

KURUKSHETRA UNIVERSITY, KURUKSHETRA
(Established by the State Legislative Act XII of 1956)
(“A+” Grade, NAAC Accredited)

Scheme of Examination of MSc (HONS) 5-year INTEGRATED in Economics Semester 1st to Semester 6th w.e.f. Session 2020-2021, Under Choice Based Credit System/LOCF in phased manner for the regular students of Institute of Integrated and Honors Studies, K.U. Kurukshetra.

Semester	Course Code	Course Name	Credit	Teaching Hour per week	Scheme of Examination			Time
					Theory	Internal Assessment	Total Marks	
Ist	CC-1 IN-ECX-101	Micro Economics-I	6	6	120	30	150	3
	CC-2IN-ECX-102	Macro Economics-I	6	6	120	30	150	3
	AECC-1	(English/MIL)/Communication/Environmental Studies (As per respective Department)	2	2	40	10	50	2
	GE-1 IN-ECX-103	Money,Banking&Finance-I	6	6	120	30	150	3
IInd	CC-3 IN-ECX-201	Micro Economics-II	6	6	120	30	150	3
	CC-4IN-ECX-202	Macro Economics-II	6	6	120	30	150	3
	AECC-2	(English/MIL)/Communication/Environmental Studies (As per respective Department)	2	2	40	10	50	2
	GE-2 IN-ECX-203	Money,Banking&Finance-II	6	6	120	30	150	3
IIIrd	CC-5 IN-ECX-301	Mathematics for Economics-I	6	6	120	30	150	3
	CC-6 IN-ECO-302	Environmental Economics-I	6	6	120	30	150	3
	CC-7 IN-ECO-	Statistics for Economics-I	6	6	120	30	150	3

	303							
	SEC-1	Computer Science Level-1/ Personality Development/MOOC (As per respective Department)	2	2	40	10	50	2
	GE-3IN-ECX-304	Indian Economy-I	6	6	120	30	150	3
IVth	CC-8 IN-ECO-401	Mathematics for Economics-II	6	6	120	30	150	3
	CC-9- IN-ECO-402	Environmental Economics-II	6	6	120	30	150	3
	CC-10 IN-ECO-403	Statistics for Economics-II	6	6	120	30	150	3
	SEC-2	Computer Science Level-1/ Personality Development/MOOC (As per respective Department)	2	2	40	10	50	2
	GE-4IN-ECX-404	Indian Economy-II	6	6	120	30	150	3
Vth	CC-11 IN-ECO-501	Basic Econometrics	6	6	120	30	150	3
	CC-12IN-ECO-502	Development Economics-I	6	6	120	30	150	3
	DSE-1 IN-ECO-503 or DSE-1 IN-ECX-504	History of Economic Thought or Communication skills for Economists	6	6	120	30	150	3
	DSE-2 IN-ECO-505 Or DSE-2 IN-ECO-506	Economics of Health and Education or Public Economics	6	6	120	30	150	3

	GE-5IN-ECO-507	International Trade-I	6	6	120	30	150	3
VIth	CC-13 IN-ECO-601	Economics of Finance	6	6	120	30	150	3
	CC-14- IN-ECO-602	Development Economics-II	6	6	120	30	150	3
	DSE-3 IN-ECO-603 DSE-3 IN-ECO-604 Or DSE-3 IN-ECO-605 DSE-3 IN-ECO-606	Research Methodology Research Methodology(P) Or Energy Economics Energy Economics(P)	4 2	4 2	80 40	20 10	100 50	3
	DSE-4IN-ECO-607 DSE-4IN-ECO-608 Or DSE-4IN-ECO-609 DSE-4IN-ECO-610	Industrial Economics Industrial Economics(P) Or Agricultural Economics Agricultural economics(P)	4 2	4 2	80 40	20 10	100 50	3
	GE-6IN-ECO-611	International Trade-II	6	6	120	30	150	3

*Workload=1 Hour of teaching/2 hours of practical work=25 marks

*MIL stands for Modern Indian Languages

*GE: Generic Elective@ 6 credits. Available in English only(As per respective Department)

*CC: Core courses are fourteen @ 6 credits per semester.

*AECC: Ability Enhancement Compulsory Course are two @ 2 credits per Semester. (Available in Sem. 1 and Sem. 2) (As per respective Department)

*SEC: Skill Enhancement Course is four. @ 2 credits per semester, exist in Sem. 3 and Sem. 4(As per respective Department)

*DSE: Discipline Specific Elective are four @ 6 credits per semester. Available in Sem. 5 & Sem. 6

*General elective may be other than economics.

