND TIME SERIES ANALYSIS Practical on selected topics using R.	3	STSG P3	3	75	As part of this course, students would learn to draw random samples from univariate probability distributions. Also, they will learn to carry out tests of hypothesis.
4	SAMPLE SURVEY METHODS AND ANALYSIS OF VARIANCE Project based on the topics taught in semester I-IV ; Practical on Group-A	4	STSG P4	3	75	This course would enable the learners to perform analysis of variance and sample survey. It would also equip the students to carry out time series analysis.

STATISTICS ANCILLARY SYLLABUS

SEMESTER I

Paper I

STSG P1

CO : This course would enable the students 1. to analyse both univariate and bivariate data in terms of measures of central tendency, dispersion, correlation and regression 2. to compute basic probabilities in the context of both discrete and continuous random variables

Group A

DESCRIPTIVE STATISTICS I

[25 Marks]

Unit-1:

Introduction to Statistics. Population and sample. Data : Primary and secondary data, Non-frequency and frequency data. Scales of measurement. Tabulation. Graphical representation of non-frequency data : line, bar, pie and component bar diagram. Frequency distribution. Graphical representation of frequency distributions: column diagram, histogram, step diagram and ogive.

[6L]

Unit-2:

Analysis of univariate data: concepts of central tendency, dispersion, skewness and kurtosis and their measures with properties and applications. A.M. – G.M. and Cauchy-Schwarz inequality (Statement only). Box-plot.

[13L]

Analysis of bivariate data: Scatter plot. Correlation and Linear regression. Related results.

[6L]

PROBABILITY THEORY I

[25 Marks]

Unit-1:

Random experiment. Sample space and events. Operations with events. Classical definition of probability and its limitations. Theorem on union of mutually exclusive events. Conditional probability. Theorem of compound probability. Baye's Theorem. Independence of events. Repeated trials. Simple problems. Frequency and Axiomatic definition of probability.

[16L]

Unit-2:

Random variable and probability distribution. Cumulative distribution function. Probability mass function and Probability density function. Moment and quantile measure of central tendency, dispersion, skewness and kurtosis (concepts only). Simple problems.

[10L]

References :

1. A.M. Gun, M.K. Gupta and B. Dasgupta : Fundamentals of Statistics (Vol. 1)
2. J. Pitman : Probability
3. S.M. Ross : Introduction of Probability and Statistics for Engineers and Scientists
4. R.V. Hogg and E.A. Tanis : Probability and Statistical Inference
5. I. Miller and M. Miller : J.E. Freund's Mathematical Statistics.

Group B

Practical based on the topics of Group A

[25 Marks]

SEMESTER II

Paper II

STSG P2

CO : This course would enable the students to fit probability distributions such as binomial, poisson, Normal, hypergeometric to empirical data. Also the students will have exposure to non-linear regression.

Group A

DESCRIPTIVE STATISTICS II

[25 Marks]

Unit-1:

Non-linear Regression : Residual Plot, Quadratic Equation & its goodness of fit, Exponential Equation. [5L]

Analysis of Multivariate Quantitative Data : Multiple Regression, Multiple Correlation and Partial Correlation in three variables their measures and related results. [10L]

Unit-2:

Categorical Data : Contingency Tables. Association & Independence. Odds ratio, Yule and Cramer's measures. Pearson and Goodman-Kruskal γ measures of association. Binary Response and Logistic Regression. [11L]

PROBABILITY THEORY II

[25 Marks]

Unit-1:

Standard univariate distributions : Discrete uniform, Binomial, Hypergeometric and Poisson, Geometric and Negative Binomial distributions. Rectangular, Normal, Lognormal, Gamma, Exponential and Beta distributions. [12L]

Unit-2:

Joint Distribution of two random variables – Marginal & Conditional distributions, Covariance & Correlation Coefficient. Expectation & Variance of the Sum and the Product of two random variables. [7L]

Bivariate Normal distribution and its properties. [3L]

Weak Law of large Numbers and its applications. De Moivre Laplace limit Theorem. Statement of central Limit Theorem for iid random variables and its applications. [3L]

References :

1. A.M. Gun, M.K. Gupta and B. Dasgupta : Fundamentals of Statistics (Vol. 1)
2. J. Pitman : Probability
3. S.M. Ross : Introduction of Probability and Statistics for Engineers and Scientists
4. R.V. Hogg and E.A. Tanis : Probability and Statistical Inference
5. I. Miller and M. Miller : J.E. Freund's Mathematical Statistics.

Group B

Practical based on the topics of Group A

[25 Marks]

SEMESTER III

Paper III

STSG P3

CO : As part of this course , students would learn to draw random samples from univariate probability distributions. Also , they will learn to carry out tests of hypothesis.

