The University of Burdwan

Syllabus for 3 Year Degree /4 Year Honours

in

Economics

under

Curriculum and Credit Framework for Undergraduate Programmes (CCFUP) as per NEP, 2020 w.e.f 2023-24

Semester Wise and Course Wise Credit Distribution Structure of Syllabus for BA/B.Sc. in Economics under CCFUP as Per NEP, 2020

Eligibility: Students must have to pass in Mathematics/ Business Mathematics /Applied Mathematics at10+2 Level (Applied Mathematics is included w.e.f. 2025-26) to be admitted in Economics Major or Economics (Honours) or Economics (Honours with Research)

Semester Wise and Course Wise Credit Distribution Structure of Syllabus for BA/B.Sc. in Economics under CCFUP as Per NEP, 2020

SEM	Course Type	Course Code	Course Title	L-T-P	Credit	Marks	Marks Division		
							The	Int	Prc/Viva-voce
I	Major / DS Course	ECON1011	Microeconomics-I	3 -1-0	4	75	60	15	00
	Minor Course	ECON1021	Basic Microeconomics	3-1-0	4	75	60	15	00
	Multi/Interdisciplinary	ECON1031	Elementary Economics	2-1-0	3	50	40	10	00
	AEC **(L_1-1): MIL**	…….1041	Arabic/ Bengali/ Hindi/ Sanskrit/ Santali/ Urdu or Equivalent. Course from SWAYAM /Any other UGC recognized platform -	2 -0- 0	2	50	40	10	00
	SEC	ECON1051	Basic Computer Application (Practical)	0 -0- 3	3	50	00	10	40
	CVA Course	CVA 1061	Environmental Science / Education	3 -0 -1	4	100	60	20	20
	Total Sem I				**20**	**400**			
II	Major / DS Course	ECON 2011	Macroeconomics-I	3 -1- 0	4	75	60	15	00
	Minor Course	ECON 2021	Basic Macroeconomics	3 -1 -0	4	75	60	15	00
	Multi/Interdisciplinary	ECON 2031	Issues in Indian Economy	2 -1- 0	3	50	40	10	00
	AEC **(L_2-1):English**	ENGL 2041	Functional English or Equivalent. Course from SWAYAM/ /any other UGC-recognized platform	2- 0- 0	2	50	40	10	0
	SEC	ECON 2051	Entrepreneurship Development	2 -1- 0	3	50	40	10	00
	CVA Course	CVA 2061	Understanding India/Digital & Technological Solutions/Health &Wellness, Yoga Education, Sports & Fitness	3/3-1/0-0/1	4	100	80/60	20	0/20
	Total Sem II				**20**	**400**			

SEM	Course Type	Course Code	Course Title	L-T-P	Credit	Marks	Marks Division		
							Theo	Inter	Prc/Viva –voce
III	Major / DS Course **Level:200 – 299**	ECON 3011	Microeconomics-II	4 -1 -0	5	75	60	15	00
	Major / DS Course **Level:200 – 299**	ECON 3012	Statistical Methods-I	4 -1 -0	5	75	60	15	00
	Minor Course **Level:200 – 299** Minor Course Vocational: Education and Training **Level:200 – 299**	MSR 3021 Or HRM 3021 Or RSA 3021	Medical Sales Representative Or Human Resource Management Or Retail Sales Associate	3-1-0	4	75	60	15	00
	Multi/ Interdisciplinary	ECON 3031	Money and Banking	2 -1- 0	3	50	40	10	00
	AEC **(L1-2): MIL**	……..3041	Arabic/ Bengali/ Hindi/ Sanskrit/ Santali/ Urdu or Equivalent. Course from SWAYAM /Any other UGC recognized platform -	2 -0- 0	2	50	40	10	00
	SEC	ECON 3051	Managerial Economics	2 -1- 0	3	50	40	10	00
	Total Sem III				**22**	**375**			
IV	Major / DS Course **Level:200 - 299**	ECON 4011	Macroeconomics-II	4 -1- 0	5	75	60	15	00
	Major / DS Course **Level:200 - 299**	ECON 4012	Mathematical Economics-I	4 -1- 0	5	75	60	15	00
	Major / DS Course **Level:200 - 299**	ECON 4013	Statistical Methods-II	4 -1- 0	5	75	60	15	00
	Minor Course **Level:200 – 299**	ECON4021	Issues in Indian Economy	3-1-0	4	75	60	15	00
	Minor Course (Other than Economics)	..……4021	-	-	4	75	-	15	-
	AEC **(L2-2): English**	ENGL4041	Language and Creativity or Equivalent. Course from SWAYAM/ /any other UGC-recognized platform	2- 0- 0	2	50	40	10	00
	Total Sem IV				**25**	**425**			

SEM	Course Type	Course Code	Course Title	L-T-P	Credit	Marks	Marks Division			
							Th	Pr.	IA	
V	Major / DS Course **Level:300 - 399**	ECON 5011	Mathematical Economics-II	4 -1 -0	5	75	60	00	15	
	Major / DS Course **Level:300 - 399**	ECON 5012	International Economics	4 -1 -0	5	75	60	00	15	
	Major / DS Course **Level:300 - 399**	ECON 5013	Selected Features of Indian Economy	4 -1 -0	5	75	60	00	15	
	Minor Course Vocational: Education and Training **Level:200 - 299**	MSR 5021 Or HRM 5021 Or RSA 5021	Medical Sales Representative Or Human Resource Management Or Retail Sales Associate	3-1-0	4	75	60	00	15	
	Internship	INT 5081		0-0-2	2	50	00 - 50 - 00 (Project/Field Diary: 30+ Viva-voce: 20)			
	Total Sem V				**21**	**350**				
VI	Major / DS Course **Level:300 - 399**	ECON 6011	Development Economics-I	3 -1- 0	4	75	60	00	15	
	Major / DS Course **Level:300 - 399**	ECON 6012	Public Economics	3 -1- 0	4	75	60	00	15	
	Major / DS Course **Level:300 - 399**	ECON 6013	Field Survey and Project	0 -0- 4	4	75	00- 60 - 15 Project/Field Diary: 60+ Viva-voce: 15			
	Major / DS Course **Level:300 - 399**	ECON 6014	Basic Econometrics	3 -1- 0	4	75	60	00	15	
	Minor Course **Level:200 - 299** Minor Course Vocational: Education and Training **Level:200 - 299**	MSR 6021 Or HRM 6021 Or RSA 6021	Medical Sales Representative Or Human Resource Management Or Retail Sales Associate	3 -1 -0	4	75	60	00	15	
	Total Sem VI				**20**	**375**				
	Grand total (Sem I – VI)				**128**	**2325**				

- **Exit Option after 3 years available**

Structure of Economics Honours Papers VIIth semesters of 4-yr UGP with Coursework / Research

Seventh Semester (common for both Honours with Coursework and Honours with Research

Sem	Course Type	Course Code	Course Title	L-T-P	Credit	Marks
VII	Major / DS Course **Level:400 - 499**	ECON 7011	**Research Methodology**	5-0-1	6	75
VII	Major / DS Course **Level:400 - 499**	ECON 7012	**Advanced Microeconomic Theory & Applications**	5-1-0	6	75
VII	Major / DS Course **Level:400 - 499**	ECON 7013	**Advanced Macroeconomic Theory & Applications**	5-1-0	6	75
VII	Major / DS Course **Level:400 - 499**	ECON 7014	**Advanced Development Economics: Theory & Applications**	5-1-0	6	75
VII	Minor Course **Level: 300 - 399**	ECON 7021	**(Any one of the following)**		4	75
			Demography OR	3-1-0		
			Applied Statistics OR	3-0-1		
			Course from SWAYAM platform			
	Total VIIth Sem				**28**	**375**

Eighth Semester

Structure of Economics Honours Papers of 4-yr UGP with Coursework

Sem	Course Type	Course Code	Course Title	L-T-P	Credit	Marks
VIII	Major / DS Course **Level:400 - 499**	ECON 8011	**Indian Economic Thought**	5-1-0	6	75
VIII	Major / DS Course **Level:400 - 499**	ECON 8012	**Resource & Environmental Economics**	3-1-0	4	75
VIII	Major / DS Course **Level:400 - 499**	ECON 8013	**Basic Financial Economics**	3-1-0	4	75
VIII	Major / DS Course **Level:400 – 499**	ECON 8014	**Development Studies**	3-1-0	4	75
VIII	Minor Course **Level: 300 - 399**	ECON 8021	**(Any one from the following)**	3-1-0	4	75
			Indian Official Statistics OR			
			Select Features of West Bengal Economy OR			
			Course from SWAYAM platform			
	Total VIIIth sem				**22**	**375**

Structure of Economics Honours Papers (VII-VIII semesters) of 4-yr UGP with Research

Structure of Seventh Semester will be common as mentioned earlier

Students opting for *Honours with Research* shall do Dissertation in lieu of the three courses ECON 8012, ECON 8013, ECON 8014 in Sem-VIII

Eighth Semester
Structure of 4-yr UGP Economics Honours with Research

Sem	Course Type	Course Code	Course Title	L-T-P	Credit	Marks
VIII	Major / DS Course **Level:400 - 499**	ECON 8011	**Indian Economic Thought**	5-1-0	6	75
VIII	Dissertation	ECON 8091	**Dissertation**	0-0-12	12	135 + 90 = 225[@]
VIII	Minor Course **Level: 300 - 399**	ECON 8021	**(Any one from the following)** **Indian Official Statistics OR** **Select Features of West Bengal Economy OR** **Course from SWAYAM platform**	3-1-0	4	75
	Total VIII				**22**	**375**

@ Seminar Presentation & Submission of Research Project/ Dissertation: 135; Viva-voce: 90.

At a Glance

Sem	Credit	Marks
I	**20**	**400**
II	**20**	**400**
III	**22**	**375**
IV	**25**	**425**
V	**21**	**350**
VI	**20**	**375**
VII	**28**	**375**
VIII	**22**	**375**
TOTAL	**178**	**3075**

Detailed Syllabus

Curriculum and Credit Framework for Undergraduate Programmes (CCFUP) as per NEP, 2020 w.e.f 2023-24

1st Semester

Major / DS Course (Core)

Microeconomics-1 (ECON 1011)

Full Marks: 75 (60 Theory + 15 Internal) Credit: 4 LTP: 3-1-0

Lectures: 60

Course Objectives: This course is an attempt to introduce the basic concept of microeconomics. It helps to develop the basic pillars of microeconomics-their definition, how they work and in which way they are relevant to our daily experiences.

Course Outcomes: Students should develop an understanding of the concepts of microeconomics. They understand how choices are made and how they shape the working of the system. They also understand the input and technical choices of the producers and the distribution thereof.

1. General Concept (08 Lectures)

Scope of Economics- Distinction between Microeconomics and Macroeconomics – concept of different Microeconomic units – commodity, consumer, firm, industry and market. Determinants of demand and supply, demand curve, supply curve – concepts of equilibrium - static, dynamic, comparative static and stability of equilibrium, concept of elasticity.

2. Consumer Behaviour (20 Lectures)

- The Marshallian Approach: measurement of utility – derivation of demand curve – consumer's surplus.
- Indifference curve approach: indifference curve and its properties, the consumer- pathological cases – consumer's equilibrium, price consumption curve and income consumption curve, - price effect, income effect and substitution effect, derivation of demand curve – Giffen Paradox – market demand.
- Elasticity of demand – price, income and cross elasticity – relation between price elasticity of demand, price and marginal revenue – relation between price elasticity and total expenditure.
- The Revealed Preference approach –negativity of substitution effect from Revealed Preference approach.

3. Producer Behaviour (22 Lectures)

- Production function: the neo-classical production function – relation between total, average and marginal productivities – law of variable proportions – the fixed coefficient production functions.
- Isoquant and properties of iso-quant, Iso-cost line. Economic region of production, marginal rate of technical substitution, equilibrium of the producer - constrained output maximization and constrained cost minimization, output and substitution effects – elasticity of substitution – expansion path, returns to scale -homogeneous and homothetic production function, the Cobb Douglas and CES production function.
- Cost function: different concepts of costs, short run cost analysis and long run cost analysis – relation between the expansion path and cost function – total, average and marginal cost curves – long run cost curves as envelope of short run cost curves.

4. Theory of Perfect Competition (10 Lectures)

Perfect competition —Short run and long run equilibrium of a competitive firm – Short run and long run supply curves—Elasticity of Supply. Long run equilibrium of the competitive industry- price determination in a competitive industry, producer's surplus – existence, uniqueness and static stability of equilibrium –long run supply curves of the industry- effects of external economies and diseconomies – effect of change in cost – effect of imposition of tax – effect of price control.

References:

1. Robert S. Pindyck, Daniel L. Rubinfeld, PremL.Mehta: Microeconomics, 7thEdn. Pearson.
2. Koutsoyiannis: Microeconomic Theory
3. Ferguson and Gould: Microeconomic Theory
4. H. Varian: Intermediate microeconomics
5. Henderson and Quandt: Microeconomic Theory
6. Ryan and Pearce: Price Theory, Macmillan.
7. A. Bilas : Microeconomics.

Minor Course

Basic Microeconomics (ECON 1021)

Full Marks: 75 (60 Theory + 15 Internal) Credit: 4 LTP: 3-1-0

Number of Lectures: 60

Course Objectives: This course discusses the basic principles in Microeconomics and their applications. It includes consumer's problem, demand estimation, production function, cost functions and market analysis. It illustrates how the concepts of microeconomics can be applied to analyze real-life economic situations.

Course Outcomes: Students learn some basic principles of microeconomics of consumer and producers, and interactions supply and demand, characteristics of perfect competition, efficiency and welfare outcomes. They also learn some classical and partial theories of microeconomics and identify the difference..

1. **Consumer's Behaviour: (18 Lectures)**

- Utility: Total and Marginal Utility- Law of Diminishing Marginal Utility – Law of Demand.
- Indifference Curve: Definition, Characteristics. Consumer's equilibrium, Price effect, Income effect and Substitution effect.
- Elasticity of Demand – price and income elasticity, cross price elasticity of demand, Measurement of price elasticity.

2. **Producer's Behaviour: (20 Lectures)**

- Production Function: AP, MP and their derivation from TP Curve, Returns to Factor and Returns to Scale.
- Cost of Production: Real cost and Opportunity cost – Fixed and Variable cost. Shape of cost curves -- short run and long run. Relation between Average cost and Marginal cost.
- Total Revenue, Marginal Revenue and Average Revenue – Relation between TR, AR and MR curves. Relation between AR, MR and Price elasticity of Demand.

3. **Market Morphology: (10 Lectures)**

- Perfect competition, Monopoly, Monopolistic Competition, Oligopoly and Duopoly (concepts only).
- Short run and Long run equilibrium of firm and industry under Perfect competition, Price discrimination.
- Price and Output determination under Monopoly.

4. **Theory of Distribution : (09 Lectures)**

- Marginal Productivity Theory of Distribution, Factor price determination.
- Rent: Ricardian Theory and Modern Theory.
- Wage: Distinction between Money and Real wage – Factors determining Real wage
- Role of Trade Unions in wage determination under competitive set up.
- Interest: Real and money Interest – Loanable fund and Liquidity Preference Theory of Interest.
- Profit: Alternative Theories of Profit.

5. **General concepts of Welfare Economics: (03 Lectures)**

   Graphical presentation of Pareto optimality.

References:

1. Samuelson, P.A and William. D. Nordhaus,: Economics , McGraw Hill Book Co. Singapore.

2. Lipsey, R.G: An Introduction to positive Economics, Weidenfeld and Nicholson, London.

3. Ferguson and Gould: Microeconomic Theory, published by All India Traveller Book Seller.

4 .HaridasAcharya -AdhunikArthaniti- PrativaPublication,Kolkata

5 .Alok Ghosh and Anil Basak- Arthaniti-Prativa Publication, Kolkata

Multi / Interdisciplinary

Elementary Economics (ECON 1031)

Full Marks: 50 (40 Theory + 10 Internal) Credit: 3 LTP: 2-1-0

Number of Lectures: 45

Course Objectives: The objective of this paper is to introduce the basic concepts of economics to the students so to enable them for further learning of economics..

Course Outcomes: After studying this paper, the students will be able to understand the basic concepts of economics and equip oneself to understand the subject in greater details, later semesters. Like any subject, economics also contains a lot of technical terms. In the beginning students may feel that economists have unnecessarily coined different terms or jargon for many common sense ideas. However, as Lipsey argues that it is required as an essential "brevity of expression" as the subject grows and expands.

Some Basic Concepts: (05 Lectures)

- Scope of Economics - Distinction between Microeconomics and Macroeconomics – concept of different Microeconomic units – commodity, consumer, firm, industry and market. Determinants of demand and supply, demand curve, supply curve – concepts of equilibrium

1. Consumer's Behaviour: (10 Lectures)

- Utility: Total and Marginal Utility- Law of Diminishing Marginal Utility – Law of Demand.
- Indifference Curve: Definition, Characteristics. Consumer's equilibrium. Price effect, Income effect and Substitution effect (concepts only)
- Elasticity of Demand – price and income elasticity, cross price elasticity of demand (concepts only). Importance (or use) of elasticity of demand.

2. Producer's Behaviour: (10 Lectures)

- Production Function: AP, MP and their derivation from TP Curve, Returns to Factor and Returns to Scale.
- Cost of Production:– Fixed and Variable cost. Cost curves - short run and long run (concepts only).
- Total Revenue, Marginal Revenue and Average Revenue (concepts only).

3. Market Morphology: (10 Lectures)

- Perfect Competition: Short run and Long run equilibrium of firm and industry under Perfect competition.
- Monopoly, Monopolistic Competition, Oligopoly and Duopoly (concepts only)

4. The National Income and products accounts (10 Lectures)

- Definition, concepts and measurement of GNP, NNP, GDP, NDP, NI, DI, GNP deflator, GDP deflator and price indices.
- Different methods of measuring national income – product method, income method and expenditure method.
- Problems of using national income as a measure of Economic welfare.
- Problems of measuring national income in any country
- Circular flow of income – equilibrium condition – concepts of injection, withdrawal etc.

References:

1. Samuelson, P.A and William. D. Nordhaus,: Economics , McGraw Hill Book Co. Singapore.
2. Lipsey, R.G: An Introduction to positive Economics, Weidenfeld and Nicholson, London.
3. Ferguson and Gould: Microeconomic Theory, published by All India Traveller Book Seller.
4. Sampat Mukherjee and Debesh Mukherjee – SamakalinArthabidya – New Central Book Agency, Kolkata.
5. Haridas Acharya –AdhunikArthaniti – PrativaPublication, Kolkata
6. Alok Ghosh and Anil Basak – Arthaniti - Prativa Publication, Kolkata
7. K.KDewett- Modern economic Theory, S. Chand Publication.

SEC

Basic Computer Applications (ECON1051)

(Practical)

Full Marks: 50 (40 Final Practical + 10 Internal)   Credit: 3   LTP: 0-0-3

Number of Total Practical Classess: 45 Each of 2 Hrs

It is a Lab Based Practical Paper. The student shall learn the operations through Hands-on Practical Training followed by practical tests and Viva.

Course Objectives: The importance of Computer Applications in Economics have increased in the recent years. This course is intended to introduce the student of economics to the application of basic computer programs in dealing with the problems of economics.

Course Outcomes: After going through this paper, the students would acquire the capacity to enumerate, analyse and interpret the economic and social data collected by them. The students would be able to go through the mess of data to have a glimpse of the economic insights behind them..

1. File Creation and Management System **(06 Practical)**

The File Tree; File Naming Conventions;

2. Word Processing **(14 Practical)**

Basic features of Text formatting; Creating documents; Heading Styles; Creating Reference Lists

3. Spread Sheet Solutions **(15Practical)**

Basic features of Spreadsheets; Data entry, Mathematical Functions, Financial functions, Statistical Functions, Creating simple Line, Bar and Pie charts;

4. Presentations **(10 Practical)**

Creating Presentations; Pasting Charts etc in Presentations; Exporting Presentations as PDF

References:

1. Data Analysis Using Microsoft Excel – Ash Narayan Sah Excel Books India Excel 2010 For Dummies Colin Banfield, John Walkenbach
2. BhoumikSankar, Principles of Econometrics: A Modern Approach Using Eviews, OUP

2^{nd} Semester

Major /DS Course (Core)

Macroeconomics-I (ECON 2011)

Full Marks: 75 (60 theory + 15 Internal) Credit: 4 L-T-P: 3-1-0

No of Lectures: 60

Course Objectives: This course is designed to impart knowledge on the basic concepts of macroeconomics, its working, fundamentals of consumption, investment and the idea of equilibrium in simple models.

Course Outcomes: The learner will develop an understanding on the different concepts of national income and role of consumption and investment in the determination of equilibrium national income. In addition to the above, the learner will acquire knowledge about the roles and functions of money; interaction of the money market with the commodity market in determination of equilibrium in the economy..

1. **The National Income and products accounts (Lectures - 12)**

- Definition, concepts and measurement of GNP, NNP, GDP, NDP, NI, DI, GNP deflator, GDP deflator and price indices.
- Interrelation between measures of national income in the absence and presence of Governmental sector and international transactions.
- Different methods of measuring national income – product method, income method and expenditure method.
- The Accounting identity of saving and investment.
- Problems of using national income as a measure of Economic welfare.
- Problems of measuring national income in any country
- Circular flow of income – equilibrium condition – concepts of injection, withdrawal etc.

2. **Consumption function (Lectures - 6)**

- Keynesian consumption function and its properties – factors affecting consumption expenditure – saving function and its properties.
- Empirical findings regarding consumption function – Alternative theories – Permanent income hypothesis, Absolute income hypothesis, Life cycle hypothesis, Relative income hypothesis.