MASTER OF SCIENCE ECONOMICS (Honors)

(upto and inclusive 6th semester)

5-year integrated course

PROGRAMME OUTCOMES (POs) for MSc honors course of Economics

- 1- To develop skills in graduate students so that they are able to acquire theoretical and practical knowledge about economics, economy, economic behavior, economic policies and economic institutions and economic problems.**
- 2- To inculcate ability in students for critical thinking, lateral thinking about economic phenomena, problems and policies so as to create professional potential in them**
- 3- To create awareness on ethical issues, good business practices, and ecology-economics interface**
- 4- To development ability in youth for understanding basic economic rationality and effective communication skills**
- 5- To prepare youth for career in teaching, industry, government organizations and self-entrepreneurship**
- 6- To make students aware of natural resources, sustainable use and environment**
- 7- To provide learning experience in students that instills deep interest in economic science for the benefit of society.**

PROGRAMME SPECIFIC OUTCOMES(PSOs) for MSc course in Economics (Honors)

PSO1: demonstrate the knowledge and understanding of economic science i.e. vital processes of economy, consumer and producer behavior at micro level and macro-level

PSO2: critically think and correlate the economics knowledge with decision-making with regard to economic planning and economic policies, understanding of conflicts, tradeoffs, and welfare implications of economic measures to improve the quality of life in person as well as of community.

PSO3: demonstrate an understanding of the principles, methods of economic analysis in static and dynamic terms, analysis of economic data

PSO4: concise and meaningful writing and reporting, effective presentation skills, and ability to work productively in a group with co-operation

**Master of Science Economics(Honors)5-year integrated
Semester-1
Micro Economics-I
CC1-IN-ECX-101**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I (i-a) Introduction: Definition & Nature of Economics; Subject matter of Economics: human behavior or product behavior (Robbins' Definition) Basic Problems of an economy (1-b) Fundamental economic Terms: Marginalist Rule, Opportunity cost, Time Value of Money</p>	<p>i-a To introduce the students about microeconomics, its nature, scope, importance; Choice as basic economic problem, and production possibility frontier The aim is to make students attuned with economics as introduced at fresher's level, its subject-matter, and its nature. Also to make a student learn about the basic economic problem of choice and production possibility frontiers i-b is meant to make student acquainted with basic principles of economics and fundamental terms</p>
<p>UNIT-2 (ii-a) Consumer Behavior- Law of equi-marginal utility; Indifference Curve analysis: Consumer Equilibrium (ii-b) Law of Demand; Types of Goods (Ordinary and Giffen); Elasticity of Demand (Price, Income and Cross)</p>	<p>ii-a Objective is to acquaint the students with laws relating to consumption, and approaches to consumer's behavior: Neo-classical, and later developments ii-b The contents under this section are designed to make students learn about the law of demand and elasticity of demand, and the measurement by different approaches.</p>
<p>UNIT-3 (iii-a) Theory of Production: Theory of Cost (Traditional & Modern), Concepts of</p>	<p>iii-a The contents under this section are designed to make students learn about the producer or firm's behaviour as laws of returns in short-period and long period, and least cost combinations, alongwith economies of</p>

Revenue. ; Isoquants & least-cost Combination; Laws of returns & economies of scale (iii-b)	scale iii-b A general idea about the supply and supply law, changes in supply , and sensitivity of supply to price
Supply and Law of Supply;Types of supply, Elasticity of supply.	
UNIT-4 (iv-a) Markets-firm's and industry's equilibrium in Perfect competition	iv-a Objective is to make students' exposure to markets, behavior of perfectly competitive firm
(iv-b) Monopoly: Monopoly market, price discriminating monopoly (first, second & third degree Price Discrimination), Monopolistic Competition: Firm's equilibrium (Chamberlin's model)	iv-b The students are expected to learn about behavior of firm in imperfect competition

Overview of Outcomes

Core Course- Micro Economics-I

After the successful completion of the course, the students will be able to Course Objective #

Ecx101.1 Have insight about the economics, the economic problem and consumer behavior in terms of demand and its elasticity

Ecx101.2 Have further understanding of consumer behavior in terms of indifference curves, and responsive of demand

Ecx101.3 Have knowledge about nature of production, and producer behavior in terms of laws of production, economies and diseconomies of scale, and elasticity of supply

Ecx101.4 Have understanding about markets, perfectly competitive firm and imperfectly competitive firm, and industry.

CORE-COURSE- MICROECONOMICS-1

CO#	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ecx101.1	3	3	1	2	2	2	1	3	1	2	1
Ecx101.2	3	3	2	2	1	1	1	3	1	2	1
Ecx101.3	3	3	1	2	2	2	2	3	2	2	1
Ecx101.4	3	3	2	2	2	1	1	3	1	2	1
Average	3	3	1.5	2	1.75	1.5	1.25	3	1.25	2	1

Suggested Readings List

- Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth.
- Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.