Group A

SAMPLING DISTRIBUTIONS AND STATISTICAL INFERENCE

[30 Marks]

Unit-1:

Sampling Distributions : Concepts of Population and sample, Random Sampling and Sampling Distributions of Statistics, Distributions arising from Normal distribution – χ^2 , t and F distributions (derivations excluded).

[3L]

Statistical Inference : Point Estimation of a population parameter – concepts of Bias and Standard Error of an estimator, concepts of Unbiasedness, Minimum Variance, Consistency and Efficiency of an estimator, Method of Moments, Maximum Likelihood Method of estimation, Method of Least Squares, Point estimators of the parameters of Binomial, Poisson, and univariate Normal distributions.

[10L]

Unit-2:

Statistical tests of Hypotheses : Null and Alternative hypotheses, Types of Errors, Critical Region, Level of Significance, Power and p-values, Exact tests of hypotheses under Normal set-up for a single mean, the equality of two means, a single variance and the equality of two variances, Test of Significance of sample correlation coefficient (null case) and tests of hypotheses for the equality of means and equality of variances of a bivariate Normal distribution.

[9L]

Interval Estimation : Confidence Interval and Confidence Coefficient, Exact confidence interval under Normal set-up for a single mean, single variance, the difference of two means and the ratio of two variances.

[4L]

Unit-3:

Large Sample Tests and related Interval Estimates of a single mean and a single proportion and difference of two means & two proportions, Pearsonian χ^2 tests for goodness of fit & for homogeneity and independence in a contingency table.

[5L]

References :

1. Gun A.M, Gupta M & Dasgupta B (1997) : An Outline of Statistics (Vol I), World Press
2. Gun A.M, Gupta M & Dasgupta B (2001) : Fundamentals of Statistics (Vol I), World Press
3. Mood A.M. ,Graybill F. & Boes D.C. (1974) : An Introduction to the theory of Statistics (3rd Ed.), McGraw Hill
4. Rohatgi V.K. (1984) : An Introduction to Probability Theory and Mathematical Statistics, John Wiley
5. Gun A.M. , Gupta M. & Dasgupta B. (2001) : Fundamentals of Statistics (Vol I), World Press

Group B

ECONOMIC STATISTICS AND TIME SERIES ANALYSIS

[20 Marks]

Unit-1:

Economic Statistics : Index Number – construction and use of price index numbers and tests in connection with them, Consumer and Wholesale price index numbers, their uses and major steps in their construction.

[10L]

Unit-2:

Time Series Analysis : Different components of a times series, determination of Trend by method of simple moving-averages and by fitting mathematical curves by least squares principle, determination of seasonal indices by methods of trend ratios and ratios to moving averages.

[10L]

References :

1. Gun A.M, Gupta M & Dasgupta B (2001) : Fundamentals of Statistics (Vol II), World Press
2. Yule G.U. & Kendall M.G. (1950) : Introduction to the Theory of Statistics, Charles Griffin
3. Nagar A.L. & Das R.K. (1976) : Basic Statistics
4. Mukhopadhyay P. (1999) : Applied Statistics
5. Croxton F.E., Cowden D.J. & Klein (1969) : Applied General Statistics, Prentice Hall.

Group C

Practical on selected topics using R.

[25 Marks]

SEMESTER IV

Paper IV

STSG P4

CO : This course would enable the learners to perform analysis of variance and sample survey. It would also equip the students to carry out time series analysis.

Group A

SAMPLE SURVEY METHODS AND ANALYSIS OF VARIANCE

[25 Marks]

Unit:1

Sample Survey Methods : Concepts of population and sample, Need for sampling, Stages in the design and conduct of sample surveys. Concepts of probability sampling, Random Number tables. Simple random sampling with and without replacement.

Stratified random sampling – associated unbiased estimators of population mean, total and proportion, their variables and unbiased variance estimators, Linear Systematic sampling.

[16L]

Unit:2

Analysis of Variance : Comparison of factor effects, one-way classified data and two-way classified data with equal number of observations in each cell.

[8L]

References :

1. Gun A.M, Gupta M & Dasgupta B (2001) : Fundamentals of Statistics (Vol II), World Press
2. Cochran W.G. (1984) : Sampling Techniques (3rd ed.) Wiley Eastern
3. Nagar A.L. & Das R.K. (1976) : Basic Statistics
4. Mukhopadhyay P. (1999) : Applied Statistics
5. Kempthorne O. (1965) : The Design & Analysis of Experiments, Wiley Eastern

Group B

1. Project based on the topics taught in semester I-IV
2. Practical on Group-A

[50 Marks]