3. **Investment function (Lectures-10)**

- Keynesian theory of investment – The marginal efficiency of investment–shortcomings of Keynesian analysis.
- Marginal efficiency of capital (MEC) and Net present value (NPV) criterion of investment – comparison between them.
- Determination of optimum stock of capital by using MEC schedule–Relation between MEC and MEI – factors affecting them.
- The Fixed Acceleration Principle of investment – its implications and limitations.

- The Flexible Acceleration Principle of investment – its implications and limitations.
- Induced investment function and different multipliers.

4. The Simple Keynesian model of income determination (Lectures - 08)

- Determination of equilibrium level of income – nature of equilibrium – stability of equilibrium
- Comparative Static analysis – the multiplier analysis with and without Governmental sector – Investment multiplier, Government expenditure multiplier, Balanced budget multiplier, limitations of the multiplier analysis
- Paradox of thrift.

5. Money market (Lectures - 12)

- Motives of holding money – Transactions, Precautionary and Speculative motives.
- Keynesian liquidity preference theory – indeterminacy of rate of interest in the liquidity preference theory – the liquidity trap.
- Loanable fund theory of rate of interest determination
- The inventory theoretic approach to transaction demand for money – Baumol's and Tobin's Version.

  Supply of money – Different sources of money supply – M1, M2, M3, and M4 – functions of money – credit creation by commercial banks – money multiplier – high powered money – interest sensitivity of money supply.

6. Interaction between commodity market and money market (Lectures - 12)

- Construction of the IS and LM curves – Determination of equilibrium value of rate of interest and national income – stability of equilibrium.
- Comparative static analysis – effect of shift of saving, investment, Government expenditure, taxation, money demand, money supply, price level on the IS-LM framework.
- Relative effectiveness of monetary and fiscal policies in terms of IS-LM model.
- Crowding out effect
- Value of multiplier and comparison with simple Keynesian multiplier.

References –

1. Mankiew – Macroeconomics
2. Sikdar,S – Principles of Macroeconomics, Oxford University Press.
3. D'Souza, Erol – Macroeconomics, 2nd Edition, Pearson.
4. Ackley – Macroeconomic Theory and Policy, 2nd Edition.
5. Branson – Macroeconomic Theory and Policy
6. Dornbusch and Fisher: Macroeconomics
7. Froyen – Macroeconomics – Theories and Policies, 10th Edition, Pearson.
8. Levacic and Rebbman – Macroeconomics
9. Readings in Macroeconomics – Mueller (ed) (Selected articles).

Minor Course

Basic Macroeconomics (ECON 2021)

Full Marks: 75 (60 Theory +15 Internal) Credit: 4 L-T-P:3-1-0

Number of Lectures: 60

Course Objectives: This course is designed to impart knowledge on the basic concepts of macroeconomics, its working, fundamentals of consumption, investment and the idea of equilibrium in simple models. This course will also impart knowledge on basic concepts of inflation and banking.

Course Outcomes: The learner will develop an understanding on the different concepts of national income and role of consumption and investment in the determination of equilibrium national income. In addition to the above, the learner will acquire knowledge about the roles and functions of money; interaction of the money market with the commodity market in determination of equilibrium in the economy. The leaner will develop key understanding on the concepts of inflation- its causes and types and preliminary idea on banking..

1. The National Income and products accounts (Lectures - 12)

- Definition, concepts and measurement of GNP, NNP, GDP, NDP, NI, DI, GNP deflator, GDP deflator and price indices.
- Different methods of measuring national income – product method, income method and expenditure method.
- Problems of using national income as a measure of Economic welfare.
- Problems of measuring national income in any country
- Circular flow of income – equilibrium condition – concepts of injection, withdrawal etc.

2. Money market (Lectures - 18)

- Motives of holding money – Transactions, Precautionary and Speculative motives.
- Keynesian liquidity preference theory – indeterminacy of rate of interest in the liquidity preference theory – the liquidity trap.
- Supply of money – Different sources of money supply – M1, M2, M3, and M4 – functions of money

3. Simple Keynesian Model (Lectures - 05)

Simple Keynesian theory of income and employment: Concept of effective demand – Keynesian consumption function - relation between average propensity to consume and marginal propensity to consume – Simple Keynesian static multiplier theory – investment

4. IS-LM Model (Lectures - 05)

IS-LM model – construction of IS and LM curves – shapes – determination of equilibrium values of rate of interest and level of income.

5. The classical system **(Lectures - 08)**

- The Classical view of macroeconomics in respect of the determination of employment, output and prices – Say’s law of market..
- The Classical quantity theory of money and its criticisms – Fischer’s transaction version - Cambridge cash balance version.

6. Theory of inflation **(Lectures -07)**

- Concept of inflation - Demand pulls inflation and cost push inflation – comparison between them.
- Inflationary gap – Limitations of it.
- Consequences of inflation – measures to control inflation.

7. Banking **(Lectures - 05)**

- Functions of Commercial Banks
- Functions of Central Bank
- Credit creation by Commercial Banks – credit creation multiplier.
- Credit control by Central Bank – Different methods of credit control.

References:-

1. Gupta S.B: Monetary Economics, S.Chand and Co. New Delhi.
2. Sampat Mukherjee and Debesh Mukherjee – SamakalinArthabidya – New Central Book Agency, Kolkata.
3. Haridas Acharya – AdhunikArthaniti – Prativa Publication, Kolkata
4. Alok Ghosh and Anil Basak – Arthaniti - Prativa Publication, Kolkata

Multi / Interdisciplinary

Issues in Indian Economy (ECON 2031)

Full Marks: 50 (40 Theory + 10 Internal) Credit: 3 L-T-P: 2-1-0

Number of Lectures: 45

Course Objectives: This course aims to impart ability to understand & analyse the structure, performances, challenges, and opportunities facing Indian economy in recent times. This is essentially a snapshot of India's economic policies in the post-2000 period, its interplay with global economic and geopolitical events, and what needs to be done to build a sustainable and prosperous India in the 21st century. The course will be based on Readings of selected articles for a comprehensive and contextual understanding.

Course Outcomes: Students will be able to understand the Indian Economic issues in depth and evaluate policies undertaken at the national level.

1. **Structure of Indian Economy:** **(06 lectures)**
- Sectoral distribution of National Income and its change since inception of Planning.
- Occupational pattern in India- during plan period
- Inequalities in Income distribution.
- Unemployment and poverty eradication programmes and their effectiveness.

2. **Human resources and economic development:** **(05 lectures)**
- Population policy and population projections for India.
- Changes in sex composition since inception of planning.

3. **Agriculture:** **(06 Lectures)**
- Causes for low productivity- relation between farm size and productivity.
- Public distribution system.
- New agricultural policy; Green revolution and its prospects.
- Land reforms and its appraisal.

4. **Industry:** **(05 lectures)**
- Role of small-scale industries and policy perspective to help them
- Industrial Sickness
- Role of trade union and social security measures in India.

5. **Banking:** **(08 lectures)**
- Role of Indian Commercial Banks and Reserve Bank of India.
- Monetary Policy of the Reserve Bank of India.
- Banking Sector reforms in India.

6. **Indian Public Finance:** **(08 lectures)**
- Finance Commission

- Sources of Revenue and Expenditure of Union and State Government.
- Centre-State Conflict on Finances.

7. Foreign trade **(07 lectures)**

- Volume and direction of India's foreign trade in the post-Liberalization period.
- GATT and its effects in Indian Economy

Recommended Books:

1. Dutta R. and K.P.M. Sundaram: Indian Economy, S. Chand and Co. New Delhi
2. Misra S.K.V. K. Puri: Indian Economy, Himalayas Publishing Co. Mumbai.
3. Agarwal A.N: Indian Economy, Vikash Publishing Co. Delhi
4. Gupta, S.B.: Monetary Planning in India, Oxford University Press, Delhi.
5. P. N. Dhar: Indian Economy
6. Debesh Mukherjee: SamakalinBharatiyaArthoniti, New Central Book Agency

SEC

Entrepreneurship Development (ECON 2051)

Full Marks: 50 (40 Theory + 10 for Internal) **Credit: 3** **L-T-P : 2-1-0**

Lectures: 45

Course Objectives: This course aims to enable students understand the processes of an entrepreneurship venture and its role in development process of a nation.

Course Outcomes: Ability to formulate entrepreneurship plans and start their own enterprise.

1. **Evolution of the concept of Entrepreneur** **(05 Lectures)**
   Basic features - Entrepreneurship and economic development - Growth of entrepreneurship in India—Role of Entrepreneurship in Economic Development, Problem of Rural entrepreneurship in India
2. **Entrepreneurship motivation** **(08 lectures)**
   Motivation theories, Maslow's need Hierarchy Theory, McCelland Acquired Needs Theory, Kakinada Experiment
3. **Project identification and selection** **(8 Lectures)**
   Meaning of project- project report--- planning commission's guidelines for formulating a project report
4. **Financial resources for new ventures** **(08 Lectures)**
   Sources of finance---capital structure - institutional support to enterprises—national small industries board – state small industries development corporation--- district industries center--- industrial estates.
5. **Growth strategies in small business** **(09 Lectures)**
   Stages of growth, Types of growth strategies, Expansion, Diversification, Joint Venture, Merger, Subcontracting
6. **Sickness in Small Business** **(07 lectures)**
   Concept of industrial sickness, Symptoms of sickness, Causes and consequences of industrial sickness

References:

1. S.S Khanka--- Entrepreneurial Development, S.Chand& Company Ltd
2. Bill Bolton and John Thompson ---- Entrepreneurs: Talent, Temperament and Technique, Butterworth and Heinemann.
3. David .H Holt---Entrepreneurship New Venture Creation
4. Poornima M. Charantimath: Entrepreneurship Development and Small Business
5. Enterprises (2nd Edition) Pearson.

3rd Semester

Major / DS Course

Microeconomics-II(ECON 3011)

Full Marks: 75 (60 Theory + 15 Internal)   Credit: 5   LTP: 4-1-0

Lectures: 70

Course Objectives: This course is designed to impart knowledge on the working of the imperfectly competitive market systems, the process of determining factor prices and to develop a basic understanding of Welfare Economics.

Course Outcomes: The learner will develop an understanding on the mechanisms of price determination under imperfectly competitive markets. The learner will acquire knowledge about the process of determining the factor prices under various market situations. The learner will have an understanding on the concept of Welfare Economics and various criteria of achieving optimality in social welfare.

1. ImperfectCompetition (18Lectures)

- Theory of monopoly: Characteristics- AR and MR curves under monopoly – RelationamongAR, MRandElasticityofdemand–Equilibriumundermonopoly–majorfeatures of monopoly- index of monopoly power – price discrimination – Degree of pricediscrimination– equilibriumunderpricediscrimination.EquilibriumunderMultiplePlantmonopoly – Monopsony – Equilibriumunder bilateralmonopoly.
- Monopolisticcompetition: Short runandlongrunequilibrium–excesscapacity.

2. TheoryofOligopoly (18Lectures)

- Characteristics of oligopoly-non-collusiveoligopoly modelsofCournot andStackelberg– collusive oligopoly – price leadership – market sharing model – price rigidity underoligopoly.

3. TheoryofFactorPricing (20Lectures)

- Demand for factors of production – Determinants of price elasticity of demandfor afactor– marginal productivity theoryanditslimitations
- Theory of wage - Choice between work and leisure – derivation of individual laboursupplycurve–totallaboursupplycurve–demandforlabour–determinationofequilibriumin acompetitivelabourmarket- collectivebargaining and wagerate.
- Theoryofrent- Transferearningandeconomicrent– quasi-rent– Rentandprice
- Theory of profit - Gross and net profit- elements of profit- risk and uncertainty theory- Innovationtheory ofprofit.

4. GeneralEquilibriumandEconomicWelfare (14Lectures)

- Partialandgeneralequilibrium–aformalstatementofgeneralequilibriumapproach-the concept of Pareto optimum – Pareto optimality in consumption – Pareto optimality inproduction–General Pareto optimality condition.

References:

1. RobertS.Pindyck,DanielL.Rubinfeld,PremL.Mehta:Microeconomics,7th Edn.Pearson

2. H.Varian :Intermediatemicroeconomics
3. FergusonandGould :Microeconomic Theory
4. Hendersonand Quandt :Microeconomic Theory
5. Koutsoyiannis :Microeconomic Theory

Major / DS Course

Statistical Methods-I(ECON 3012)

Full Marks: 75 (60 Theory + 15 Internal) Credit: 5 LTP: 4-1-0

Lectures: 70

Course Objectives: This course is designed to develop an understanding of the processes involved in data collection, tabulation, and presentation. It also familiarizes the students with the statistical measures of central tendency, dispersion, correlation & regression, index number and vital statistics so as to develop analytical skills for handling real-life data set.

Course Outcomes: The learner will develop an understanding of measuring basic statistical concepts and analytical tools like central tendency, dispersion, and vital statistics so as to assess the real life situations. The learner will learn to analyze the association/relationships among variables using the statistical tools like correlation and regression. They will also acquire a foundation of knowledge to deal with real life situation through the understanding of index number and time series analysis..

1. **Tabular and Diagrammatic Presentation of Data:** (05 Lectures)
   - Introduction and Overview - The distinction between populations and samples and between population parameters and sample statistics
   - Statistical Data – classification and presentation – methods of collection of data–difference between variable and attributes–frequency distribution and its diagrammatic presentation – choice of class interval – diagrammatic representation of frequency distribution – frequency curve – cumulative frequency distribution (more than and less than), Ogive - (simple numerical exercise)
2. **Measures of Central Tendency** (10 Lectures)
   - Arithmetic mean, median and mode (for both grouped and ungrouped data) – comparison and relation between mean, median and mode – geometric mean and harmonic mean (for both grouped and ungrouped data) – composite mean (average from combined data) –properties for all these measures, partition values- Quartiles, Deciles and Percentiles. (simple numerical exercise)
3. **Measures of Dispersion** (10 Lectures)
   - Meaning and necessity of 'measures of dispersion'
   - Absolute measures – Range, mean deviation and Standard deviation and Quartile Deviation, Properties of SD, Composite group, Relative measures–curve of concentration - (simple numerical exercise)
   - Measurement of economic inequality: nature of distribution of income and wealth graduating from income distribution–Lorenz Curve representation of income distribution–Gini Coefficient and Lorenz Curve-(simple numerical exercise)
4. **Skewness and Kurtosis** (09 Lectures)
   - Moments and measures of skewness and Kurtosis: moments, skewness and kurtosis–definition– relationship between central and non-central moment–Sheppard's correction-(simple numerical exercise)

5. **Correlation and Regression Analysis** (20 Lectures)

- Concept of correlation and regression, Bivariate data, Scatter diagram.
- Simple correlation coefficient and its properties, its calculation from grouped and ungrouped data, interpretation and use of correlation coefficient, limitations of correlation coefficient. Simple regression analysis – properties of regression line – relationship between correlation coefficient and regression coefficient. Spearman's rank correlation coefficient (without tie) – Kendall's rank correlation coefficient- (simple numerical exercise)
- Multiple and Partial Correlation - Three variable case – deduction of formula – Simple numerical Problems.

7. **Index Numbers** (05 Lectures)

- Purpose and uses of index number, problems of construction, different formulae for price and quantity index numbers, tests for index numbers, chain index, cost of living index and simple numerical exercise – (Simple numerical Problems.)

8. **Time Series** (07 Lectures)

- Nature and decomposition of time series – analysis of trend—polynomial trend – exponential trend – non-linear growth curves – (Simple numerical Problems.)

9. **Vital statistics** (04 Lectures)

- Measures of crude birth rate, death rate, age sex specific birth and death rates; infant mortality rate; construction and use of life table((Simple numerical Problems.).

References:

1. Goon, Gupta and Dasgupta – Fundamental of Statistics, Vol. I & II
2. Goon, Gupta and Dasgupta – Basic Statistics
3. Yule and Kendall – An Introduction to the Theory of Statistics
4. Gupta and Kapoor – Fundamental of Mathematical Statistics.
5. N. G. Das – Statistical Method (Part I & II)
6. J. F. Kenney and E. S. Keeping. Mathematical Statistics: Part 1 & Part II, Chapman and Hall, New York, 1954.
7. Mood, A.M., F. A. Graybill and D.C. Boes, Introduction to the theory of statistics, McGraw Hill, 1974.
8. William G. Cochran, Sampling Techniques, John Wiley, 2007

Multi/ Interdisciplinary

Money and Banking (ECON 3031)

Full Marks: 50 (40 Theory +10 Internal) Credit: 3 LTP: 2-1-0

Number of Lectures: 45

<u>Course Objectives</u>: This course has been designed to understand the evolution of money, its uses and functions. The supply of money and its different components from Indian perspective and different types of demand for money also form the fundamental concepts building exercise. It also covers the key understanding of banking sector and its reforms in the Indian context.

<u>Course Outcomes</u>: Students will develop an understanding of different forms of money, its uses and functions and acquire an understanding on the banking sector and its reform in the Indian context.

1. Money (15 Lectures)

Evolution of Money, Concept, functions and types of Money

Supply of Money – Factors Determining Money Supply –Measures of Money Supply (M1, M2, M3 etc) –High Powered Money and Money Multiplier

Demand for Money- Transaction demand for Money – Precautionary Demand for Money – Speculative Demand for Money

2. Banking (20 Lectures)

Commercial Bank: Definition and functions of Commercial Banks. Credit creation by Commercial banks. Major Developments in Commercial banking in India since independence. Performance of Commercial banks in India.

Central Banking- Functions; Methods of Credit Control, Role and Functions of the Reserve Bank of India; Objectives &Limitations of Monetary Policy with Reference to India

3. Banking Sector Reforms in India (10 Lectures)

Banking Sector Reforms in India since 1991

- Narasimhan Committee- 1991&1998
- R H Khan Committee-1997
- RaghuramRajan Committee-2008

References:

1. S.B Gupta: Monetary Economics: Institutions, Theory and Policy, 4th edition, S. Chand Publishing.

2. M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7th edition.

3. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition.

4. Cauvery, Kruparani, Sudha and Manimekalai: Monetary Economics, 2nd Edition S. Chand Publishing.

5. Sujatra Bhattacharyya: Indian Financial System, 2nd Edition, Oxford University Press

6.JadhavNarendra (2006): Monetary Policy, Financial Stability & Central Banking, Macmillan

SEC

Managerial Economics (ECON 3051)

Full Marks: 50 (40 Theory +10 Internal) Credit: 3 LTP: 2-1-0
Number of Lectures: 45

Course Objectives: This course has been designed to understand the fundamental concepts of managerial decision-making using economic principles. Its aim is to enhance analytical and critical thinking on demand analysis, the process of price determination, investment decision and inventory management.

Course Outcomes: The learner will be able to apply economic principles and tools to managerial decision making. The learner will develop an understanding on the profitability and risks under various business conditions.

1. Basics of Managerial Economics (Lectures:8)

- Meaning, Scope and Nature of Managerial Economics, Basic Problems of Economy: Scarcity and Choices
- Organisational Goals – Profit maximization hypothesis, Critique of profit maximization hypothesis- alternative goals of the firm – Managerial theories- Baumol, Williamson, Behavioural Theory of the Firm.

2. Demand Analysis:(Lectures:12)

- Meaning of Demand Analysis, Demand estimation for major consumer durable and non-durable goods
- Demand forecasting, Methods of demand forecasting: Survey Method, Statistical Methods – Trend Projection method, Regression Method, Leading Indicator Method. (Simple numerical problems)

3. Price determination under different structures: (Lectures:10)

- Methods of price determination in practice – Mark up pricing, Limit pricing, Average cost pricing, Peak load pricing, Multiple product pricing, Transfer pricing.(Simple numerical problems).

4. Financial Investment decisions: (Lectures:10)

- Distinction between real and financial assets, Needs of financial investment, Capital Budgeting- needs, different steps in capital budgeting, Capital budgeting appraisal methods(only concept), Alternative financial instruments and investments.

5. Inventory Management:(Lectures: 5)

- Inventory Costs, Concepts of Average Inventory, Various inventory models – economic order quantity, optimum number of orders per year, optimum number of days supply per order

References:

1. Koutsoyiannis .A: Modern Microeconomics, MacMillan.
2. Hague: Managerial Economics, ELBS.
3. Maheswari and Varsheny : Managerial Economics, S.Chand& Co.
4. Thomas. C.R., Maurice, S.C., Sarkar, S : Managerial Economics , Tata McGraw Hills.
5. Peterson, C.H., Lews, W.C, Jain, S.K : Managerial Economics ,Peason Edition.
6. Mithani, D.M : Managerial Economics- Theory and Applications, Himalya Publishing House.
7. Damodaran, S.: Managerial Economics, Oxford University Press., New Delhi.
8. Mehta, P.L.: Managerial Economics – Analysis, Problems and Cases, S. Chand and Sons.
9. Chiang: Fundamental Methods of Mathematical Economics, McGraw Hill.
10. Madnani : Quantitative Microeconomics, Oxford and I.B.H Publishing Company.
11. I M Pandey: Financial Management, Vikas Publishing House PVT LTD.
12. Keat P. G. and Young P.K.Y – Managerial Economics, Pearson Education, N Delhi]

4^{th} Semester

Major /DS Course

Macroeconomics-II (ECON 4011)

Full Marks: 75 (60 theory + 15 Internal) Credit: 5 L-T-P: 4-1-0

No of Lectures: 70

Course Objectives: This course is designed to impart knowledge on higher versions of macro models, relation between money and prices, theories of inflation and basic growth models. The course is expected to enhance the analytical understanding of role of expectations and open economy extensions of the basic macro models.

Course Outcomes: Learners will be able to develop an understanding on various macro models, its working and open economy extensions. They will have an understanding on the concepts of money and prices, inflation and growth theories.

1. The classical system (Lectures - 14)

• The Classical view of macroeconomics in respect of the determination of employment, output and prices.

• The Classical quantity theory of money and its criticisms – Fischer's transaction version - Cambridge cash balance version – Friedman's restatement of quantity theory of money.

• Complete Classical model – full employment – Classical dichotomy – derivation of aggregate demand and aggregate supply curve – determination of equilibrium.

• Effect of change in different factors on complete Classical model.

• Say's law and Walras' law – The dichotomy between the real sector and monetary sector – neutrality of money.

2. The Complete Keynesian model(Lectures – 14)

• Derivation of aggregate demand and aggregate supply curve – Keynesian labour supply function – determination of equilibrium – wage rigidity – involuntary unemployment – Underemployment equilibrium – effects of change in money supply and other factors on complete Keynesian model – money illusion.

• Comparison with the Classical system – price flexibility – Real balance effect.

3. Money and Prices:(Lectures - 9)

•Value of Money and Price Level

•Quantity Theory of Money: Fisher's Transactions Approach – Fisher's Equation of Exchange – Cambridge Cash-Balance Approach – Critical Evaluation of the Quantity Theory of Money – Keynes's Critique of the Quantity Theory of Money – Friedman's Modern Quantity Theory of Money

4. Theory of inflation (Lectures - 9)

• The Quantity theory approach to inflation.

• Demand pull inflation and cost push inflation – comparison between them – Hyperinflation, mild inflation, mark up inflation – wage-price spiral.

• Inflationary gap – Limitations of it.

• Phillips curve – implication – short run and long run Phillips curve - Okun's law – Augmented Phillips curve – natural rate of unemployment

• Consequences of inflation – measures to control inflation.

5. Economic Growth(Lectures - 10)

The Harrod – Domar model – assumptions – implications – actual, warranted and natural rate of growth – knife edge instability problem and its economic implication – causes behind it – properties of warranted rate of growth.

Solow Model of Growth-basic departure from Harrod-Domar model, steady state growth, golden rule of accumulation, issues of dynamic efficiency in solow growth model, solow growth accounting

6. Role of expectation (Lectures - 8)

Naive expectation, Cobweb phenomenon, Adaptive expectation, Rational expectation (Rules for building expectations) – Concepts only

7. Open economy (Lectures - 6)

Foreign trade multiplier, Mundell-Flemming model

References:-

10. Mankiew – Macroeconomics
11. Sikdar,S – Principles of Macroeconomics, Oxford University Press.
12. D'Souza, Erol – Macroeconomics, 2nd Edition, Pearson.
13. Ackley – Macroeconomic Theory and Policy, 2nd Edition.
14. Branson – Macroeconomic Theory and Policy
15. Dornbusch and Fisher: Macroeconomics
16. Froyen – Macroeconomics – Theories and Policies, 10th Edition, Pearson.
17. Levacic and Rebbman – Macroeconomics
18. Readings in Macroeconomics – Mueller (ed) (Selected articles).

Major /DS Course

Mathematical Economics –I (ECON 4012)

Full Marks: 75 (60 theory + 15 Internal) Credit: 5 L-T-P: 4-1-0

No of Lectures: 70

Course Objectives: This course aims to provide students a grasp over the basic mathematical tools necessary for economic analysis.
Course Outcomes: Ability to use mathematical and statistical tools for economic analysis.

1. Singleandmultivariablefunctions: 15 Lectures

- Logicandprooftechniques
- Sets,Convexsets,Basicsetoperations
- Relationsandfunctions
- Typesoffunctions:quadratic,Polynomial,Power,Exponential,Logarithmic,
- Sequencesandseries:Convergence,algebraicpropertiesandapplications,
- Continuousfunctions,Characterizations,propertieswithrespecttovariouspropertiesandapplications,
- Differentiablefunctions,Characterizations,propertieswithrespecttovariousoperationsandapplications,
- Secondandhigherorderderivativesandapplications,
- Implicit function theorem
- Totaland partial differentiations,propertiesandapplications,
- Homogeneousandnon-homogeneousfunctions,propertiesandapplication

ApplicationsinEconomics: Demandfunction-Elasticityofdemand-Marginalrevenue–Marginalutility-Relationbetweenaverageandmarginalrevenue–SlopeandcurvatureofindifferencecurveandIso-quant-Marginalproduct-Elasticityoffactorsubstitution-Totalproduct curve- Point of inflexion - Returns to scale- Properties of Cob Douglas productionfunction-Productexhaustiontheorem-Linear, QuadraticandCubic costfunctions.

2. UnconstrainedOptimization: 15Lectures

- Concaveandconvexfunctions,theircharacterizationsandapplications,localandglobaloptima:geometric characterizations
- Cauterizations using calculus, First order and second order conditions and applications.

ApplicationsinEconomics: RelationbetweenAPandMP-RelationbetweenACandMC-Profitmaximization.

3. ConstrainedOptimization with equality constraints: 15Lectures

- Geometric Characterization, Lagrange Characterization using calculus, Value function, Envelop Theorem
- Quasi-concavefunctions,levelcurves, their cauterizationsandapplications.

ApplicationsinEconomics: Utilitymaximizationsubjecttobudgetconstraint–outputmaximization subjecttocostconstraint– Costminimizationsubjecttooutput constraint.

4. IntegrationofFunctions: 10Lectures

Concept of Integration as areverseprocessofdifferentiation –RulesofIntegrationTechniquesofdefinite integral.

Applications in Economics: Finding out total functions (TR, TC, Consumption function, Saving function whenmarginal functionaregiven –Consumer's surplus–Producer 'surplus.

5. TechniquesofdynamicAnalysis: 15Lectures

- Notionofstationaryvaluesandstability–FirstorderDifferentialEquation
- Firstandsecond orderLinearDifference Equation with constantterm.

ApplicationsinEconomics: Domer'sAnalysisofGrowth-Pricedynamicsinacompetitivemarket–TheCobwebModel-Dynamic multiplier–Multiplier-AcceleratorinteractionModel.

SuggestedReadings:

1. K.SydsaeterandP.Hammond,*MathematicsforEconomicAnalysis*,PearsonEducationalAsia:Delhi,2002 .
2. A.CChiang, and K.Wainwright, Fundamental*MethodsofMathematicalEconomics,*4th edn.TataMcGrawHill Education Pvt. Ltd .2013.
3. B.MukherjeeandV,Pandit,*MathematicalMethodsforEconomicAnalysis,Allied:1989*
4. Taro Yamane,:*MathematicsforEconomist:AnElementarySurvey*.

Major /DS Course

Statistical Methods-II (ECON 4013)

Full Marks: 75 (60 theory + 15 Internal) Credit: 5 L-T-P: 4-1-0

No of Lectures: 70

Course Objectives: This course is designed to impart knowledge on statistical tools and techniques which will be useful in economic study and to assess the real life situations. The course is expected to enhance the analytical understanding on the design of sample survey, probability distribution, statistical inference, and the ANOVA.

Course Outcomes: Students will be able to develop an understanding on various methods of the design of sample survey along with important features of probability distribution and mathematical expectation. The learner will have an understanding on the concepts of statistical inference and predictability.

1. **Theory of Probability** (Lecture: 12)

   Random Experiments – Sample or Outcome Spaces (Discrete and Continuous case) – Events and their Algebra – Mutually Exclusive, Equally Likely and Collectively Exhaustive Events

   - Basic idea of set theory (concept only), Probability: Classical and Axiomatic Definition – Complementary Event – Theorem of Total Probability – Conditional Probability – Theorem of Compound Probability – Independent Events, Bayes' Theorem-(simple numerical exercise)

2. **Probability Distributions:** (Lecture: 12)
   - Random Variables (discrete and continuous), Probability Mass and Density Functions - Expectation and Variance of Random Variables (for Random Sampling With and Without replacement
   - Univariate Probability Distributions-Uniform, Binomial, Poisson, Normal Distributions – Mean, Variance. Moment Generating Functions. -(simple numerical exercise)

3. **Sampling Theory and Sampling Distributions:** (Lecture: 14)
   - Population and Sample, Parameter and Statistic, Random Sampling – Practical Methods of Drawing Random samples – Random sampling Numbers – Sampling Distribution – Standard Error
   - Sampling Distributions associated with Normal Population, Expectation and Standard Error of Sample Mean, Types of sampling-Stratified Sampling (Definition and Purpose), Sampling vs Non sampling error, ChiSquare Distribution, Student's t Distribution, F-Distribution (definition and importance, properties and uses only)

4. **Estimation:** (Lecture: 12)
   - Desirable Properties of a good estimators – Unbiasedness, Minimum Variance – Simple Methods of Point Estimation – Maximum Likelihood. Estimators and their properties – Maximum Likelihood estimation of the parameter of Binomial, Poisson and Normal Distribution and estimation of population parameters using method of moments.

5. **Testing of hypothesis** (Lecture: 10)

- Null hypothesis & Alternative Hypothesis–Confidence Intervals – Testing of Hypothesis – P-value – Type-I and Type-II Errors – Simple applications of tests for the Mean and Variance of a Univariate Normal Population. -(simple numerical exercise)

6. **Analysis of Variance** (Lecture: 10)

- Basic concept-importance-assumptions-ANOVA Table (One-Way-ANOVA, Two-Way-ANOVA)- -(simple numerical exercise)

References:

1. Goon, Gupta and Dasgupta – Fundamental of Statistics, Vol. I & II
2. Goon, Gupta and Dasgupta – Basic Statistics
3. Yule and Kendall – An Introduction to the Theory of Statistics
4. Gupta and Kapoor – Fundamental of Mathematical Statistics.
5. N. G. Das – Statistical Method (Part I & II)
6. J. F. Kenney and E. S. Keeping. Mathematical Statistics: Part 1 & Part II, Chapman and Hall, New York, 1954.
7. Mood, A.M., F. A. Graybill and D.C. Boes, Introduction to the theory of statistics, McGraw Hill, 1974.
8. William G. Cochran, Sampling Techniques, John Wiley, 2007

Semester–IV

(Minor Course)

ECON 4021

Issues in Indian Economy

Full Marks: 60 **Credit: 4** **Number ofLectures: 70**

Course Objective: This course aims to impart ability to understand & analyse the structure, performances, challenges, and opportunities facing Indian economy in recent times. This is essentially a snapshot of India's economic policies in the post-2000 period, its interplay with global economic and geopolitical events, and what needs to be done to build a sustainable and prosperous India in the 21st century. The course will be based on Readings of selected articles for a comprehensive and contextual understanding.

Course Outcomes: Students will be able to understand the Indian Economic issues in depth and evaluate policies undertaken at the national level.

1. Structure of Indian Economy: (08 lectures)

- Sectoral distribution of National Income and its change since inception of Planning.
- Occupational pattern in India-A trend analysis since 1901.
- Inequalities in Income distribution.
- Economic reforms and reduction of poverty; Poverty eradication programmes and their effectiveness.
- Structure and quality of employment in India; Government undertaken different schemes to reduce unemployment and underemployment.

2. Human resources and economy development: (08 lectures)

- Size and growth rate of population in India.
- Changes in sex composition since inception of planning.
- Population policy and population projections for India.

3. Agriculture: (14 Lectures)

- Causes for low productivity.
- Targeted public distribution system.
- New agricultural policy; Green revolution and its prospects.
- Land reforms and its appraisal.
- Effects of GATT on Indian Agriculture.

4. Industry: (12lectures)

- Review of Industrial growth underplanning.
- Role of small-scale industries and policy perspective to help them.
- Role of trade union and social security measures in India.

5. Banking: (10 lectures)

- Role of Indian Commercial Banks and Reserve Bank of India.
- Monetary Policy of the Reserve Bank of India.
- Profitability of banks in India.
- Call money market, Repo, Reverse Repo Rate, TBs, CDs.

6. Indian Public Finance: (12 lectures)

- Sources of Revenue and Expenditure of Union and State Government.
- Union-State Financial Relation.
- Centre-State Conflict on Finances.

7. Foreign trade (6 lectures)

- Volume and direction of India's foreign trade in the post-Liberalization period.

Recommended Books:

1. Dutta R.and K.P.M. Sundaram: Indian Economy, S.Chandand Co. New Delhi
2. Misra S .K.V.K.Puri: Indian Economy, Himalayas Publishing Co. Mumbai.
3. AgarwalA.N: Indian Economy, Vikash Publishing Co. Delhi
4. Gupta, S.B .:Monetary Planning in India, Oxford University Press, Delhi.
5. P. N. Dhar: Indian Economy

Sem-V

Major / DS Course (Core)
ECON 5011

Mathematical Economics-II

Full Marks: 75 **Credit: 5** **No. of Lectures:60**

Course Objectives: This is the final part of a compulsory two-course sequence on mathematical economics. Mathematical modeling is useful for analyzing multiple aspects of economic theory.The objective of this course is to enable students becoming proficient in mathematical modelling and developing the capacity to precisely convert complex economic problems into mathematical models.
Course Outcomes: Students will be able to build a strong foundation for advanced studies in quantitative economics and operation research. Students will be able to apply matrix algebra and determinants to solve economic models and systems of linear equations. The learner will be able to analyze and solve optimization problems using L-P techniques; they will acquire knowledge of integration and apply I-O analysis to understand sectoral relationships in an economy. Also, they will acquire knowledge to apply Game Theory for strategic decision-making.

1. **Determinants and Matrices:** **13 Lectures**
   - Matrices: Concepts of Scalar, Vector and Matrices, System of Equations and their Representation through Vectors and Matrices, Some specific Matrices: Diagonal, Triangular, Identity, Null, Symmetric, Idempotent, Matrix operations; Addition, Subtraction and Multiplication of Matrices – Transpose and Inverse of Matrices
   - Determinants: Minor and Cofactor, Properties of Determinants, Bordered Hessian Determinant, Technique of solving Simultaneous Equations by Cramer's Rule, Eigenvalues and Eigenvectors.
   - Economic Applications: Partial Market Equilibrium Model, Simple National Income Determination Model, The IS – LM model and Comparative Static Analysis, Derivation of Slutsky Equation.

2. **Linear Programming:** **15 Lectures**
   - Basic Concepts, Simple Examples of Linear Programming Problem, Linear Programming Technique as a Tool of Optimization, General Formulation of the Linear Programming Problem.
   - Graphical solution of some standard problems (Maximization and Minimization), Slack and Surplus Variables, Solution by Simplex Method (Maximization only), The Duality Theorem, Complimentary Slackness Conditions, Economic Interpretation of Duality.
   - Introduction to Non-linear programming-Kuhn-Tucker condition.

3. **Input – Output Analysis:** **10 Lectures**
   - Basic Concepts: Input-Output Table, Closed and Open Input-Output Model, Assumptions and Structure of the Leontief Static Closed and Open Models.

- Solutions: Determination of Gross Output, Hawkins – Simon Condition and its Economic Interpretation, Role of Labour Supply Constraints and the Consumption Possibility Locus, Determination of Equilibrium Prices in Leontief Static Open Model with Economic Interpretations.
- Applications: Linear Programming formulation of Input-Output Analysis.

4. Basic Game Theory: 12 Lectures

- Basic Concepts: Strategies and Payoffs, Zero Sum and Non-Zero-Sum Game, Maximin and MinmaxPrinciples, Examples from Prisoners' Dilemma and Matching Pennies games
- Static Games of Complete Information: Pure Strategy, Mixed Strategy, Dominant Strategy, Nash Equilibrium, Existence and Properties of Nash Equilibrium, Application to the Cournot Model of Duopoly
- Dynamic Games of Complete Information: Backwards Induction, ExtensiveForm Representation of Games,SubgamePerfect Nash Equilibrium (SPNE),Application to the Stackelberg Model of Duopoly

5. Decision making under Risk and Uncertainty: 10 Lectures

- Decision under Uncertainty: Meaning of risk and uncertainty; TheMaximin, Maximax, Hurwicz, Laplace and Savage Criterion for OptimalDecision-making.
- Risk Aversion: Expected Utility Theory; Risk Aversion and Risk Preference; Arrow-Pratt Characterization of Comparative Risk Aversion.

Suggested Readings:

1. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.
2. A.C Chiang, and K. Wainwright, *Fundamental Methods of Mathematical Economics,* 4th Edition. Tata McGraw Hill Education Pvt. Ltd .2013.
3. JK Sharma, *Operations Research Theoryand Applications*, Trinity Press, 2023
4. Blume, Lawrence and Carl Simon (1994), *Mathematics for Economists*, Norton.
5. Drofman, Samuelson and Solow: *Linear Programming and Game Theory: An Economic Analysis*: Dover Publications (1987)
6. Gibbons R.: *Game Theory for Applied Economists.*, Princeton University Press (2004)
7. Fudenberg, Dand J.Tirole : *Game Theory*, MIT Press (1991)

Sem-V
Major / DS Course (Core)
(ECON 5012)

International Economics

Full Marks: 75 Credit: 5 Lectures: 60

Course Objectives: This course aims to make students aware about the international trade policies and its role in economic development and to develop a systematic understanding of major issues related to international economics. How different theories have analysed different international economic events and problems occurred in different countries will be taught to explain the changing scenario of international money market and to enable the students to step further to focus on the dynamic world economy.

Course Outcomes: Ability to understand & analyse the working of international economic processes, transactions and the impact of trade and capital flow on development.

1. **Basic Ideas and Concepts** **4 Lectures**
2. Why do nations trade? Meaning and scope of International Economics- Arbitrage as basis and direction of International Trade – difference between international trade and intranational trade– Mercantilist view.
3. Pure Theory of Trade: 24 Lectures
    - Absolute advantage theory of Adam Smith, Ricardian Theory of Trade in two-country two-commodity framework-Multi-commodity and two-country framework - Complete Specialization and indeterminacy of TOT - Limitation of Ricardian Trade Theorem.
    - Gains from Trade using PPF and Community Indifference Curve.
  - Derivation of Offer Curve using Trade indifference curve and Trade Triangle, Elasticity of Offer curve, Equilibrium TOT under free-trade- Stability analysis using Offer Curve-General equilibrium using Meade's Analysis.
  - Factor Endowment and Trade: Hecksher – Ohlin Theorem of Trade using Price and Physical definition – Factor Price Equalization Theorem – Rybszynsky Theorem – Stolper Samuelson Theorem – Demand Bias and H-O Theorem, Factor Intensity Reversal and H - O Theorem – Leontief Paradox
  - Paul Krugman's New Trade Theory.

4. **TradePolicy:** **12 Lectures**
  - Import Tariff and Export Subsidies: Effect of imposition of Tariff in partial and general equilibrium framework for small and large country. Effect of Export Subsidy for small country – TOT Deterioration and Welfare Loss.
  - Quantitative Restrictions and Non-tariff Barriers: Quota and its comparison with Tariff, Optimum Tariff.

5. **Balance of Payment:** **20 Lectures**

- Balance of Payment Accounting – Autonomous and Accommodating transaction – Basic identities in BOP and NI Accounting
- National Income and Current Account Balance – Income Approach – Expenditure and Foreign Trade Multiplier with and without International transmission Effect - transfer Problem
- International Currency System and Exchange Rate: Gold Standard, Bretton Woods system and Post Bretton Wood Era (concept only) – Demand and Supply of foreign exchange - Exchange rate under Clean Float-Intervention in Foreign Exchange Market (Dirty or managed float and fixed exchange rate)
- Pegged Exchange Rate and BOP: Expenditure Switching Policy (Elasticity Approach) and Expenditure Reducing Policy (Absorption Approach) – Synthesis Approach.

References:

RajatAcharyya: International Economics – Oxford University Press

Krugman and Obstfeld: International Economics- Theory and policy, 8th Edn Pearson

Soderstein. Bo and Geoffrey Reed: International Economics, 3rd Edition

Caves, Frankel and Jones: World Trade and Payments.

Kennen, P: International Economics

Semester V

Major/ DS Course

ECON 5013

Selected Features of Indian Economy

FullMarks:75 **Credit: 5** **Lectures:60**

Course Objectives: Using an appropriate analytical framework, this course reviews key trends in economic indicators and policy debates in post-independence India, with particular emphasis on paradigm shifts and turning points. This course also point out the sector-specific policies and their impact on shaping trends in key economic indicators in India. It highlights key policy debates and assesses Indian empirical evidence. Rapid changes are occurring in India, so the reading list needs to be updated annually.

Course Outcomes: Students will understand the structural pattern of India's economic development. Aims to provide a comprehensive understanding of the structural characteristics and development patterns of India's economy. It focuses on analyzing the roles and performance of major sectors such as agriculture, industry, and services, while also examining key issues like poverty, unemployment, and inequality. The course introduces students to important economic reforms, including liberalization, privatization, and globalization, and evaluates their impact on economic growth and development. It further explores India's external sector, including trade and balance of payments, and highlights contemporary challenges such as inflation, fiscal deficits, and sustainable development. Overall, the objective is to develop students' analytical skills and enable them to critically assess economic policies and current issues in the Indian context

1. **Economic Development since Independence** **10 Lectures**
   - Majorfeatures ofIndian economyat the time of independence;
   - Planning – Objectives,achievementsandfailuresofPlanning_ An overview
   - EconomicReformsin1991andstructuralchangesinthepostreformsperiod.
   - NitiAyog :Its role and objectives

2. **Populationand Human Development** **10 Lectures**
   - Demographic Features- Population: Size, Growth, Composition and their Implication
   - Occupational Distribution of Population in India
   - Concept of Demographic Dividend
   - PopulationPolicies.
   - Healthand Education

3. **Inequality,PovertyandUnemployment** 10 **Lectures**
   - Inequalityinincome and wealth
   - Regionaldisparities
   - PovertyandPoliciesonpoverty eradication includingSen'sEntitlementAnalysis
   - NatureofunemploymentinIndia;Problemofmeasurementofunemployment;
   - Recent Labour regulations in India

4. **PoliciesandPerformancein Agriculture** 8 **Lectures**
   - GrowthandproductivityofIndianAgriculturesince1991
   - LandReforms
   - Green Revolution- second green revolution- Its implication
   - AgriculturalCredit and Marketing
   - FoodSecurityandPDS

5. **PoliciesandPerformancein Industry** **12 Lectures**
   - GrowthandproductivityofIndianIndustrysince1991
   - Reforms in IndianIndustry- Disinvestment in India
   - Problems and Prospects of Smallscaleindustries;
   - Publicsector industries and their limitations
   - Foreigninvestmentsinindustry
   - Exit Policy
   - Make in India Programme

6. **PoliciesandPerformanceinService Sector:** **6 Lectures**
   - Concept and components of Service Sector
   - Infrastructure: Transport and Communication
   - Banking- Bank Nationalization and its achievements
   - Banking and Insurance Sector Reforms since 1991

7. **Indian Public Finance** **4 Lectures**
   - Composition of govt. revenue and expenditure
   - Tax reforms since 1991.
   - FinanceCommission- emerging issues- Centre–Statefinancialrelation

References

Aniruddha Krishna and DevendraBajpai, 2011, ―Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, Economic and Political Weekly, September.

BhagwatiandChakraborty"ContributionstoIndianEconomicAnalysis"Dhingra, I.C"IndianEconomy"

Bhagwati and Chakraborty "Contributions to Indian Economic Analysis" Chakraborty "Development Planning: The Indian Experience"

Dutt and Sundaram (latest Ed) "Indian Economy" Mishra and Puri (latest ed.) "Indian Economy"

Geeta G. Kingdon, 2007, ―The Progress of School Education in India, Oxford Review of Economic Policy

Himanshu. 2011, ―Employment Trends in India: A Re-examination, Economic and Political Weekly, September.

J.B.G. Tilak, 2007, ―Post Elementary Education, Poverty and Development in India, International Journal of Educational Development

Jalan “Indian Economic Crisis” Nayaar “On Economic Liberalization” Kapila “Indian Economy”
Jean Dreze and Angus Deaton, 2009, Food and Nutrition in India: Facts and Intepretations, Economic and Political Weekly, February.
K. James, 2008, ―Glorifying Malthus: Current Debate on Demographic Dividend in India‖ Economic and Political Weekly, June.
K.L. Krishna and A. Vaidyanathan, editors, Institutions and Markets in India’s Development.Himanshu, 2010, Towards New Poverty Lines for India, Economic and Political Weekly, January.
KaushikBasuandA.Maertens,Eds,2013,TheNewOxfordCompaniontoEconomics, Oxford University Press
KaushikBasu, 2009, ―China and India: Idiosyncratic Paths to High Growth, Economic and Political Weekly, September.
RakeshMohan, 2008,―GrowthRecordofIndianEconomy:1950-2008.AStoryof Sustained Savings and Investment, Economic and Political Weekly, May.
Rama Baru et al, 2010, ―Inequities in Access to Health Services in India: Caste, Class andRegion, Economic and Political Weekly, September.
ReetikaKhera, 2011, ―India‘s Public Distribution System: Utilisation and Impact Journal of Development Studies.
S.L.Shetty,2007,―India‘sSavingsPerformance sincetheAdventofPlanning,in
T. Dyson, 2008, ―India‘s Demographic Transition and its Consequences for Development‖in Uma Kapila, editor, Indian Economy Since Independence, 19th edition, Academic Foundation.
Wadhva “Some Problems of India’s Economic Policy” Lucas and Papanek “IndianEconomy”

Semester-VI

Major/DS Course
Econ 6011
Development Economics I

Full Marks: 75 **Credit: 4** **Lecture: 45**

Course Objectives: This course aims t aims to introduce students to the fundamental concepts, theories, and issues related to economic development and underdevelopment focusing on the theories, indicators, and strategies that shape economic growth and development. It provides a comprehensive understanding of how economies grow, the factors influencing development, and the challenges faced by developing nations. The course is structured to ensure that students gain both theoretical and practical insights into economic development processes.
Course Outcomes: Ability to understand the historical causes of underdevelopment & pathways for development.

1. **Economic Development and under development** **10 Lectures**

   Economic Growth and Development. Different concepts of development: Participatory development, Inclusive development, Sustainable development.
   Characteristics of under development – Vicious circle of poverty — Low level equilibrium trap – Critical minimum effort thesis - Process of cumulative causation.

2. **Broad indicators of Economic development** **10 Lectures**

   Different Indicators of Economic Development: Structural Change **-** Per Capita Income – Purchasing Power Parity-PQLI - Basic needs approach – Human development index – Gender related development index (GDI and GEM).

3. **Development and under development as historical process.** **9 Lectures**

   Stages of Economic Development and Growth (Rostow and Marx) - Dependency school of Development: Paul Baran, Frank, Kay.

4. **Development strategy** **8 Lectures**

   Surplus labour and Disguised Unemployment – Lewis Model– Choice of techniques – Balanced Growth and unbalanced growth.

5. **Poverty and Inequality** **(8 Lectures)**
   Inequality axioms- Common measures of Inequality-Different Poverty measures: Head count ratio, income gap approach – HPI.

Rerferences.

- ✓ Abhijit Banerjee, Roland Benabou and DilipMookerjee: Understanding Poverty, OUP, 2006
- ✓ Debesh Bhattacharya: Political Economy of Development
- ✓ Debraj Roy : Development Economics
- ✓ K. Basu: Analytical Development Economics, OUP
- ✓ Meier(ed.) Leading issues in Economic development
- ✓ Thirlwall : Growth and development.
- ✓ Todaro and Smith: Economic Development, Pearson Education, 2009

Sem-VI

MAJOR/DS COURSE

ECN_6012

Public Economics

Full Marks: 75 Credit: 4 **No of Lectures: 45**

Course Objectives: This course aims to provide students with a comprehensive understanding of the role of the government in economic activities, public finance, and taxation. Through this course, students will be able to critically evaluate fiscal policies and their broader economic impacts, preparing them for careers in public policy, finance, and economic analysis.

Course Outcomes: Students would form the ability to understand & analyse the performances, behaviour and decision making of the governmental side of the economy and ability to evaluate economic policies of governments across different sets of countries.

1. **The constituents of Public Sector**: Government's Budget, Economic Activities of the Government, Expenditures and Receipts in Revenue and Capital Accounts, Concepts of Primary Deficit, Revenue Deficit and Fiscal Deficit, Three bases of Public Finance(concepts only). 5 Lectures
2. **Public Goods, Mixed Goods and Externalities**: Excludable and Non Excludable Goods, Rival and Non Rival Goods, Classification of Goods (Private, Public , Merit and Mixed), Efficient Allocation of Resources in the absence of Public Goods, Efficient Allocation of Resources in the Presence of both Private and Public Goods. 12 Lectures
3. **Principles of Taxation**
   Benefit Principle of Taxation and Public Expenditure- - Benefit Principle(Lindahl Model) and Social Welfare, Concept of Horizontal Equity and Vertical Equity- Ability to Pay Principle and its limitations, Degree of progression bases of taxation, Merits and Demerits of income, expenditure and wealth tax10 Lectures
4. **Tax Incidence-Tax Incidence on Produced Goods in a Perfectly Competitive Market**: Partial Equilibrium Analysis only, Burden of Taxes; Effects of taxation on income distribution, work efforts and on savings (Partial Equilibrium Framework Only); Distribution of Tax Burden, Laffer curve;Optimal Taxation, introduction of GST & its basic concept and idea. 12 Lectures

5. **Public Debt**
   Sources of Public Borrowings: internal and external borrowing; Burden of Internal Debt, Ricardian Equivalence(concept only), Domar Approach (concept only). 6 Lectures

References:

A Ghosh and C Ghos, Public Finance, PHI (second Ed),

A.B. Atkinson and J. E. Stiglitz, Lectures on Public Economics, McGraw-Hill Inc.,US

R .A. Musgrave and P. B. Musgrave, Public Finance in Theory¬& Practice, McGraw-Hill Publications 5th Edition

J. F. Due and A. F. Friedlander. Government Finance- Economics of Public Sector,AITBS Publishers and Distributors

J. Hindriks and G.D. Myles. Intermediate Public Economics. The MIT Press.

J. E. Stiglitz. Economics of Public Sector. W.W. Norton and Company, 3rd Edition

Sem VI

Major / DS Course

ECON 6013

Field Survey and Project Report

Full Marks: 50 **Credit: 4** **Lectures: 45**

Course Objectives: This paper aims to develop students' ability to evaluate the impact of socio-economics policies and development programs based on empirical data. This is a Project Paper where the Students will make a Field Visit to collect Primary information followed by analysis of data using basic econometric tools and writing a project report on the contemporary issues of Indian Economy with the support and assistance from the faculty members.

Course Outcomes: Students will develop skill to undertake small scale field surveys and prepare reports based on the data collected using the tools and methods studies in the classroom.

Instructions: Ideally there should be 15 classroom lectures to prepare the students for Field Survey and to train them for Report Writing. Remaining should be Field Visits and preparing Project Report.

The project report should ideally cover the following areas:

Introduction–LiteratureReview–Objectives–DataMethodology– Analysis – Results– Conclusion and Policy Suggestion – Bibliography

Project to be done on a small Primary sample of size 30 or more observations.

Proposed Guidelines

1. Each college shall arrange for a Field Visit for collection of data by the students.
2. Each student will analyze the collected data using basic econometric tools including descriptive statistics and will prepare a term paper between 4000 – 5000 words (excluding charts, diagrams, tables, appendix etc.).
3. The selection of the topic will be from the subjects covered in the undergraduate economics honours syllabus.
4. The term paper will be submitted by the candidates to the respective colleges at least a fortnight before the viva-voce examination which will be held at the respective college centres.
5. The board of examiners will consist of one internal and one external examiner (from some other college on a one-on-one basis).
6. The marks division for the term paper will be as follows: 50 for the written report and 25 for viva-voce.
7. The marks of the written paper will be the average given by the internal and external examiners.
8. However, theviva-vocewillbeconductedandthemarks will be awardedbytheexternal examiner only.

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Sem_ VI

Major / DS Course (Core)

ECON 6014

Basic Econometrics

Full Marks: 75 Credit: 4 Lectures: 50

Course Objectives: Provide tools for analysing economic data. Students can analyse economic data, test theories and understand the real-world application of economics concepts through the application of econometric tools.

Course Outcomes: Students will be able to formulate and estimate the economic models to analyse the relationship between the economic variables. Learning econometrics helps to understand the effects of economic policies and intervention.

1. **Nature and scope of Econometrics: 6 lectures**
   Concept of stochastic relation, Rationale behind the inclusion of random disturbance term in an econometric model, Application of econometrics in different branches of social science
2. **Simple linear regression model**:**(Two variable case**) **15 lectures**
   Assumptions regarding random disturbance term in classical linear regression model - Estimation of the parameters by using Ordinary Least Square method (OLSM) – Gauss Markov theorem. Properties of estimators– Best, linear, unbiased estimator – Point estimator, interval estimator, confidence interval, Testing of hypothesis, t test, F test, goodness of fit – R^2 and Adjusted R^2.
3. **Multiple linear regression model (in three variable set up)**: **10 lectures**
   Assumptions regarding random disturbance term - Estimation of the parameters by using Ordinary Least Square method (OLSM), Properties of OLS estimators, goodness of fit – R^2 and Adjusted R^2, testing of hypothesis-individual and joint, Interpretation of Regression results,
4. **Dummy variable** – Dummy variable trap**.** **4 lectures**
5. **Violation of classical assumptions (Sources, Consequences, Detection): 15 lectures**
   (i) Heteroscedasticity – Definition, sources, consequences, tests for detecting Heteroscedasticity(Goldfeld – Quandt test, Glesjer test, Park test), remedial measures.
   (ii) Autocorrelation - Definition, sources, consequences,tests for detecting Autocorrelation (Durbin – Watson test, Cochrane – Orcutt iterative method), remedial measures.
   (iii) Multi-collinearity - Definition, sources, exact and near exact multi-collinearity – coefficient of magnification - consequences, tests for detecting Multi-collinearity(FarrerGlauber test), Variance Inflationary Factor, remedial measures – dropping variable technique.

Suggested Reading:

1. John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
2. Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
3. Gujarati Damodar (2004), Basic Econometrics, McGrow-Hill
4. Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3rd edition, Indian edition, 2007
5. Maddala, G.S. Introduction to Econometrics, John Wiley & Sons.
6. Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2nd Edition,2008.
7. Koutsoyiannis A, Theory of Econometrics, ELBS with Macmillan.
8. Bhaumik S.K, Principles of Econometrics, Oxford University Press

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Sem-V

Major / DS Course (Core)

ECON 5011

Mathematical Economics-II

Full Marks: 75 **Credit: 5** **No. of Lectures: 75**

Course Objectives: This is the final part of a compulsory two-course sequence on mathematical economics. Mathematical modeling is useful for analyzing multiple aspects of economic theory.The objective of this course is to enable students becoming proficient in mathematical modelling and developing the capacity to precisely convert complex economic problems into mathematical models..

Course Outcomes: Students will be able to use mathematical tools to understand economic processes and decision-making pathways.

1. **Determinants and Matrices:** **16 Lectures**
   - Matrices: Concepts of Scalar, Vector and Matrices, System of Equations and their Representation through Vectors and Matrices, Some specific Matrices: Diagonal, Triangular, Identity, Null, Symmetric, Idempotent, Matrix operations; Addition, Subtraction and Multiplication of Matrices – Transpose and Inverse of Matrices
   - Determinants: Minor and Cofactor, Properties of Determinants, Bordered Hessian Determinant, Technique of solving Simultaneous Equations by Cramer's Rule, Eigenvalues and Eigenvectors.
   - Economic Applications: Partial Market Equilibrium Model, Simple National Income Determination Model, The IS – LM model and Comparative Static Analysis, Derivation of Slutsky Equation.

2. **Linear Programming:** **18 Lectures**
   - Basic Concepts, Simple Examples of Linear Programming Problem, Linear Programming Technique as a Tool of Optimization, General Formulation of the Linear Programming Problem.
   - Graphical solution of some standard problems (Maximization and Minimization), Slack and Surplus Variables, Solution by Simplex Method (Maximization only), The Duality Theorem, Complimentary Slackness Conditions, Economic Interpretation of Duality.
   - Introduction to Non-linear programming-Kuhn-Tucker condition.

3. **Input – Output Analysis:** **13 Lectures**
   - Basic Concepts: Input-Output Table, Closed and Open Input-Output Model, Assumptions and Structure of the Leontief Static Closed and Open Models.
   - Solutions: Determination of Gross Output, Hawkins – Simon Condition and its Economic Interpretation, Role of Labour Supply Constraints and the Consumption Possibility Locus, Determination of Equilibrium Prices in Leontief Static Open Model with Economic Interpretations.

- Applications: Linear Programming formulation of Input-Output Analysis.

4. **Basic Game Theory: 15 Lectures**
   - Basic Concepts: Strategies and Payoffs, Zero Sum and Non-Zero-Sum Game, Maximin and MinmaxPrinciples, Examples from Prisoners' Dilemma and Matching Pennies games
   - Static Games of Complete Information: Pure Strategy, Mixed Strategy, Dominant Strategy, Nash Equilibrium, Existence and Properties of Nash Equilibrium, Application to the Cournot Model of Duopoly
   - Dynamic Games of Complete Information: Backwards Induction, ExtensiveForm Representation of Games,SubgamePerfect Nash Equilibrium (SPNE),Application to the Stackelberg Model of Duopoly

5. **Decision making under Risk and Uncertainty: 13 Lectures**
   - Decision under Uncertainty: Meaning of risk and uncertainty; TheMaximin, Maximax, Hurwicz, Laplace and Savage Criterion for OptimalDecision-making.
   - Risk Aversion: Expected Utility Theory; Risk Aversion and Risk Preference; Arrow-Pratt Characterization of Comparative Risk Aversion.

Suggested Readings:

1. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.
2. A.C Chiang, and K. Wainwright, *Fundamental Methods of Mathematical Economics,* 4th Edition. Tata McGraw Hill Education Pvt. Ltd .2013.
3. JK Sharma, *Operations Research Theoryand Applications*, Trinity Press, 2023
4. Blume, Lawrence and Carl Simon (1994), *Mathematics for Economists*, Norton.
5. Drofman, Samuelson and Solow: *Linear Programming and Game Theory: An Economic Analysis*: Dover Publications (1987)
6. Gibbons R.: *Game Theory for Applied Economists.*, Princeton University Press (2004)
7. Fudenberg, DandJ.Tirole : *Game Theory*, MIT Press (1991)

Sem-V
Major / DS Course (Core)
(ECON 5012)
International Economics

Full Marks: 75 Credit: 5 Lectures: 75

Course Objectives: This course aims to familiarise students with major issues related to international economics, to show how different theories have analyzed different international economic events and problems occurred in different countries, to explain the changing scenario of international money market and to enable the students to step further to focus on the dynamic world economy.
Course Outcomes: Students will be able to understand the international policies and processes related to movement of goods, services, capital, labour and technology across international boundaries and how international economic processes are related to the development processes of countries.

1. **Basic Ideas and Concepts** **7 Lectures**
   Why do nations trade? Meaning and scope of International Economics- Arbitrage as basis and direction of International Trade – difference between international trade and intranational trade– Mercantilist view.
2. Pure Theory of Trade: **28 Lectures**
    - Absolute advantage theory of Adam Smith, Ricardian Theory of Trade in two-country two-commodity framework-Multi-commodity and two-country framework - Complete Specialization and indeterminacy of TOT - Limitation of Ricardian Trade Theorem.
    - Gains from Trade using PPF and Community Indifference Curve.
   - Derivation of Offer Curve using Trade indifference curve and Trade Triangle, Elasticity of Offer curve, Equilibrium TOT under free-trade- Stability analysis using Offer Curve-General equilibrium using Meade's Analysis.
   - Factor Endowment and Trade: Hecksher – Ohlin Theorem of Trade using Price and Physical definition – Factor Price Equalization Theorem – Rybszynsky Theorem – Stolper Samuelson Theorem – Demand Bias and H-O Theorem, Factor Intensity Reversal and H - O Theorem – Leontief Paradox
   - Paul Krugman's New Trade Theory.

3. **TradePolicy:** **16 Lectures**
   - Import Tariff and Export Subsidies: Effect of imposition of Tariff in partial and general equilibrium framework for small and large country. Effect of Export Subsidy for small country – TOT Deterioration and Welfare Loss.
   - Quantitative Restrictions and Non-tariff Barriers: Quota and its comparison with Tariff, Optimum Tariff.

4. Balance of Payment: **24 Lectures**

- Balance of Payment Accounting – Autonomous and Accommodating transaction – Basic identities in BOP and NI Accounting
- National Income and Current Account Balance – Income Approach – Expenditure and Foreign Trade Multiplier with and without International transmission Effect - transfer Problem
- International Currency System and Exchange Rate: Gold Standard, Bretton Woods system and Post Bretton Wood Era (concept only) – Demand and Supply of foreign exchange - Exchange rate under Clean Float-Intervention in Foreign Exchange Market (Dirty or managed float and fixed exchange rate)
- Pegged Exchange Rate and BOP: Expenditure Switching Policy (Elasticity Approach) and Expenditure Reducing Policy (Absorption Approach) – Synthesis Approach.

References:

RajatAcharyya: International Economics – Oxford University Press

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Soderstein. Bo and Geoffrey Reed: International Economics, 3rd Edition

Caves, Frankel and Jones: World Trade and Payments.

Kennen, P: International Economics

Semester V

Major/ DS Course

ECON 5013

Selected Features of Indian Economy

Full Marks:75 **Credit: 5** **Lectures: 75**

Course Objectives: Using an appropriate analytical framework, this course reviews key trends in economic indicators and policy debates in post-independence India, with particular emphasis on paradigm shifts and turning points. This course also point out the sector-specific policies and their impact on shaping trends in key economic indicators in India. It highlights key policy debates and assesses Indian empirical evidence. Rapid changes are occurring in India, so the reading list needs to be updated annually..

Course Outcomes: Aims to provide a comprehensive understanding of the structural characteristics and development patterns of India's economy. It focuses on analyzing the roles and performance of major sectors such as agriculture, industry, and services, while also examining key issues like poverty, unemployment, and inequality. The course introduces students to important economic reforms, including liberalization, privatization, and globalization, and evaluates their impact on economic growth and development. It further explores India's external sector, including trade and balance of payments, and highlights contemporary challenges such as inflation, fiscal deficits, and sustainable development. Overall, the objective is to develop students' analytical skills and enable them to critically assess economic policies and current issues in the Indian context..

1. Economic Development since Independence **12 Lectures**

- Majorfeatures ofIndian economyat the time of independence;
- Planning – Objectives,achievementsandfailuresofPlanning_ An overview
- EconomicReformsin1991andstructuralchangesinthepostreformsperiod.
- NitiAyog :Its role and objectives

2. Populationand Human Development **12 Lectures**

Demographic Features- Population: Size, Growth, Composition and their Implication

- Occupational Distribution of Population in India
- Concept of Demographic Dividend
- PopulationPolicies.
- Healthand Education

3. Inequality,PovertyandUnemployment 12**Lectures**

- Inequalityinincome and wealth
- Regionaldisparities
- PovertyandPoliciesonpoverty eradication includingSen'sEntitlementAnalysis
- NatureofunemploymentinIndia;Problemofmeasurementofunemployment;

- Recent Labour regulations in India

4. PoliciesandPerformancein Agriculture 10Lectures

- GrowthandproductivityofIndianAgriculturesince1991
- LandReforms
- Green Revolution- second green revolution- Its implication
- AgriculturalCredit and Marketing
- FoodSecurityandPDS

5. PoliciesandPerformancein Industry 14Lectures

- GrowthandproductivityofIndianIndustrysince1991
- Reforms in IndianIndustry- Disinvestment in India
- Problems and Prospects of Smallscaleindustries;
- Publicsector industries and their limitations
- Foreigninvestmentsinindustry
- Exit Policy
- Make in India Programme

6. PoliciesandPerformanceinService Sector: 8Lectures

- Concept and components of Service Sector
- Infrastructure: Transport and Communication
- Banking- Bank Nationalization and its achievements
- Banking and Insurance Sector Reforms since 1991

7. Indian Public Finance 7 Lectures

- Composition of govt. revenue and expenditure
- Tax reforms since 1991.
- FinanceCommission- emerging issues- Centre–Statefinancialrelation

References

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BhagwatiandChakraborty"ContributionstoIndianEconomicAnalysis"Dhingra, I.C"IndianEconomy"
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Himanshu. 2011, ―Employment Trends in India: A Re-examination, Economic and Political Weekly, September.
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Jean Dreze and Angus Deaton, 2009, Food and Nutrition in India: Facts and Intepretations, Economic and Political Weekly, February.
K. James, 2008, ―Glorifying Malthus: Current Debate on Demographic Dividend in India‖ Economic and Political Weekly, June.
K.L. Krishna and A. Vaidyanathan, editors, Institutions and Markets in India's Development.Himanshu, 2010, Towards New Poverty Lines for India, Economic and Political Weekly, January.
KaushikBasuandA.Maertens,Eds,2013,TheNewOxfordCompaniontoEconomics, Oxford University Press
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RakeshMohan, 2008,―GrowthRecordofIndianEconomy:1950-2008.AStoryof Sustained Savings and Investment, Economic and Political Weekly, May.
Rama Baru et al, 2010, ―Inequities in Access to Health Services in India: Caste, Class andRegion, Economic and Political Weekly, September.
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T. Dyson, 2008, ―India‗s Demographic Transition and its Consequences for Development‖in Uma Kapila, editor, Indian Economy Since Independence, 19th edition, Academic Foundation.
Wadhva "Some Problems of India's Economic Policy" Lucas and Papanek "IndianEconomy"

Semester-VI

Major/DS Course
ECON 6011
Development Economics I

Full Marks: 75 **Credit: 4** **Lecture: 60**

Course Objectives: This course aims to introduce students to the fundamental concepts, theories, and issues related to economic development and underdevelopment focusing on the theories, indicators, and strategies that shape economic growth and development. It provides a comprehensive understanding of how economies grow, the factors influencing development, and the challenges faced by developing nations. The course is structured to ensure that students gain both theoretical and practical insights into economic development processes..

Course Outcomes: Students will be able to understand the historical process of development and underdevelopment and the major issues plaguing developing countries.

1. **Economic Development and under development** **13Lectures**

   Economic Growth and Development. Different concepts of development: Participatory development, Inclusive development, Sustainable development.
   Characteristics of under development – Vicious circle of poverty — Low level equilibrium trap – Critical minimum effort thesis - Process of cumulative causation.

2. **Broad indicators of Economic development** **13 Lectures**

   Different Indicators of Economic Development: Structural Change - Per Capita Income – Purchasing Power Parity-PQLI - Basic needs approach – Human development index – Gender related development index (GDI and GEM).

3. **Development and under development as historical process.** **12 Lectures**

   Stages of Economic Development and Growth (Rostow and Marx) - Dependency school of Development: Paul Baran, Frank, Kay.

4. **Development strategy** **11 Lectures**

   Surplus labour and Disguised Unemployment – Lewis Model– Choice of techniques – Balanced Growth and unbalanced growth.

5. **Poverty and Inequality** **11 Lectures**
   Inequality axioms- Common measures of Inequality-Different Poverty measures: Head count ratio, income gap approach – HPI.

Rerferences.

- ✓ Abhijit Banerjee, Roland Benabou and DilipMookerjee: Understanding Poverty, OUP, 2006
- ✓ Debesh Bhattacharya: Political Economy of Development
- ✓ Debraj Roy : Development Economics
- ✓ K. Basu: Analytical Development Economics, OUP
- ✓ Meier(ed.) Leading issues in Economic development
- ✓ Thirlwall : Growth and development.
- ✓ Todaro and Smith: Economic Development, Pearson Education, 2009

Sem.-VI

MAJOR/DS COURSE

ECON 6012

Public Economics

Full Marks: 75 **Credit: 4** **No. of Lectures: 60**

Course Objectives: This course aims to provide students with a comprehensive understanding of the role of the government in economic activities, public finance, and taxation. Through this course, students will be able to critically evaluate fiscal policies and their broader economic impacts, preparing them for careers in public policy, finance, and economic analysis..

Course Outcomes: Ability to understand & analyse the performances, behaviour and decision making of the governmental side of the economy; Ability to evaluate economic policies of governments across different sets of countries.

1. **The constituents of Public Sector**: Government's Budget, Economic Activities of the Government, Expenditures and Receipts in Revenue and Capital Accounts, Concepts of Primary Deficit, Revenue Deficit and Fiscal Deficit, Three bases of Public Finance(concepts only). **8 Lectures**
2. **Public Goods, Mixed Goods and Externalities**: Excludable and Non Excludable Goods, Rival and Non Rival Goods, Classification of Goods (Private, Public , Merit and Mixed), Efficient Allocation of Resources in the absence of Public Goods, Efficient Allocation of Resources in the Presence of both Private and Public Goods. **15 Lectures**
3. **Principles of Taxation**
   Benefit Principle of Taxation and Public Expenditure- - Benefit Principle(Lindahl Model) and Social Welfare, Concept of Horizontal Equity and Vertical Equity- Ability to Pay Principle and its limitations, Degree of progression bases of taxation, Merits and Demerits of income, expenditure and wealth tax. **13 Lectures**
4. **Tax Incidence-Tax Incidence on Produced Goods in a Perfectly Competitive Market**: Partial Equilibrium Analysis only, Burden of Taxes; Effects of taxation on income distribution, work efforts and on savings (Partial Equilibrium Framework Only); Distribution of Tax Burden, Laffercurve; Optimal Taxation, introduction of GST & its basic concept and idea. **15 Lectures**
5. **Public Debt**
   Sources of Public Borrowings: internal and external borrowing; Burden of Internal Debt, Ricardian Equivalence(concept only), DomarApproach (concept only). **9 Lectures**

References:

A Ghosh and C Ghos, Public Finance, PHI (second Ed),

A.B. Atkinson and J. E. Stiglitz, Lectures on Public Economics, McGraw-Hill Inc.,US

R .A. Musgrave and P. B. Musgrave, Public Finance in Theory¬& Practice, McGraw-Hill Publications 5th Edition

J. F. Due and A. F. Friedlander. Government Finance- Economics of Public Sector,AITBS Publishers and Distributors

J. Hindriks and G.D. Myles. Intermediate Public Economics. The MIT Press.

J. E. Stiglitz. Economics of Public Sector. W.W. Norton and Company, 3rd Edition

Sem.- VI

Major / DS Course

ECON 6013

Field Survey and Project Report

Full Marks: 75 (Project/Field Diary: 60+ Viva-voce: 15) **Credit: 4**

Lecture Hours: 20 & Survey Hours: 40

<u>Course Objectives</u>: This paper aims to develop students' ability to evaluate the impact of socio-economics policies and development programs based on empirical data. This is a Project Paper where the Students will make a Field Visit to collect Primary information followed by analysis of data using basic econometric tools and writing a project report on the contemporary issues of Indian Economy with the support and assistance from the faculty members.

<u>Course Outcomes</u>: Students will develop the skill to undertake small scale field survey and prepare report based on the data by using the tools and methods studies in the classroom.

Instructions: Ideally there should be 15 classroom lectures to prepare the students for Field Survey and to train them for Report Writing. Remaining should be Field Visits and preparing Project Report.

The project report should ideally cover the following areas:

Introduction–Literature Review–Objectives–Data Methodology– Analysis – Results– Conclusion and Policy Suggestion – Bibliography

Project to be done on a small Primary sample of size 30 or more observations.

Proposed Guidelines

1. Each college shall arrange for a Field Visit for collection of data by the students.
2. Each student will analyze the collected data using basic econometric tools including descriptive statistics and will prepare a term paper between 4000 – 5000 words (excluding charts, diagrams, tables, appendix etc.).
3. The selection of the topic will be from the subjects covered in the undergraduate economics honours syllabus.
4. The term paper will be submitted by the candidates to the respective colleges at least a fortnight before the viva-voce examination which will be held at the respective college centres.
5. The board of examiners will consist of one internal and one external examiner (from some other college on a one-on-one basis).
6. The marks division for the term paper will be as follows: 60 for the written report and 15 for viva-voce.
7. The marks of the written paper will be the average given by the internal and external examiners.
8. However, the viva-voce will be conducted and the marks will be awarded by the external examiner only.

Sem.- VI

Major / DS Course (Core)

ECON 6014

Basic Econometrics

Full Marks: 75 **Credit: 4** **Lectures: 60**

Course Objectives: Provide tools for analysing economic data. Students can analyse economic data, test theories and understand the real-world application of economics concepts through the application of econometric tools. By studying econometrics, students can learn to formulate and estimate the economic models to analyse the relationship between the economic variables. Learning econometrics helps to understand the effects of economic policies and intervention..

Course Outcomes: Students will be able to evaluate economic processes and policies by econometric analysis of data. Prepare them for research.

1. **Nature and scope of Econometrics:** **8 lectures**
   Concept of stochastic relation, Rationale behind the inclusion of random disturbance term in an econometric model, Application of econometrics in different branches of social science
2. **Simple linear regression model**:**(Two variable case**) **17 lectures**
   Assumptions regarding random disturbance term in classical linear regression model - Estimation of the parameters by using Ordinary Least Square method (OLSM) – Gauss Markov theorem. Properties of estimators– Best, linear, unbiased estimator – Point estimator, interval estimator, confidence interval, Testing of hypothesis, t test, F test, goodness of fit – R^2 and Adjusted R^2.
3. **Multiple linear regression model (in three variable set up)**: **12 lectures**
   Assumptions regarding random disturbance term - Estimation of the parameters by using Ordinary Least Square method (OLSM), Properties of OLS estimators, goodness of fit – R^2 and Adjusted R^2, testing of hypothesis-individual and joint, Interpretation of Regression results,
4. **Dummy variable** – Dummy variable trap**.** **6 lectures**
5. **Violation of classical assumptions (Sources, Consequences, Detection):** **17 lectures**
   (i) Heteroscedasticity – Definition, sources, consequences, tests for detecting Heteroscedasticity(Goldfeld – Quandt test, Glesjer test, Park test), remedial measures.
   (ii) Autocorrelation - Definition, sources, consequences,tests for detecting Autocorrelation (Durbin – Watson test, Cochrane – Orcutt iterative method), remedial measures.
   (iii) Multi-collinearity - Definition, sources, exact and near exact multi-collinearity – coefficient of magnification - consequences, tests for detecting Multi-collinearity (Farrer Glauber test), Variance Inflationary Factor, remedial measures – dropping variable technique.

Suggested Reading:

1. John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
2. Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
3. Gujarati Damodar (2004), Basic Econometrics, McGrow-Hill
4. Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3rd edition, Indian edition, 2007
5. Maddala, G.S. Introduction to Econometrics, John Wiley & Sons.
6. Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2nd Edition,2008.
7. Koutsoyiannis A, Theory of Econometrics, ELBS with Macmillan.
8. Bhaumik S.K, Principles of Econometrics, Oxford University Press

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The University of Burdwan

Syllabus for 4 Year Honours and Honours with Research

in

Economics

Seventh and Eighth Semesters

Under

Curriculum and Credit Framework for Undergraduate Programmes (CCFUP) as per NEP, 2020 w.e.f 2023-24

- Students pursuing Option-1, i.e. ***Honours*** shall take up all the courses mentioned;
- Students pursuing Option-2, i.e. ***Honours with Research*** shall take up Dissertation Paper in lieu of the courses ECON 8012, ECON 8013, and ECON 8014 in the 8th semester;
- For students pursuing Option-2, i.e. ***Honours with Research***, a component of ***Community Engagement*** must be incorporated in their Research Project / Dissertation which shall expose students to real life situations and require them to suggest solutions to identified real life problems in their community;
- Students shall be exposed to concepts of ***Research and Publication Ethics*** in the Research Methodology course (ECON 7014) during UG-VII of 4-year UGP;
- Class Hour distribution shall be 15 Lecture Hours per semester for 1 credit
- Feasibility of including course from SWAYAM platform in lieu of Minor Elective paper shall be explored

Approved Structure of Economics Honours Papers (I-VI semesters)

Sem	Course Type	Course Code	Course Title	L-T-P	Credit	Marks
I	Major / DS Course	ECON1011	Microeconomics-I	3 -1-0	4	75
II	Major / DS Course	ECON 2011	Macroeconomics-I	3 -1- 0	4	75
III	Major / DS Course **Level:200 - 299**	ECON 3011	Microeconomics-II	4 -1 -0	5	75
III	Major / DS Course **Level:200 - 299**	ECON 3012	Statistical Methods-I	4 -1 -0	5	75
IV	Major / DS Course **Level:200 - 299**	ECON 4011	Macroeconomics-II	4 -1- 0	5	75
IV	Major / DS Course **Level:200 - 299**	ECON 4012	Mathematical Economics-I	4 -1- 0	5	75
IV	Major / DS Course **Level:200 - 299**	ECON 4013	Statistical Methods-II	4 -1- 0	5	75
V	Major / DS Course **Level:300 - 399**	ECON 5011	Mathematical Economics-II	4 -1 -0	5	75
V	Major / DS Course **Level:300 - 399**	ECON 5012	International Economics	4 -1 -0	5	75
V	Major / DS Course **Level:300 - 399**	ECON 5013	Selected Features of Indian Economy	4 -1 -0	5	75
V	**Internship**	INT 5081		0-0-2	2	50
VI	Major / DS Course **Level:300 - 399**	ECON 6011	Development Economics-I	3 -1- 0	4	75
VI	Major / DS Course **Level:300 - 399**	ECON 6012	Public Economics	3 -1- 0	4	75
VI	Major / DS Course **Level:300 - 399**	ECON 6013	Field Survey and Project	0 -0- 4	4	75
VI	Major / DS Course **Level:300 - 399**	ECON 6014	Basic Econometrics	3 -1- 0	4	75
	Grand total (Sem I – VI)	ONLY DISCIPLINE SPECIFIC PAPERS			**66**	**1100**

Structure of Economics Honours Papers VIIth semesters of 4-yr UGP with Coursework / Research

Seventh Semester (common for both Honours with Coursework and Honours with Research

Sem	Course Type	Course Code	Course Title	L-T-P	Credit	Marks
VII	Major / DS Course **Level:400 - 499**	ECON 7011	**Research Methodology**	5-0-1	6	75
VII	Major / DS Course **Level:400 - 499**	ECON 7012	**Advanced Microeconomic Theory & Applications**	5-1-0	6	75
VII	Major / DS Course **Level:400 - 499**	ECON 7013	**Advanced Macroeconomic Theory & Applications**	5-1-0	6	75
VII	Major / DS Course **Level:400 - 499**	ECON 7014	**Advanced Development Economics: Theory & Applications**	5-1-0	6	75
VII	Minor Course **Level: 300 - 399**	ECON 7021	**(Any one of the following)**		4	75
			Demography OR	3-1-0		
			Applied Statistics OR	3-0-1		
			Course from SWAYAM platform			
	Total VIIth Sem				**28**	**375**

Eighth Semester
Structure of Economics Honours Papers of 4-yr UGP with Coursework

Sem	Course Type	Course Code	Course Title	L-T-P	Credit	Marks
VIII	Major / DS Course **Level:400 - 499**	ECON 8011	**Indian Economic Thought**	5-1-0	6	75
VIII	Major / DS Course **Level:400 - 499**	ECON 8012	**Resource & Environmental Economics**	3-1-0	4	75
VIII	Major / DS Course **Level:400 - 499**	ECON 8013	**Basic Financial Economics**	3-1-0	4	75
VIII	Major / DS Course **Level:400 – 499**	ECON 8014	**Development Studies**	3-1-0	4	75
VIII	Minor Course **Level: 300 - 399**	ECON 8021	**(Any one from the following)**	3-1-0	4	75
			Indian Official Statistics OR			
			Select Features of West Bengal Economy OR			
			Course from SWAYAM platform			
	Total VIIIth sem				**22**	**375**

Structure of Economics Honours Papers (VII-VIII semesters) of 4-yr UGP with Research

Structure of Seventh Semester will be common as mentioned earlier
Students opting for *Honours with Research* shall do Dissertation in lieu of the three courses ECON 8012, ECON 8013, ECON 8014 in Sem-VIII

Eighth Semester
Structure of 4-yr UGP Economics Honours with Research

Sem	Course Type	Course Code	Course Title	L-T-P	Credit	Marks
VIII	Major / DS Course **Level:400 - 499**	ECON 8011	**Indian Economic Thought**	5-1-0	6	75
VIII	Dissertation	ECON 8091	**Dissertation**	0-0-12	12	135 + 90 = 225@
VIII	Minor Course **Level: 300 - 399**	ECON 8021	**(Any one from the following)** **Indian Official Statistics OR** **Select Features of West Bengal Economy OR** **Course from SWAYAM platform**	3-1-0	4	75
	Total VIII				**22**	**375**

@ Seminar Presentation & Submission of Research Project/ Dissertation: 135; Viva-voce: 90.

Template for Research Project / Dissertation

- Within 7 days of commencement of the Final Semester, all eligible and approved students will be allocated Supervisors as per availability and consent of faculty member.
- Topics will be submitted by such students within 15 days of commencement of the Semester to the HoD office forwarded duly by each allocated Supervisor.
- The Synopsis and outline of study shall be presented by the student within 45 days of commencement of the semester
- Students are to simultaneously start working on their Research Project / Dissertation
- Periodic assessment of data collection, analysis and report writing would be carried out by each allocated Supervisor
- End Semester Examination will comprise of submission of Dissertation and Viva-voce and/or Presentation in front of the Examiners (at least one external examiner should be present)
- Marks distribution for Dissertation shall be as follows:
    - For UG Level (UG VIII in 4-year UGP): Report / Dissertation: 135; Viva-voce: 90
- Format for Project Report / Dissertation shall be as follows:
    - Preliminary Section (of 1500-2000 words) providing Background, Conceptual frame, Literature review, Identification of research gaps, Objectives, Importance of literature review, Methods/ procedure /steps, Data sources.
    - Main Section (of 7000-7500 words) with subsections on Results & Discussion
    - Concluding section (of 500-1000 words) with focus on Policy Implications

The above guidelines are common to all the candidates. However depending on the research topic, the candidate and supervisor have the freedom to work out the micro details.

The University of Burdwan

Detailed Syllabus for Seventh and Eighth Semesters for 4 Year Honours and Honours with Research

in

Economics

Under

Curriculum and Credit Framework for Undergraduate Programmes (CCFUP) as per NEP, 2020 w.e.f. 2023-24

Detailed Syllabus for Seventh Semester
for 4 Year UGP

Common for

Honours with Coursework and Honours with Research

in

Economics

Core Paper
ECON 7011
RESEARCH METHODOLOGY FOR ECONOMICS
Credit: 6
Marks: 40(T)+20(P)+15(IA) = 75
Lecture hours – 75+15

Course Objective: To equip students with skill for formulation of a research problem, designing of questionnaire, designing sample and its size across various modes of primary data collection. They would also know possible sources of sampling and non-sampling errors and methods to clean data. Provide exposure to data analysis and report writing.
Course Outcome: Skills to undertake primary data based research, competency in executing sample surveys, knowledge of secondary data sources in Indian context, small scale data analysis and report writing.

Theory: 40 marks

1. Stages of a Research (5 lectures)

- Identifying a Research Problem - Literature Review and tools for reference collection - Critical Evaluation of Literature Review - Formulation of hypotheses - Research design - Data analysis - Interpretation of result – Report Writing – Ethics in Research

2. Research Design (5 lectures)

- Meaning of Research Design - Necessity of Research Design, Framework and parameters - Approaches to Research Design: Qualitative and Quantitative - Types of Research Design: Explanatory, Descriptive, Diagnostic, Experimental, Exploratory and Hypothesis Testing Design

3. Methodologies of collection of data (10 lectures)

- Concept of Universe, Population & Sample; Complete enumeration vs. sample survey
- Sampling techniques: basic ideas of simple random sampling (with and without replacement), stratified random sampling, circular sampling, sampling proportional to size; Snowball Sampling; Purposive sampling; merits & demerits
- Practical methods of drawing random sample using random number tables.
- Prerequisites for Field survey & preparation of Tabulation Format (blank tables)
- Preparation of questionnaire depending on nature of survey - illustrations on the basis of preparation of hypothetical questionnaire

4. Estimation (10 Lectures)

- Interval Estimation –Interval Estimators of Population Mean, Population Variance, and Population Proportion.
- Estimating K-variable GLM – Assumptions & Estimation (using Matrix Algebra)
- Estimation in presence of - Heteroscedasticity, Autocorrelation &Multicollinearity
- Familiarity with Software to estimate CLRM (MSExcel, R, Stata, etc)

5. Estimation with Qualitative Dependent Variables **(7 Lectures)**

- Nature and types of Qualitative Response Models –Linear Probability Model (LPM) and its application, Problems with LPM; Logit Model – Estimation of the Logit Model and its application; Tobit Model and its application.

6. Estimation under Simultaneous Equation System **(15 Lectures)**

- Basic Concepts - Structural Form, Reduced Form, and Final Form; Identification problem - Rank and Order conditions; Reduced Form approach to identification -Methods of Estimation - Single Equation Approach – Problems of applying OLS in simultaneous equation system – Simultaneous Bias – Contemporaneous Correlation – OLS in Recursive System
- Estimation through the methods of: Indirect Least Squares (ILS); Instrumental Variable (IV); 2-Stage Least Square; Properties of these estimators.

7. Testing of Hypothesis **(5 Lectures)**

- Simple Parametric Tests based on τ, t, $\chi 2$ and F Distributions –Small Sample Tests, Large Sample Tests.
- Non-parametric Tests: Median Test, Run Test, Wilcoxon Rank Sum Test, Kruskal-Wallis Test, Concordance Test.

<u>Practical: 20 marks</u>

- Applications of methods and techniques of the above-mentioned modules

<u>Internal Assessment: 15 marks</u>

<u>References (Topics 1-3)</u>:

Bairagi, V., &Munot, M. V. (Eds.). (2019). Research methodology: A practical and scientific approach. CRC Press.

Bethlehem, J. (2009). Applied survey methods: A statistical perspective.Wiley.

Booth, Wayne C() The Craft of Research

Bordens, K. S., & Abbott, B. B. (2002). Research design and methods: A process approach. McGraw-Hill.

Bryman, A. (2016). Social Research Methods.Oxford University Press.

Cochran, W. (2008). Sampling techniques, 3rd ed. Wiley

Cooper, Donald R. and Pamela S. Schindler () Business Research Methods

Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications

Flick, U. (2012).Introducing research methodology: A beginner’s guide to doing a research project.Sage Publications.

Goode and Halt - Methods in Social Surveys and Research

Goon, A. M, Gupta, M. K, and Dasgupta, B. Fundamentals of Statistics (Volumes One and Two),The World Press Private Ltd

Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., Tourangeau, R. (2009).Survey Methodology.Wiley.

J K Sharma- Business Statistics

Kothari C. R., Research Methodology: Methods and Techniques (Second Revised Edition)

Kothari, CR and GauravGarg () Research Methodology: Methods and Techniques
Kumar, R. (2014). Research methodology: A step by step guide for beginners, 4th ed. Sage Publications.
Scheaffer, Richard L. W Mendenhall, and R. L Ott (2023) Elementary Survey Sampling
Sukhatme, P.V. and B.V. Sukhatme (1970) Sampling Theory of Survey with Applications, Iowa State University Press

References (Topics 4-7) :

Chou, Y. (1975) Statistical Analysis, Holt, Reinhart and Winston, New York
Croxton, Crowden and Klein (1971) Applied General Statistics, Prentice Hall of India, New Delhi.
Goon, A. M, Gupta, M. K, and Dasgupta, B. Fundamentals of Statistics (Volumes One and Two),The World Press Private Ltd
Gujarati D. Basic Econometrics, Tata McGraw Hill, New Delhi.
Gujarati D. Econometrics by Example, Tata McGraw Hill, New Delhi.
Gupta, S. C. (1993) Fundamentals of Applied Statistics, S. Chand & Sons, New Delhi. Hogg. R. V. and A. T. Craig (1970) Introduction to Mathematical Statistics (3rd Edition) N.Y.Millar, J. (1996) Statistics for Advanced Level, Cambridge University Press, Cambridge. Spiegel, M. R. (1992) Theory and Problems of Statistics, McGraw Hill Book Co. London.
Johnston and Dinardo, Econometric Methods, McGraw Hill.
Koutsoyiannis: Theory of Econometrics.
Maddala, G.S (1983), Limited-Dependent and Qualitative Variables in Econometrics, Econometric Society Monographs, Cambridge
Maddala, GS –Econometrics, McGraw Hill, N.Y.
Stock, James H. and Mark W. Watson (2007), Introduction to Econometrics, 2/E, Pearson

Core Paper
ECON 7012
ADVANCED MICROECONOMIC THEORY & APPLICATIONS
Credit: 6
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 90

Course Outcome
Clear understanding of behaviour & decision making process of individuals, households and firms.

1. **Advanced Topics in Demand Function: (10 Lectures)**
   - Axioms of Consumer's choice, Indifference Curve, Utility function, Utility maximization
   - Ordinary and compensated demand function, Indirect Utility function, Roy's identity
   - Expenditure function – Properties, Shephard's lemma, Additively separable utility function, Quasi-linear utility function
   - Almost ideal demand system

2. **Advanced Topics in Production function: (10 Lectures)**
   - Specification of technology, Input requirement set, Properties of technology – Monotonic, Convex and regular; CD, CES and Leontieff technology
   - Returns to scale and scale elasticity, Elasticity of factor substitution
   - Homogenous and Homothetic production function, and case of multiple products.
   - Preliminary idea of technical and allocative efficiency.

3. **Advanced topics in Cost and Profit function: (10 Lectures)**
   - Properties of cost function, Shephard's lemma. Profit Maximisation – Factor demand and Output supply function, properties of profit function, Hotelling's lemma; Duality in production; Envelope Theorem

4. **Advanced topics in Markets: (10 Lectures)**
   - Comparison of Welfare under Perfect Competition and Monopoly; Choice of both qualtity and quality under monopoly and its welfare implications; Impact of tax on Monopoly
   - Natural monopoly and sub-additivity of cost function
   - Oligopoly Models – Cournot, Bertrand, Stackelberg model
   - Introduction to basic game theory - Nash equilibrium.

5. **Economics of Uncertainty: (10 Lectures)**
   - Distinction between risk and uncertainty-Individuals behaviour towards risk-Contingent
   - Consumption - Von-Neumann–Morgenstern expected utility function – Properties - uniqueness of expected utility function – positive affine transformation – consumer's equilibrium under uncertainty
   - Arrow-Pratt measures of risk aversion - absolute and relative measures
   - Allocation of wealth to risky asset-output decision under uncertainty

6. **Asymmetric Information: (10 Lectures)**
   - Economics of Information - Imperfect Information - the market for Lemons - Akerlof's Model - the Principal-Agent Model

7. **General Equilibrium:** **(10 Lectures)**

- Walrasian General Equilibrium - a Pure Exchange Model - An aggregate Excess demand function -Walras Law - composite commodity theorem - existence of a general equilibrium
- Uniqueness and stability of General equilibrium

8. **Advanced topics in Welfare Economics:** **(10 Lectures)**

- Social Welfare Functions - The Pareto conditions - Pure Exchange–Pure Production - the Classical Theorem of Welfare Economics - The Theory of the second Best
- Arrow's Social Welfare function - General Possibility theorem - Compensation Principle - Kaldor-Hicks-Scitovsky

References

Arrow, K. and F. Hahn (1971), General Competitive Analysis, Holder-Day, San Francisco.
Baumal: Economic theory and Operational Analysis
Chipman, J. (1965): "The Nature and Meaning of Equilibrium in Economic Theory" in H. Townsend. "Price Theory", Penguin.
De Costa, G.C.(1980) Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
Gravell H. and R. Reese (1992), Microeconomics, Longman, London (2nd Edition)
Hall and Varian: Intermediate Microeconomics
Hall and Varian: Microeconomic Analysis
Henderson and Quandt: Microeconomic Theory
Hilderbrand, W and A. Kirman (1976): Introduction to Equilibrium Analysis, Northern Holland.
Hirshleifer J and J riley (1992): Analysis of Uncertainty and Intonation, Cambridge University Press.
Koutsoyannis: Modern Microeconomics
Kreps, David M. (l990) A. Course in Microeconomic Theory, Princeton University Press.
Kreps: A course in Microeconomic Theory
Layard, P.R.G. and A W. Walters (1978) Microeconomic Theory. McGraw Hill, New York.
Maddala and Miller: Microeconomics-Theory and Applications
Mass-Colell, A., M. Whinston and J. Green (1995); Microeconomic Theory, Oxford University Press, New Delhi.
Mukherjee, Anjan(1990): Walrasian and Non-WalrasianEquilibria, Oxford University, Press, Oxford.
Sen, A. (1999) Microeconomics; Theory and Applications, Oxford University Press, New Delhi.
Silberberg and Suen: The structure of Economics-a mathematical analysis
Tirole, J. (1988), Theory of Industrial Organization, MIT Press.
Varian, H (2000) Microeconomic Analysis. W.W. Norton, New

Core Paper
ECON 7013
ADVANCED MACROECONOMIC THEORY AND APPLICATIONS
Credit: 6
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 90

Course Outcome
Ability to understand & analyse the structure, performances, behaviour and decision making of aggregate economy. Apply macroeconomic principles to explain national and international situations of employment, wages, prices, exchange rate mechanism and capital flow

1. **Unemployment** **(15 Lectures)**
   - The Natural Rate – Types of Unemployment – Full Employment
   - Wage rigidity - Generic Efficiency wage Model - General Version of Efficiency wage model, Shapiro-Stiglitz model, Insider-Outsider model

2. **Wage-Unemployment-Inflation Trade-off** **(15 Lectures)**
   - Why are Wages sticky; The Phillips curve; Lipsey's theoretical rationale behind its existence; Role of Expectations; Adaptive expectation and Rational expectation: Application in Cagan's model. Expectations Augmented Phillips Curve. Single period wage contract model, Two period wage contract model, Policy irrelevance result.
   - Inflation and interest rate- Fisher's equation, Tobin-Mundell Effect.
   - Short run Aggregate supply function- The Sticky Wage model, The Workers' Misperception model, The Imperfect Information model and the Sticky Price model.
   - Derivation of Expectation Augmented Phillips Curve from the Short run Aggregate supply function: Okun's law, Supply Shocks.

3. **The Demand for Money** **(15 Lectures)**
   - Keynesian Regressive Expectation model
   - Portfolio Balance Approach
   - Keynesian macroeconomics without the LM Curve.

4. **Open Economy Macroeconomics-I** **(12 Lectures)**
   - Balance of Payments accounting; national product accounting; monetary accounting
   - Different Exchange rate regimes and Measures of exchange rate
   - IS-LM model with goods trade: comparative statics results- Monetary policy, Fiscal policy, Exchange rate policy (Devaluation).

5. **Open Economy Macroeconomics-II** **(12 Lectures)**
   - Extension to international capital market: perfect capital mobility under fixed exchange rate – Effectiveness of monetary and fiscal policy.
   - Extension to international capital market: perfect capital mobility under flexible exchange rate regime: The Mundell-Flemming Model.
   - Extension to international capital market: imperfect capital mobility under flexible exchange rate.
   - Exchange rate Overshooting.

6. **Dynamic Models with saddle paths** **(20 Lectures)**
   - Dynamic IS-LM model
   - Tobin-Blanchard model
   - The Extended Blanchard model
   - Cagan's model of Hyperinflation
   - Baseline theory of investment, User cost of Capital, Tobin's 'q' theory of investment

References

Ackley, G. (1978) – Macroeconomics: Theory and Policy; (Macmillan)
AsbjornRodseth (2000)- Open economy macroeconomics (Cambridge University Press)
Blanchard, O and Fisher, S (1989)- Lectures on Macroeconomics, MIT press
Branson, W. (1989) – Macroeconomic Theory and Policy; (3rd Ed, Harper & Row)
David Romer (2001)-Advanced Macroeconomics,(2nd Ed, McGraw Hill)
Dornbush, R. (1980)- Open Economy Macroeconomics (New York: Basic Books)
Dornbush, R. and S. Fischer (2004) – Macroeconomics (9th Ed, Tata-McGraw Hill)).
Errol D'Souza (2008) – Macroeconomics (Pearson Education)
Jha, R. (1991)– Contemporary Macroeconomic Theory and Policy; (Wiley Eastern)
Levacic, R and A. Rebman (1986) – Macroeconomics; (2nd Ed, Macmillan).
Mankiw, N. Gregory (2000) – Macroeconomics (4th Ed, Macmillan-Worth))
Mankiw, N.G. and D. Romer (eds.) (1991) – New Keynesian Economics; (MIT, Cambridge)
Turnovsky, S. J (1995): Methods of Macroeconomics Dynamics (Prentice Hall India Pvt Ltd.)

Core Paper

ECON 7014

ADVANCED DEVELOPMENT ECONOMICS: THEORY AND APPLICATIONS

Credit: 6

Full Marks: 60(T) + 15(IA) = 75

Lecture Hours: 90

Course Outcome
Ability to understand the historical causes of underdevelopment & pathways for development. Special emphasis on non-material aspects of development – social sector and gender issues. Apply methods to measure and analyse inequality, poverty, cost-benefits of education & health, gender discrimination. Ability to relate policies with outcomes in context of developing countries.

1. **Poverty** **(10 Lectures)**
   - Conceptual Issues in Poverty Measurement;
   - Poverty Measures & their limitations – Head Count Ratio (HCR), Income-gap Index (IGI), Squared Poverty Index (SPI); Foster-Greer-Thorbecke (FGT) measures of poverty - Sen's Index of Poverty- The Sen-Shorrocks-Thone (SST) Index - Evaluation of Poverty Measures.

2. **Growth & Inequality** **(12 Lectures)**
   - Interconnections between Inequality and Development - The Inverted U hypothesis of Kuznets; Possible explanations of Inverted U – Uneven and Compensatory Changes; Tunnel Effect and Tolerance- Income Inequality Revisited: Piketty vs Kuznets.
   - Innovation, Economic Growth and Inequality – Model of Aghion and Hewitt- Joseph Schumpeter's Theory of "Creative Destruction"- Inequality of Income/Wealth as a Consequence of the Difference in the Rate of Economic Growth and Innovation Activity.

3. **Migration Models in Development** **(10 Lectures)**
   - Ranis-Fei model; Dixit and Marglin model; Jorgenson model; Labour Turnover Model; Recent Empirical Evidences.

4. **Urbanisation& Development** **(8 Lectures)**
   - Urbanization in India: Components of Urban Population Growth; Forces of Urbanization in the Developed and Developing Countries and the Over-Urbanization Phenomenon
   - Urbanisation and Environment - Smart City Development

5. **Population and Development** **(12 Lectures)**
   - From Development to Population; Theory of Demographic Transition; Historical Trends; Adjustment of Birth and Death Rates; Household Choice Models
   - From Population to Development; Malthusian View; Growth Impact; Population and Environment; Population and Innovation; Malthus vs Boserup's arguments

6. **Topics in Social Capital &Development** **(12 Lectures)**
   - O-Ring Theory of Development
   - Basu's Triadic Power Model

7. **Applications** **(11 Lectures)**

- Measurement of Poverty & Inequality– HCR, PGI, IGI, SPI; Gini Index, Kuznets Ratio, Palma Ratio, Theil Index, Computation of the Lorenz Curve
- Empirical Testing of the Inverted U hypothesis
- Empirical assessment of Innovation and Inequality
- National Projection of Total Population and Age-Sex composition – Mathematical Methods and Cohort-Component Methods; Methods of Sub-National Projection of Population; Projection of the Economically Active Population
- Concepts of Stable, Stationary, and Quasi-Stationary Population

References

Adelman, I. and C.T. Morris (1973) – *Economic Growth and Social Equity in Developing Countries,* Stanford, USA

Ahluwalia, M. (1976) – "Inequality, Poverty, and Development", *Journal of Development Economics,* Vol. 6

Ahmed, I (1994), "Technology and Feminization of work", Economic and Political Weekly, 29 (18), WS34–38.

Anand, S. and R. Kanbur (1993) – "The Kuznets Process and the Inequality-Development Relationship", *Journal of Development Economics,* Vol. 40

Anand, S. and R. Kanbur (1993a) – "Inequality and Development: A Critique", *Journal of Development Economics,* Vol. 41

Banerjee, Abhijit, Benabou, Roland and Mookherjee, Dilip, (2006), Understanding Poverty, Oxford University Press,

Basu, K. - Analytical Development Economics

Basu, Kaushik, 1986. "One Kind of Power," Oxford Economic Papers, Oxford University Press, vol. 38(2), pages 259-282, July.

Behrman and Srinivasan Ed.-Handbook of Development Economics, vol. 3

Foster, Greer, Thorbecke – "A Class of Decomposable Poverty Measure", *Econometrica*, May, 1984

Jorgenson, D. – 'The Development of a Dual Economy', *Economic Journal,* Vol. 71, *Reprinted in* S. P. Singh (ed.) Underdevelopment to Development.

Kremer, Michael (1993). "The O-Ring Theory of Economic Development". Q. J. Econ. 108 (3). Oxford University Press: 551–575. doi:10.2307/2118400. JSTOR 2118400.

Kuznets, S. (1955) – "Economic Growth and Economic Inequality, *American Economic Review,* Vol. 45, Kuznets, S. (1963) – "Quantitative Aspects of Economic Growth of Nations: VIII, Distribution of Income by Size", *Economic Development and Cultural Change,* Vol. 12.

Lewis W. A. – 'Economic Development with Unlimited Supplies of Labour' in Agarwala and Singh (ed.) *Economics of Underdevelopment*

Meir, G.M. - Leading Issues in Economic Development

Oommen, MA (2008) Microfinance and poverty alleviation: The case of Kerala's Kudumbashree, CSES Working Paper No. 17. [http://csesindia.org/admin/ modules/cms/docs/publication/17.pdf]

Paukert, F. (1973) – "Income Distribution at Different Levels of Development: A Survey of Evidence, *International Labour Review,* Vol. 108

Philippe Aghion and Rachel Griffith – "Innovation and inequalities "*Oxford Open Economics*, 2024, 3

Ranis, G. and J. Fei - 'A Theory of Economic Development', *American Economic Review,* Vol. 51, 1961, *Reprinted in* Eicher and Witt (ed.) *Agriculture in Economic Development*

Ray, Debraj - Development Economics

Ronald Lee (2003) "The Demographic Transition: Three Centuries of Fundamental Change," *Journal of Economic Perspectives* v. 17, n. 4, Fall 2003, pp.167-190.

Sen, Amartya (1976): An Ordinal Approach to Measurement, Econometrica, Vol. 44, No. 2, (Mar., 1976), pp. 219-231

Shand, Ric and S. Bhide (2000), "Sources of Economic Growth: Regional Dimensions of Reforms," *Economic and Political Weekly, Vol. 35, No. 42, October 14.*

Thirlwall, A.P.- Growth and Development

United Nations - Human Development Report (various issues)

United Nations Publications, *The Determinants and Consequences of population Trends* (Series No.50)

Victor Aguirregabiria: SEN-SHORROCKS-THON INDEX, Encyclopaedia of World Poverty
Visaria, V. (1985), "Infant Mortality in Indian : Level Trends and Determinants" Economic and Political Weekly, Vol.20,No.32, August 10, 1985.
Washington, D.C: The World Bank. Overview, pp. 2-21.
World Bank - World Development Report (various issues)
Bogue, D.J. (1971), Principles of Demography, John Wiley, New York.
Bose, A. (1996), India's Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi
Chiang Choubey, P.K. (2000), Population Policy in India, Kanishka Publications, New Delhi.Coale, A. J. and E. M. Hoover, *Population Growth and Economic Development in Low Income Countries*, Oxford University Press.
Leibenstein, *An Interpretation of the Economic Theory of Fertility, Promising Path or Blind Alley*, The Journal of Economic Literature, XII (2), 1974.
Lundquist, J.H, Douglas L. Anderton and David Yaukey (2015): DEMOGRAPHY
The Study of Human Population, Fourth Edition, Waveland Press
Malthus, Thomas (1798), *An Essay on the Principle of Population* (first edition), Chapters 1-2.
Novell, C. (1988), Methods and Models in Demography, BellhavenPress,London.
Pathak, J.B and F. Ram: Techniques of Demographic Analysis, Himalaya Publishing House
Ray, Debraj - Development Economics
Ronald Lee (2003) "The Demographic Transition: Three Centuries of Fundamental Change," *Journal of Economic Perspectives* v. 17, n. 4, Fall 2003, pp.167-190.
Saxena, P. C. and Talwar P. P. (Eds.), *Recent Advances in the Techniques of DemographicAnalysis*, Himalayan Publishers, Bombay, 1988.
Shryock, H., The *Methods and Materials of Demography*.
Sinha, V.C and E. Zacharia: *Elements of Demography*
Srinivasan, K. and A. Shariff (1998), India: Towards Population and Demographic Goals, Oxford University Press, New Delhi
Srinivasan, K., *Basic Demographic Techniques and Applications*, Sage Publications, New Delhi, 1992.

Minor Elective Paper
ECON 7021

Any ONE from: Demography / Applied Statistics / Course from SWAYAM Platform

DEMOGRAPHY

Credit: 4
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 60
[THIS COURSE IS FOR EXTRA DEPARTMENTAL STUDENTS ONLY]

Course Outcome

Clear understanding of demographic trends and patterns. Conceptual command over the dynamics of size and composition of population, how demographic changes affect national and global economy, and a special focus on India's situation.

1. **Basic Concepts and Indicators** **(8 Lectures)**
   - Vital Rates – Fertility, Mortality, Age Pyramids, and Life Tables

2. **Human Resource and Development** **(10 Lectures)**
   - From Development to Population; Theory of Demographic Transition; Historical Trends.;
   - From Population to Development; Malthusian View; Growth Impact; Population, Environment and Technology

3. **Migration and Urbanization** **(10 Lectures)**
   - Migration in India: Concepts, Determinants & Consequences; Measures of Internal Migration;
   - Urbanization in India: Components of Urban Population Growth; Forces of Urbanization in the Developed and Developing Countries and the Over-Urbanization Phenomenon

4. **Trends in Population, Population Projection&Population Policy in India** **(10 Lectures)**
   - Concepts of Stable, Stationary, and Optimum Population
   - Major demographic features of India's population – Spatial, Age, Sex, Occupational Structure of Indian Population; Birth rate, Death rate, Life Expectancy & Infant Mortality; Trends & Patterns;
   - National Population Policies -Manpower Planning in India.
   - National Projection of Total Population and Age-Sex composition – Mathematical Methods and Cohort-Component Methods; Methods of National & Sub-National Projection of Population; Projection of the Economically Active Population, Demographic Dividend..

5. **Aging and Demographic Change** **(12 Lectures)**
   - Aging Process - Ageing around the world
   - The impact of demographic changes - The changing balance of age groups
   - Social, Economic, and Demographic Changes among the Elderly
   - Dependency ratio

READING LIST

Bogue, D.J. (1971), Principles of Demography, John Wiley, New York.
Bose, A. (1996), India's Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi Chiang
Choubey, P.K. (2000), Population Policy in India, Kanishka Publications, New Delhi.Coale, A. J. and E. M. Hoover, *Population Growth and Economic Development in Low IncomeCountries*, Oxford University Press.
Leibenstein, *An Interpretation of the Economic Theory of Fertility, Promising Path or BlindAlley,* The Journal of Economic Literature, XII (2), 1974.
Lundquist, J.H, Douglas L. Anderton and David Yaukey (2015): DEMOGRAPHY
The Study of Human Population, Fourth Edition, Waveland Press
Malthus, Thomas (1798), *An Essay on the Principle of Population* (first edition), Chapters 1-2.
Novell, C. (1988), Methods and Models in Demography, BellhavenPress,London.
Pathak, J.B and F. Ram: Techniques of Demographic Analysis, Himalaya Publishing House
Ray, Debraj - Development Economics
Ronald Lee (2003) "The Demographic Transition: Three Centuries of Fundamental Change," *Journal of Economic Perspectives* v. 17, n. 4, Fall 2003, pp.167-190.
Saxena, P. C. and Talwar P. P. (Eds.), *Recent Advances in the Techniques of DemographicAnalysis*, Himalayan Publishers, Bombay, 1988.
Shryock, H., The*Methods and Materials of Demography*.
Sinha, V.C and E. Zacharia :*Elements of Demography*
Srinivasan, K. and A. Shariff (1998), India: Towards Population and Demographic Goals, Oxford University Press, New Delhi
Srinivasan, K., *Basic Demographic Techniques and Applications*, Sage Publications, New Delhi, 1992.

Minor Elective Paper

APPLIED STATISTICS

Credit: 4

Full Marks: 40(T) + 20(P) + 15(IA) = 75

Lecture Hours: 60

[THIS COURSE IS FOR EXTRA DEPARTMENTAL STUDENTS ONLY]

Course Outcome

This course will make the students conversant with Ideas of trend, fitting of linear, quadratic trend, exponential curve and plotting of trend values and comparing with given data graphically. It will introduce students to ideas and measurement of seasonal indices. Students will have hands-on training to enable Construction of price and quantity index numbers by comparison and interpretation; Construction of wholesale price index numbers. Students will also learn to handle demographic data and be able to Compute measures of mortality; Complete the life table; Compute measures of fertility and population growth.

Theory: 40 marks

1. **Price Index Numbers** **(15 Lectures)**

- Definition, Criteria for a good index number, and different types of index numbers. Construction of index numbers of prices and quantities, consumer price index number. Uses and limitations of index numbers.
- **Application and hands-on training of:**
    - Construction of price and quantity index numbers by Laspeyres' formula, Paasche's formula, Marshall-Edgeworth's formula, Fisher's Formula - Comparison and interpretation.
    - Construction of wholesale price index number, Cost of living index number, fixed base index number and consumer price index number with interpretation.

2. **Analysis of Time Series** **(15 Lectures)**

- Components of time series, Decomposition of time series. Additive and multiplicative model with their merits and demerits, Illustrations of time series. Measurement of trend by method of free-hand curve, method of semi-averages and method of least squares (linear, quadratic and modified exponential). Measurement of seasonal variations by method of ratio to trend.
- **Application and hands-on training of:**
    - Fitting of linear, quadratic trend, exponential curve and plotting of trend values and comparing with given data graphically.
    - Measurement of seasonal indices by Ratio-to-trend method and plotting of trend values, and comparing with given data graphically.

3. **Vital Statistics** **(12 Lectures)**

- Demographic Methods: Introduction, measurement of population, rates and ratios of vital events. Measurement of mortality: CDR, SDR (w.r.t. Age and sex), IMR, Standardized death rates. Life tables: definition of its main functions and uses. Measurement of fertility and reproduction: CBR, GFR, and TFR. Measurement of population growth: GRR, NRR.
- **Application and hands-on training of:**
    - Computation of measures of mortality
    - Completion of life table
    - Computation of measures of fertility and population growth

4. Demand Analysis **(12 Lectures)**

- Demand and Supply Curves. Price elasticity of demand and supply..
- **Application and hands-on training of:**
    - Determination of demand curve from market data
    - Understanding Engel's law and Engel curve - Deriving Income elasticity of demand - Different types of Engel curve.

5. Statistical Quality Control **(6 Lectures)**

- Importance of statistical methods in industrial research and practice. Determination of tolerance limits. General theory of control charts, process & product control, Control charts for variables: X-bar and R-charts. Control charts for attributes: p- chart and c-chart.
- **Application and hands-on training of:**
    - Determination of tolerance limits
    - Computing X-bar and R-charts
    - Computing p-charts and c-charts

<u>Practical: 20 marks</u>

- Applications of methods and techniques of the above-mentioned modules

<u>Internal Assessment: 15 Marks</u>

Reading/Reference List

Goon, A.M., Gupta, M.K. and Dasgupta, B. (2008): Fundamentals of Statistics, Vol. I, 9th Edition World Press, Kolkata.
Das, N.G.: Statistical Methods, Vol I, Tata McGraw Hill Pub. Co. Ltd.
Gupta, S.C. and Kapoor, V. K., Fundamentals of Mathematical Statistics, Sultan Chand Publication, New Delhi, India
Johnson, R.A. and Wichern, D.W. Applied Multivariate Statistical Analysis, PHI.
Hardle W. and Simar, L. Applied Multivariate Statistical Analysis.
Draper N.R. and Smith, H. Applied Regression Analysis

Detailed Syllabus for Eighth Semester for 4 Year UGP With HONOURS

in

Economics

Under

Curriculum and Credit Framework for Undergraduate Programmes (CCFUP) as per NEP, 2020 w.e.f. 2023-24

Core Paper
ECON 8011
INDIAN ECONOMIC THOUGHT
Credit: 6
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 90

Course Outcome
Part of Indian Knowledge System – this course provides a historical context of economic thoughts by great Indian scholars. Prepares students for better understanding the current Indian economic situation in global context and the policies needed to build a resilient and dynamic India

1. **Economic Thoughts in Ancient India:** **(15 Lectures)**
   - Kautilya's Arthashastra: Varta (National Economy), Importance of agriculture, animal husbandry and trade; Ideas on population growth and slavery; Economic functions of State; Public Finance; Town planning and social security

2. **Economic Thoughts during Pre-independence period:** **(15 Lectures)**
   - Dadabhai Naoroji: Taxation, military expenditure and public debt; Drain theory;
   - Economic Ideas of Ranade; Poverty and industrialization; Agrarian Policy; Railways
   - Ramesh Chandra Dutta's idea on Causes of Poverty and remedies;
   - Gopal Krishna Gokhale's idea on public expenditure and financial reforms; Thoughts on Education
   - Subhas Chandra Bose's thoughts on Planning
   - Ambedkar's ideas on Public Finance; Currency; Caste & Class

3. **Economic Thoughts of Tagore** **(15 Lectures)**
   - Relevance of Tagore's Economic Ideas and Tagore's Economic Model;
   - Ideas on Rural Development;
   - Ideas on Welfare Economic model of Education and its relevance in present scenario;
   - Tagore's Co-operative Principle;

4. **Gandhian Economics:** **(15 Lectures)**
   - Sarvodaya& Welfare economy; Population and food problem; Decentralization; Technology, Industrialisation and Scale of Production; Regeneration of village and khadi industry; Doctrine of trusteeship;

5. **Economic Thoughts in Modern India:** **(15 Lectures)**
   - Radhakamal Mukherjee: Ecological theory of population; Ecological Sustainability & Well being
   - C. N. Vakil: Fiscal policy and financial development in India;
   - D.R. Gadgil: Industrial evolution, war and economic policy and planned economic development;
   - V.K.R.V Rao: National income of India, income tax in India, war-time and post-war economic policies, deficit financing and economic development, dealing with post-devaluation problems.

6. **Economic Thoughts of Indian Nobel Laureates:** **(15 Lectures)**
   - Economics of Amartya Sen: Choice of Technique - Capability Approach – Development as Freedom – Social Choice Theory
   - Economics of Abhijit Banerjee: Poverty and Public Action

References

Banerjee Abhijit and Duflo Esther (2018) Good Economics for Hard Times: Better Answers to Our Biggest Problems

Basu, Asish Kumar (ed.) (2013) RabindranatherSamaj O Rashtrabhavna, Kolkata, Evenel Press

Bhattacharya, S. (2017). Rabindranath Tagore: An Interpretation. UK: Penguin.

Brahmananda, P – Nobel Economics, Himalaya Publishing

Chakrabarty, Bidyut (2022) *Sociopolitical Thought of Rabindranath Tagore*, Sage Publications

Conlin, Jonathan, Great Economic Thinkers: From Adam Smith to AmartyaSen, Speaking Tiger Publishing Ltd., 2018.

Dasgupta, Ajit K., A History of Indian Economic Thoughts, Routledge, 1993.

Dasgupta, Tapati (1993). Social Thought of Rabindranath Tagore: A Historical Analysis. Maharashtra: Abhinav Publications.

Dutta, Bhabatosh (1980) Indian Economic Thought: Twentieth Century Perspectives, 1900-1950, Tata McGrawhill

Elmhirst Leonard K (2008) Poet and Plowman, Kolkata, Visva-Bharati.

GoI (2010) INDIA Perspectives, Vol 24, No. 2 [Special issue on Rabindranath Tagore]

Jayaram, N. 2014. ‘Against fragmentation: RadhakamalMukerjee’s philosophy of social science’, Sociological bulletin, 63 (1): 4–20

Lokanathan, V., History of Economic Thought, S. Chand & Company Limited, 2010.

Planning Commission (1997) Subhas Chandra Bose: Pioneer of Indian Planning

Raj K.N. and A.K. Sen (1959): "Sectoral Models for Development Planning", Arthniti, Calcutta, 2(2), May, 173-182.

Sen, Amartya (1956) : "On Choosing One's Techniques", Economic Weekly, 8(29).

Sen, Amartya (1956a) : "Labour Cost or Common Sense", Economic Weekly, 8(42).

Sen, Amartya (1997) : What's the Point of a Development Strategy, DERP No. 3, STICERD, London School of Economics, p. 18.

Sen, Amartya, (2006) The Argumentative Indian: Writings on History, Culture and Identity, 2006.

Sen, Sudhir (1943) *Rabindranath on Rural Reconstruction*, Calcutta, Visva-Bharati

Core Paper
ECON 8012
RESOURCE AND ENVIRONMENTAL ECONOMICS
Credit: 4
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 60

[Candidates opting for **Honours with Research** will choose Dissertation in lieu of this paper]

Course Outcome

Ability to analyse environmental issues, especially pollution control and global & local sustainable development policies

1. **Relationship between Environment and Economy** **(4 Lectures)**
   - Laws of thermodynamics

2. **Environmental Asset as public good** **(5 Lectures)**
   - Concept of market failure and its causes: incomplete markets, externality, non-rivalry and non-excludability

3. **Economics of Renewable Resource** **(10 Lectures)**
   - Economic of Fishery - Growth function – logistic model – The sustained yield function – Gordon Schaefer model - Underlying assumptions – Drawbacks of MSY – Static model of fishery – bio-economic model and private property regime.
   - Economics of Forestry – The volume function and the mean annual increment – optimal single rotation – The rotation. Timber supply the short run and in long run, socially optimal depletion of forest in the presence of amenity benefits
   - Economics of Land and Water - Debate over Renewablity and Non Renewablity – Optimum use and re-use of Land and Water

4. **Economics of Non Renewable Resource** **(8 Lectures)**
   - Basic concepts – Hotelling rule – The concept of backstop - A simple model of optimal depletion – Perfect competition and monopoly in non-reasonable resource market

5. **Uncertainty, Irreversibility and Option Value** **(8 Lectures)**
   - Principles of Uncertainty, Irreversibility, Inter-Temporal Efficiency, Inter-Generational Equity; Environment-Development Trade-Offs; Environmental Costs of Economic Growth, Limits to Growth
   - Environmental Damages/Benefits, Social Cost Benefit Analysis; Definitions: Total Economic Value Use Value, Option Value and Non-Use Values

6. **Environment and Development** **(8 Lectures)**
   - Environmental issues: local regional and global: Air pollution, water pollution, noise pollution, waste pollution – measurements issues.
   - Trade-off between Development and Environment; Environmental Kuznets Curve - Concept, Genesis, Factors and Lessons

7. **Environmental Policy** **(8 Lectures)**
   - Pollution as negative externality – optimal pollution, Taxation and optimal pollution – The optimal Pigovian tax, The concept of property right - Coase theorem, Potential for market bargain in externality – criticism of Coase theorem. Tradable Pollution Permits – Type of Permits – advantage of TPPs

8. Sustainable Development (5 Lectures)

- Context and the concept – Difference between Economic Growth, Development and Sustainable Development – Values and measures of S.D. SDG goals 2030 and targets

9. Institutions and their functions (4 Lectures)

- UNEP, IPCC, CPCB, Green Bench

References:

Pearce, D and RK Turner: *Economic of Natural Resources and the Environment*, Prentice Hall.

Hodge,Ian*Environmental Economics*, Palgrave MacMillan

Conrad, J.M. and C. Clark : *Natural Resource Economics*, CUP

Conrad, J.M.: *Resource Economics*, Cambridge Univ. Press

Hanley, N., J. Shogren and B. White: *Environmental Economics in Theory and Practice*, MacMillan.

Sengupta, R. P. *Ecological Limits and Economic Development*, OUP

Bhattacharyya, R.N. (Ed.) :*Environmental Economics*, OUP

Dinda, S. Environmental Kuznets Curve Hypothesis: A Survey, *Ecological Economics*, Vol.-49(4), 431-455

World Bank, World Development Report 1992, New York, OUP

Hussen, Ahmed (2018) Principles of Environmental Economics and Sustainability: An Integrated Economic and Ecological Approach; Routledge

Clark, C.W. (1974). Mathematical Bioeconomics. In: van den Driessche, P. (eds) Mathematical Problems in Biology. Lecture Notes in Biomathematics, vol 2. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-45455-4_3

Core Paper
ECON 8013
BASIC FINANCIAL ECONOMICS
Credit: 4
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 60

[Candidates opting for **Honours withResearch** will choose Dissertation in lieu of this paper]

Course Outcome

Understand how financial resources are transacted in the market and its impact on the economy

1. **Financial Markets and Institutions** **(10 Lectures)**
   - Real and Financial Assets; Securities –Types and Attributes; Financial Markets; Capital Market –Primary & Secondary; Trading of Securities, Investment Banks and their operations, Price discovery mechanism
   - Theories of Capital Structure; Capital Structure and the pie theory, Maximizing firm value versus maximizing stockholders' interest, Financial Leverage and Firm Value – Modigliani and Miller Propositions.

2. **Security Analysis** **(10 Lectures)**
   - Economic Analysis: Economic Forecasting and Stock Investment Decision, forecasting techniques, Industry Analysis: Industry Life Cycle, Structural Analysis, Techniques for evaluating relevant industry factors. Company Analysis: Analysis of financial statements, financial ratios and their significance, Impact of changes in accounting policies.
   - Technical Analysis – Dow theory, Random Walk theory.

3. **Efficient Market Hypothesis** **(10 Lectures)**
   - Asymmetric information in financial markets, Efficient Versus Perfect Market; Allocation, Internal & External Efficiencies; Weak, Semi-strong and Strong Forms of Pricing Efficiency-Meaning and Tests.

4. **Portfolio Analysis** **(10 Lectures)**
   - Risk and Return of Individual Securities; Portfolio Risk and Return; Efficient Portfolios; Portfolio Selection Models; Diversifications
   - Capital Asset Returns- Capital market line and Security market line

5. **Capital Market Theories** **(5 Lectures)**
   - Capital-Asset Pricing Model; Arbitrage Pricing Theory and Multi-factor Models of Risk.

6. **Foreign Exchange Rates and Markets** **(10 Lectures)**
   - Determination of Foreign Exchange Rates; Functions of Foreign Exchange Markets – Spot Market, Forward Market; Interest Rate Parity Theory –covered and uncovered; Efficiency in Forex markets
   - Theories of Foreign Exchange Rate Movements - Purchasing Power Parity Theory, Expectations Theory, International Fisher Effect Theory.

References

Bodie, Kane, Marcus & Mohanty: Investments, Tata McGraw-Hill Publishing Company Limited.
Elton and Gruber: Modern Portfolio Theory and Investment Analysis, John Wiley & Sons.
Fischer & Jordan: Security Analysis and Portfolio Management, Prentice-Hall of India Pvt Ltd.
Fuller and Farrel (Jr.): Modern Investments and Security Analysis, McGraw Hill
Giancarlo Gandolfo: International Finance and Open-Economy Macroeconomics. Springer, 2002.
I.M. Bhole : Financial Institutions and Markets, Tata McGraw Hill Publishing Company Limited
Ravi M. Kishore: Financial Management, Taxmann Allied Services Pvt. Ltd.
Rick Bensignor (Ed.): New Thinking in Technical Analysis, Viva Books Private Limited.
Tinic& West: Investing in Securities: An Efficient Markets Approach Adddison-Wesley Publishing Company.
Yuh-Dauh Lyuu : Financial Engineering and Computation, Cambridge University Press.

Core Paper
ECON 8014
DEVELOPMENT STUDIES
Credit: 4
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 60

[Candidates opting for **Honours withResearch** will choose Dissertation in lieu of this paper]

Course Outcome

Ability to understand & analyse theories, models, policies related to rural development for developing countries and assess Indian situation in international context

1. **Introduction to Social Sector** **(3 Lectures)**
   - Components of Social Sector – Importance of Social Sector in Development

2. **Education and Development** **(8 Lectures)**
   - Education as means of Development – Cost-Benefit Analysis in Education – Cost of Education - Private costs & Social costs; Wastage and Stagnation;
   - Benefits of Education - Direct and Indirect benefits; Private and Social benefits; Externalities in Education – Market failure – Public vs Private Debate – Education and Socio-Economic Status

3. **Health and Development** **(8 Lectures)**
   - Why health is important – Direct and Indirect effects on private and social development; Concept of human life value; Burden of Disease
   - Determinants of health – poverty, malnutrition and environmental issues;
   - Institutional issues in health care delivery; Health Financing Models; Health Insurance & Risk Pooling

4. **Applications** **(3 Lectures)**
   - Methods to measure benefits from Education
   - Measuring Inequalities in Education and Health - Concentration Index and Concentration Curves; Class and gender perspectives;
   - Measuring Cost of Illness – YLL, YLD, DALY, QALY

5. **Gender Disparity & Deprivation** **(5 Lectures)**
   - Gender Disparity & deprivation – Missing Women problem - AK Sen's Seven dimensions of Gender Deprivation

6. **Gender and Work** **(10 Lectures)**
   - Labour market issues–occupational segregation, wage disparity, housewifization, feminization, flexibility and casualization – Paid/Unpaid Debate – Care Work & Purple Economy
   - Globalisation & Gender Impacts – SAP & Land Grabs – Working Conditions in Global Factories

7. **Applications** **(3 Lectures)**
   - Gender development and Gender Inequality Measurement Techniques - GII, MPI, WEIA, SIGI, GPI etc
   - Measuring Women's contribution to National Economy
   - Measuring Discrimination in Labour Market – Oaxaca-Blinder Technique

8. **Development and Social Inclusion** **(7 Lectures)**
   - Importance of Inclusive Development
   - Factors affecting Inclusion/Exclusion - Structural factors – Political factors – Economic factors - Historical Background - Intergenerational Mobility
   - Growth, Displacement and Inclusive Development
   - Network, Markets and Inclusion

READING LIST

Beneria, Lourdes, GunseliBerik, and Maria Floro. 2015. Gender, Development and Globalization:Economics as if all People Mattered. Second Edition.Ch.1, 3, 4, 5.

Berik, Gunseli. 1997. The need for crossing the method boundaries in feminist research, Feminist Economics. 3(2). pp. 121-125

Berman, P. (Ed.) (1995) - Health Sector Reform in Developing Countries : Making Health Development Sustainable, Boston: Harvard Series on Population and International Health.

Bessell, Sharon. 2010. "Methodologies for gender-sensitive and pro-poor poverty measures." In The International Handbook of Gender and Poverty by Sylvia Chant. Edward Elgar, Northampton. pp. 59-64

Bhattacharya, Debesh - Political Economy of Development

Blaug. M (1972) - Introduction to Economics of Education (Penguin)

Bogue, D.J. (1971), Principles of Demography, John Wiley, New York.

Cagatay, Nilufer. 1998. "Gender and poverty." UNDP Working Paper no. 5. (Section I & II)

Chant, Sylvia. 2008. "The `Feminization of Poverty' and the `Feminization' of Anti-poverty Programmes: Room for Revision?" Journal of Development Studies, 44(2).

Chenery and Srinivasan Ed.- Handbook of Development Economics, vol.1&2

Chibba, Michael (2008), "Perspectives on Inclusive Development: Concept, approaches and current issues", World Economic Journal, Vo1.9, Issue.4, 145-158pp.

Cohen, E and T. Gaske (1989) - Economics of Education.Pergamon Press, London

Cook, S, (2006), "Structural Change, growth and poverty reduction in Asia: Pathways to inclusive development", Development Policy Review, Vo1.24, No. 1,5 1-80.

Cox, W. Michael, and Richard Alm. "The Churn: The Paradox of Progress." Federal Reserve Bank of Dallas, annual report, 1992.

Davis, Stevens J., John Haltwanger, and Scott Schuh. *Gross Job Creation, Gross Job Destruction,* Cambridge: MIT Press, 1996

De Haan, Arjan.(1999). Social Exclusion: Towards a Holistic Understanding ofDeprivation. London: Department for International Development

Doss, Cheryl. 2001. "How does gender affect the adoption of agricultural innovations? The case of improved maize technology in Ghana."Agricultural Economics 25 pp. 27-39.

Doss, Cheryl. 2011. "The role of women in agriculture." ESA Working Paper.No. 11-02.pp 3-13 Agarwal, Bina. 1988. "Who sows? Who reaps? Women and land rights in India." The Journal of Peasant Studies 15(4) pp. 531-581.

Doss, Cheryl. 2015. "Women and Agricultural Productivity: What Does the Evidence Tell Us?." Economic Growth Center Discussion Paper No. 1051.

El-Enian, Mohamed and Spene, Michael (2008), Growth Strategies and Dynamics: Insights from Country Experiences, Working Paper No.6, Commission on Growth and Development

Folbre,Nancy. 1986. "Cleaning house: New perspectives on households and economic development." Journal of Development Economics. 22, pp. 5-40.

Ghosh, Jayati (2002) "Globalisation, export oriented employment for women and social policy: A Case study of India", Social Scientist, Vol 30(11 and 12), pp. 17–60.

Guy Standing. (1999) "Global Feminisation through flexible labour: A theme revisited", World Development, 27 (3).

Himanshu. (2018). India Inequality Report: Widening Gaps. London: Oxfam.

Himmelweit, Susan. 1995. "The discovery of "unpaid work": the social consequences of the expansion of "work"." Feminist Economics 1(2) pp. 1-19.

Kabeer, Naila. (2000). Social exclusion, poverty and discrimination: towards analytical framework. IDS Bulletin, 31 (4), pp. 83-97.

Kabeer, Naila. 2004. “Globalization, Labor Standards, and Women's Rights: Dilemmas of Collective(In)action in an Interdependent World." Feminist Economics 10 (1): 3-35.
McMohan, W.W. (1999) - Education and Development : Measuring the Social Benefits, OUP, Oxford.
Medeiros, Marcelo and Joana Costa. 2010. “The feminisation of poverty: a widespread phenomena?" In The International Handbook of Gender and Poverty by Sylvia Chant. Edward Elgar, pp. 95-100
Nanda, Priya, NitinDatta, ElinaPradhan, Priya Das and SnehaLamba (2016): “Making Change with Cash? Impact of a Conditional Cash Transfer Programme on Age of Marriage in India,” US AID and ICRW.
Neetha N. (2006), “Invisibility continues? Social Security and Unpaid women workers”, Economic and Political Weekly, Vol XLI (32).
Patel, Leila and Tessa Hochfeld. 2011. \It Buys Food but Does it Change GenderRelations? Child Support Grants in Soweto, South Africa." Gender and Development 19(2): 229-240.
Saloojee, Anver (2003), "Social Inclusion, Anti-Racism and Democratic Citizenship." Toronto: The Laidlaw Foundation. Available online: http://www.laidlawfdn.org/filedchi1dren/sa10ojee.pdf
Schultz, T. W(1971) - Investment in Human Capital, Free Press, New York.
Sen, Gita. 2010. “Poor households or poor women: is there a difference?" In The International Handbook of Gender and Poverty by Sylvia Chant. Edward Elgar, Northampton. pp.101-104
Sen,Anindita and ArijitaDutta (2018) West Bengal's Successful KanyashreePrakalpa Programme Needs More Push From State and Beneficiaries, Economic & Political Weekly, Vol. 53(17), 28 Apr, 2018
Sengupta, Arjun (2009), Inclusive development vs equitable growth, The Asian Age, June.29, www.asianage.comlpresentation/leftnavigatiodopinkdopinionlinclusive-development-vs-equi-x
ShahraRazavi (ed.) (2009.) “The gendered impacts of liberalization: Towards embedded liberalism?” New York: Routledge (for UNRISD).
Sudarshan and A. Shariff (1999), Gender Population and Development, Oxford University Press, New Delhi.
Tilak, J.B.G. (1994) - Education for Development in Asia, Sage Publications, New Delhi.
UNDP (2004), Human Development Report 2004: Cultural Liberty in today’s Diverse World, New Delhi: Oxford University Press.
Weisskopf, Thomas, E, (2004), Affirmative Action in the United States and India: A Comparative Perspective, Rutledge, New York.
World Bank (1993) - The World Development Report, 1993 : Investing in Health, Oxford University Press, New York.
World Bank. (2012) Gender Equality and Development: World Development Report 2012,

Film: China Blue (2005) 87 mins.
Film: Who's Counting? Marilyn Waring on Sex, Lies and Global Economics (1995) 52 mins.

Minor Elective Paper

ECON 8021

Any ONE from: INDIAN OFFICIAL STATISTICS / SELECT FEATURES OF WEST BENGAL ECONOMY / Course from SWAYAM Platform

INDIAN OFFICIAL STATISTICS

Credit: 4

Full Marks: 60(T) + 15(IA) = 75

Lecture hours - 60

[THIS COURSE IS FOR EXTRA DEPARTMENTAL STUDENTS ONLY]

Course Objective: To equip students with knowledge about the Indian Official Statistics collection, generation and dissemination system.

Course Outcome: Skills to use Indian Official Statistics as secondary data sources in Indian context. Understand the processes and use appropriate data.

1. **Official Statistical System in India** **(10 lectures)**
   - Role of Ministry of Statistics & Program Implementation (MoSPI),
   - Central Statistical Office (CSO), National Sample Survey Office (NSSO), Registrar general's Office, Labour Bureau, and National Statistical Commission
   - Methods of collection of official statistics, their Reliability and limitations.
   - Concept of Classification Schemes of Industry, Occupation, Activity

2. **Population Statistics** **(8 lectures)**
   - Working of RGI - Census data – collection – tabulation – information available - limitations

3. **Industrial Statistics** **(8 lectures)**
   - Working of CSO – ASI data – collection – tabulation – information available - limitations

4. **Labour Statistics** **(8 lectures)**
   - NSSO – survey structure – rounds and schedules – Employment & Unemployment Surveys – PLFS and rotating panel system - limitations

5. **Price Statistics** **(10 lectures)**
   - Labour Bureau – collection of price data – index number preparation – types of Price indices in India – CPI and WPI – CPIAL, CPIRL, CPIIW, CPIUW – base year changes - limitations

6. **National Account Statistics** **(8 lectures)**
   - National Income Accounting: Sectors and major heads; National and State tables;limitations

7. **Time Use** **(8 lectures)**
   - Collection of Time Use Data – Activity Types and Codes – strengths and limitations

References:

Altaf Hussain Haji (2023) Indian Official Statistics for Reference

GoI (2009) Statistical System in India, *Min of Statistics & Programme Implementation, Govt of India, [www.mospi.gov.in/sites/default/files/publication_reports/Statistical_System_23nov09_final.pdf]*

Saluja, MR (2017) Measuring India: The Nation’s Statistical System, OUP

SELECT FEATURES OF WEST BENGAL ECONOMY

Credit: 4

Full Marks: 60(T) + 15(IA) = 75

Lecture Hours: 60

[THIS COURSE IS FOR EXTRA DEPARTMENTAL STUDENTS ONLY]

Course Outcome

This course provides a historical context of economic processes in West Bengal. Prepares students for better understanding of the current economic situation of West Bengal in national and global context and the policies needed to build a prosperous and welfare state.

1. **Economic Growth and Structural Change in West Bengal** **(10 Lectures)**
   - Level and growth of SDP and Per Capita SDP in West Bengal
   - District level comparison of SDP and per capita SDP - comparison of the State per capita income in West Bengal and National Per Capita Income
   - Sectoral Contribution of State Income and employment in West Bengal - Changing sectoral composition of state income and sectoral contribution to the growth of income in West Bengal in the post liberalization period.

2. **Agriculture and Agribusiness** **(10 Lectures)**
   - Trends in agricultural production and productivity in West Bengal - Cropping pattern - Crop diversification and Food Security
   - Agribusiness sector - Agribusiness priority sectors in West Bengal - Fisheries, food processing, horticulture
   - Agricultural Marketing- Schemes and services offered by the state government and major achievement.

3. **MSME and Rural Livelihood** **(10 Lectures)**
   - MSME investment limits - role of MSME in West Bengal in terms of state income and employability - A district wise overview of MSME clusters sectors
   - Challenges of MSME in West Bengal - Nature and extent of non-farm employment in West Bengal - SHGs and rural livelihood.

4. **Industries in West Bengal** **(10 Lectures)**
   - Jute and Tea, Iron and Steel, Engineering and Petrochemicals,Leather.
   - Problems and Prospects

5. **State of Public Finance** **(10 Lectures)**
   - State Budget - Sources of Income and Expenditure
   - Revenue Receipts - Tax Revenue -Non-Tax Revenues
   - State’s Expenditure – Components and trend - Trends in sectoral allocation of fund
   - Analysis of Deficits - Primary deficit - Fiscal Deficit-Budget Deficit - Fiscal Decentralisation. Major decentralization initiatives.

6. **Rural Development and Social Welfare Schemes (10 Lectures)**

- Panchayat and Rural development - Swami Vivekananda Swanirbhar Karmasansthan Prakalpa (SVSKP), West Bengal Swanirbhar Sahayak Prakalpa (WBSSP) - Training on self-employment and livelihood augmentation
- Social Welfare Schemes for Women and Children - Social Welfare Schemes for farmers and migrant workers- Social Welfare Schemes for elderly and disabled- Social Welfare Schemes for education and livelihood.

References

Chatterjee, Biswajit and Aparajita Dhara (Edi), 2018: Perspectives of West Bengal Economy, Palmview Publishing LLP, Kolkata

Finance Commission, India (2017): Evaluation of State Finances with reference to State of West Bengal. Web link: https://fincomindia.nic.in/asset/doc/commission-reports/15thFC/reports/studies/evaluation/STATE%20OF%20WEST%20BENGAL.pdf

GOWB (2021-22): Economic Review (2021-22), Department of Planning and Statistics, Government of West Bengal

JhaDebajit, Jagadish Prasad Sahu and Parinita Singh (2024) "A Political Economy Analysis of Recent Growth Slowdown in West Bengal, *Economic and Political Weekly*, Vol. 59, Issue No. 49.

Khasnabis , Ratan (2008): "The Economy of West Bengal" Economic and Political Weekly 43(52):103-115

NABARD (2022-23): Sectoral Paper on MSME in West Bengal, NABARD, Regional Office, Kolkata

Roychowdhury, Ajitava and Tuhin Das (Edi), 2005: "West Bengal Economy: Some Contemporary Issues" Allied Publisher

Sanyal, Sanjeev and Aakanksha Arora (2024): Relative Economic Performance of Indian States: 1960-61 to 2023-24, The Economic Advisory Council to the PM'

BAES, Government of West Bengal: Statistical Abstract and Economic Review, various years

Detailed Syllabus for Eighth Semester
for 4 Year UGP with

HONOURS WITH RESEARCH

in

Economics

Under

Curriculum and Credit Framework for Undergraduate Programmes (CCFUP) as per NEP, 2020 w.e.f. 2023-24

Core Paper
ECON 8011
INDIAN ECONOMIC THOUGHT
Credit: 6
Full Marks: 60(T) + 15(IA) = 75
Lecture Hours: 90

Course Outcome
Part of Indian Knowledge System – this course provides a historical context of economic thoughts by great Indian scholars. Prepares students for better understanding the current Indian economic situation in global context and the policies needed to build a resilient and dynamic India

1. Economic Thoughts in Ancient India: (15 Lectures)

- Kautilya's Arthashastra: Varta (National Economy), Importance of agriculture, animal husbandry and trade; Ideas on population growth and slavery; Economic functions of State; Public Finance; Town planning and social security

2. Economic Thoughts during Pre-independence period: (15 Lectures)

- Dadabhai Naoroji: Taxation, military expenditure and public debt; Drain theory;
- Economic Ideas of Ranade; Poverty and industrialization; Agrarian Policy; Railways
- Ramesh Chandra Dutta's idea on Causes of Poverty and remedies;
- Gopal Krishna Gokhale's idea on public expenditure and financial reforms; Thoughts on Education
- Subhas Chandra Bose's thoughts on Planning
- Ambedkar's ideas on Public Finance; Currency; Caste & Class

3. Economic Thoughts of Tagore (15 Lectures)

- Relevance of Tagore's Economic Ideas and Tagore's Economic Model;
- Ideas on Rural Development;
- Ideas on Welfare Economic model of Education and its relevance in present scenario;
- Tagore's Co-operative Principle;

4. Gandhian Economics: (15 Lectures)

- Sarvodaya& Welfare economy; Population and food problem; Decentralization; Technology, Industrialisation and Scale of Production; Regeneration of village and khadi industry; Doctrine of trusteeship;

5. Economic Thoughts in Modern India: (15 Lectures)

- Radhakamal Mukherjee: Ecological theory of population; Ecological Sustainability & Well being
- C. N. Vakil: Fiscal policy and financial development in India;
- D.R. Gadgil: Industrial evolution, war and economic policy and planned economic development;
- V.K.R.V Rao: National income of India, income tax in India, war-time and post-war economic policies, deficit financing and economic development, dealing with post-devaluation problems.

6. Economic Thoughts of Indian Nobel Laureates: (15 Lectures)

- Economics of Amartya Sen: Choice of Technique - Capability Approach – Development as Freedom – Social Choice Theory
- Economics of Abhijit Banerjee: Poverty and Public Action

References
Banerjee Abhijit and Duflo Esther (2018) Good Economics for Hard Times: Better Answers to Our Biggest Problems
Basu, Asish Kumar (ed.) (2013) RabindranatherSamaj O Rashtrabhavna, Kolkata, Evenel Press
Bhattacharya, S. (2017). Rabindranath Tagore: An Interpretation. UK: Penguin.
Brahmananda, P – Nobel Economics, Himalaya Publishing
Chakrabarty, Bidyut (2022) *Sociopolitical Thought of Rabindranath Tagore*, Sage Publications
Conlin, Jonathan, Great Economic Thinkers: From Adam Smith to AmartyaSen, Speaking Tiger Publishing Ltd., 2018.
Dasgupta, Ajit K., A History of Indian Economic Thoughts, Routledge, 1993.
Dasgupta, Tapati (1993). Social Thought of Rabindranath Tagore: A Historical Analysis. Maharashtra: Abhinav Publications.
Elmhirst Leonard K (2008) Poet and Plowman, Kolkata, Visva-Bharati.
GoI (2010) INDIA Perspectives, Vol 24, No. 2 [Special issue on Rabindranath Tagore]
Jayaram, N. 2014. ‘Against fragmentation: RadhakamalMukerjee’s philosophy of social science’, Sociological bulletin, 63 (1): 4–20
Lokanathan, V., History of Economic Thought, S. Chand & Company Limited, 2010.
Planning Commission (1997) Subhas Chandra Bose: Pioneer of Indian Planning
Raj K.N. and A.K. Sen (1959): "Sectoral Models for Development Planning", Arthniti, Calcutta, 2(2), May, 173-182.
Sen, Amartya (1956) : "On Choosing One's Techniques", Economic Weekly, 8(29).
Sen, Amartya (1956a) : "Labour Cost or Common Sense", Economic Weekly, 8(42).
Sen, Amartya (1997) : What's the Point of a Development Strategy, DERP No. 3, STICERD, London School of Economics, p. 18.
Sen, Amartya, (2006) The Argumentative Indian: Writings on History, Culture and Identity, 2006.
Sen, Sudhir (1943) *Rabindranath on Rural Reconstruction*, Calcutta, Visva-Bharati

<u>Dissertation Paper</u>
<u>ECON 8091</u>
<u>Full Marks: 135(Dissertation) + 90(Viva) = 225</u>

Template for Research Project / Dissertation

- Within 7 days of commencement of the Final Semester, all eligible and approved students will be allocated Supervisors as per availability and consent of faculty member.
- Topics will be submitted by such students within 15 days of commencement of the Semester to the HoD office forwarded duly by each allocated Supervisor.
- The Synopsis and outline of study shall be presented by the student within 45 days of commencement of the semester
- Students are to simultaneously start working on their Research Project / Dissertation
- Periodic assessment of data collection, analysis and report writing would be carried out by each allocated Supervisor
- End Semester Examination will comprise of submission of Dissertation and Viva-voce and/or Presentation in front of the Examiners (at least one external examiner should be present)
- Marks distribution for Dissertation shall be as follows:
    - <u>For UG Level (UG VIII in 4-year UGP)</u>: Report / Dissertation: 135; Viva-voce: 90
- Format for Project Report / Dissertation shall be as follows:
    - Preliminary Section (of 1500-2000 words) providing Background, Conceptual frame, Literature review, Identification of research gaps, Objectives, Importance of literature review, Methods/ procedure /steps, Data sources.
    - Main Section (of 7000-7500 words) with subsections on Results & Discussion
    - Concluding section (of 500-1000 words) with focus on Policy Implications

The above guidelines are common to all the candidates. However depending on the research topic, the candidate and supervisor have the freedom to work out the micro details.

<u>Minor Elective Paper</u>
<u>ECON 8021</u>

Any ONE from: INDIAN OFFICIAL STATISTICS / SELECT FEATURES OF WEST BENGAL ECONOMY / Course from SWAYAM Platform

INDIAN OFFICIAL STATISTICS

<u>Credit: 4</u>
<u>Full Marks: 60(T) + 15(IA) = 75</u>
<u>Lecture hours - 60</u>
<u>[THIS COURSE IS FOR EXTRA DEPARTMENTAL STUDENTS ONLY]</u>

<u>Course Objective</u>: To equip students with knowledge about the Indian Official Statistics collection, generation and dissemination system.
<u>Course Outcome</u>: Skills to use Indian Official Statistics as secondary data sources in Indian context. Understand the processes and use appropriate data.

1. **Official Statistical System in India** **(10 lectures)**
   - Role of Ministry of Statistics & Program Implementation (MoSPI),
   - Central Statistical Office (CSO), National Sample Survey Office (NSSO), Registrar general's Office, Labour Bureau, and National Statistical Commission
   - Methods of collection of official statistics, their Reliability and limitations.
   - Concept of Classification Schemes of Industry, Occupation, Activity

2. **Population Statistics** **(8 lectures)**
   - Working of RGI - Census data – collection – tabulation – information available - limitations

3. **Industrial Statistics** **(8 lectures)**
   - Working of CSO – ASI data – collection – tabulation – information available - limitations

4. **Labour Statistics** **(8 lectures)**
   - NSSO – survey structure – rounds and schedules – Employment & Unemployment Surveys – PLFS and rotating panel system - limitations

5. **Price Statistics** **(10 lectures)**
   - Labour Bureau – collection of price data – index number preparation – types of Price indices in India – CPI and WPI – CPIAL, CPIRL, CPIIW, CPIUW – base year changes - limitations

6. **National Account Statistics** **(8 lectures)**
   - National Income Accounting: Sectors and major heads; National and State tables; limitations
7. **Time Use** **(8 lectures)**
   - Collection of Time Use Data – Activity Types and Codes – strengths and limitations

References:

Altaf Hussain Haji (2023) Indian Official Statistics for Reference
GoI (2009) Statistical System in India, *Min of Statistics & Programme Implementation, Govt of India, [www.mospi.gov.in/sites/default/files/publication_reports/Statistical_System_23nov09_final.pdf]*
Saluja, MR (2017) Measuring India: The Nation’s Statistical System, OUP

SELECT FEATURES OF WEST BENGAL ECONOMY

Credit: 4

Full Marks: 60(T) + 15(IA) = 75

Lecture Hours: 60

[THIS COURSE IS FOR EXTRA DEPARTMENTAL STUDENTS ONLY]

Course Outcome

This course provides a historical context of economic processes in West Bengal. Prepares students for better understanding of the current economic situation of West Bengal in national and global context and the policies needed to build a prosperous and welfare state.

1. **Economic Growth and Structural Change in West Bengal** **(10 Lectures)**
   - Level and growth of SDP and Per Capita SDP in West Bengal
   - District level comparison of SDP and per capita SDP - comparison of the State per capita income in West Bengal and National Per Capita Income
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   - Trends in agricultural production and productivity in West Bengal - Cropping pattern - Crop diversification and Food Security
   - Agribusiness sector - Agribusiness priority sectors in West Bengal - Fisheries, food processing, horticulture
   - Agricultural Marketing- Schemes and services offered by the state government and major achievement.

3. **MSME and Rural Livelihood** **(10 Lectures)**
   - MSME investment limits - role of MSME in West Bengal in terms of state income and employability - A district wise overview of MSME clusters sectors
   - Challenges of MSME in West Bengal - Nature and extent of non-farm employment in West Bengal - SHGs and rural livelihood.

4. **Industries in West Bengal** **(10 Lectures)**
   - Jute and Tea, Iron and Steel, Engineering and Petrochemicals,Leather.
   - Problems and Prospects

5. **State of Public Finance** **(10 Lectures)**
   - State Budget - Sources of Income and Expenditure
   - Revenue Receipts - Tax Revenue -Non-Tax Revenues
   - State’s Expenditure – Components and trend - Trends in sectoral allocation of fund
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- Social Welfare Schemes for Women and Children - Social Welfare Schemes for farmers and migrant workers- Social Welfare Schemes for elderly and disabled- Social Welfare Schemes for education and livelihood.

References

Chatterjee, Biswajit and Aparajita Dhara (Edi), 2018: Perspectives of West Bengal Economy, Palmview Publishing LLP, Kolkata

Finance Commission, India (2017): Evaluation of State Finances with reference to State of West Bengal. Web link: https://fincomindia.nic.in/asset/doc/commission-reports/15thFC/reports/studies/evaluation/STATE%20OF%20WEST%20BENGAL.pdf

GOWB (2021-22): Economic Review (2021-22), Department of Planning and Statistics, Government of West Bengal

JhaDebajit, Jagadish Prasad Sahu and Parinita Singh (2024) "A Political Economy Analysis of Recent Growth Slowdown in West Bengal, *Economic and Political Weekly*, Vol. 59, Issue No. 49.

Khasnabis , Ratan (2008): "The Economy of West Bengal" Economic and Political Weekly 43(52):103-115

NABARD (2022-23): Sectoral Paper on MSME in West Bengal, NABARD, Regional Office, Kolkata

Roychowdhury, Ajitava and Tuhin Das (Edi), 2005: "West Bengal Economy: Some Contemporary Issues" Allied Publisher

Sanyal, Sanjeev and Aakanksha Arora (2024): Relative Economic Performance of Indian States: 1960-61 to 2023-24, The Economic Advisory Council to the PM'

BAES, Government of West Bengal: Statistical Abstract and Economic Review, various years