- Borch, K.H. (1968), The Economics of Uncertainty, Princeton University Press, Princeton.
- Broadway, R.W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, London.
- Da Costa, G. C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Diamond and Rothschild (Eds.) (1978), Uncertainty in Economics, Academic Press New York.
- Graff, J. De. V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge.
- Green H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth.
- Heathfield & Wibe (1987):An Introduction to Cost & Production Functions; Macmillan, London.
- Henderson J.and Quandt R.E(1980):Micro-economic Theory: A Mathematical
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.
- Koutsoyiannis A. (1990): Modern Microeconomics, Macmillan press, London.
- Kreps, David M. (1990), A Course in Microeconomic Theory, Princeton University Press, Princeton.
- Layard, P.R.G. and A.W. Walters (1978), Microeconomic Theory, McGraw Hill, New York.
- Quirk, J. and R. Saposnik (1968), Introduction to General Equilibrium Theory and Welfare Economics, McGraw Hill, New York
- Samuelson P.A, and Nordham, W.D(1998):Economics, Tata-McGraw Hill, NewDelhi
- Sen, A. (1999), Microeconomics: Theory and Applications, Oxford University Press, New Delhi. Varian, H. (2000), Microeconomic Analysis, W.W. Norton, New York.

**Master of Science Economics(Honors)5-year integrated
Semester-I
Macro Economics-I
CC2-IN-ECX-102**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Nature and scope of Macroeconomics: Introduction to Macro-economic data; Circular flow of income (i-b) Gross and Net national product, national and personal income, methods of national income accounting.	i-a Objective is to introduce the students about macroeconomics, its nature, scope, importance with the aim is to make students acquainted with macro-economics as introduced at fresher's level, its subject-matter, and nature of economic processes as a circular flow. i-b is meant to give a broad and indepth view of National Income concepts and measurement.
UNIT-2 (ii-a) Theories of Employment: Classical Theory of Employment, Say's Law of Markets, (ii-b) Keynesian Theory of Employment.	ii-a Objective is to acquaint the students with approaches relating to determination of Income and employment- Classical model, its limitations ii-b Students are expected to get exposure about Keynes' model, and basic comparison between the two approaches
UNIT-3 (iii-a) Consumption function: Psychological law of consumption (iii-b) Absolute income hypothesis, Life cycle hypothesis and Permanent income hypothesis	iii-a Objective is to make students' exposure to the concept of consumption function, and its attributes iii-bThe students are expected to learn about Income-consumption relationship in short run and long run in terms of the various kinds of Income-Absolute Income, Relative Income, Permanent Income and Income over life cycle.
UNIT-4 (iv-a) Investment and Investment function. Types	iv-a Aims at pupils' understanding of macroeconomic aggregate of investment; factors which determine

of Investment, and determinants of Investment, Concept of Investment Multiplier (iv-b) Decision to Invest: MEC and rate of interest. Multiplier-Accelerator interaction. Applicability of Keynesian Theory to the developing countries	investment, Investment multiplier and its role. iv-b Objective is to make students learn about decision to Invest, and Income generation process, and applicability of Keynesian economics to developing countries.
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Overview of Outcomes

Core Course- Macroeconomics-I

After the successful completion of the course, the students will be able to

Course Objective

EcX102.1 Have insight about the macroeconomics, national income, concepts and measurement

EcX102.2 Have further understanding of economy in terms of equilibrium level of income employment-classical and Keynesian approach

EcX102.3 Have knowledge about nature of consumption function, and Consumption-income relationship in short and long run

EcX102.4 Have understanding about Capital, investment function, decision to invest, and income generation process

Core-Course- MacroEconomics-1

CO#	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
EcX102.1	3	3	1	2	1	2	1	3	1	2	1
EcX102.2	3	3	2	2	1	1	2	3	2	2	1
EcX102.3	3	3	1	2	2	2	1	3	1	2	1
EcX102.4	3	3	2	2	2	1	1	3	1	2	1
Average	3	3	1.5	2	1.5	1.5	1.25	3	1.25	2	1

Suggested Reading List

- Ackley, G. (1978), Macroeconomics: Theory and Policy, Macmillan, New York.
- Bernanke and Abel: Macroeconomics, 4th Edition
- Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
- Blanchard: Macroeconomics (Pearson Education), 4th Edition.
- Branson, W.A. (1989), Macroeconomic Theory and Policy, (3rd Edition), Harper and Row, New York.
- Dernburg, T.F. and D. M. Mc Dougall, Macroeconomics, McGraw Hill International Book Company.
- Dornbusch, Fisher and Startz: Macroeconomics (Tata McGraw-Hill), 9th Edition.
- Dornbusch, R. and F. Stanley (1999), Macroeconomics, Irwin McGraw Hill, Inc. New

York, 7th Edition.

- Edward Shapiro : Macroeconomic Analysis.
- Frisch, H. (1983), Theories of Inflation, Cambridge University Press, Cambridge.
- Gardner Ackley : Macroeconomic Theory
- Heijdra, B.J. and V.P. Fredericck (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
- Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.
- Karl E. Case, Ray C. Fair : Principles of Macroeconomics, Publisher: Prentice Hall
- Lucas, R. (1981), Studies in Business Cycle Theory, MIT Press, Cambridge, Massachusetts.
- Mankiw N.G: Macroeconomics (Worth Publishers), 5th Edition,
- Mankiw, N. Greogory (2000), Macroeconomics Macmillan Worth Publishers 4th Edition.
- Mankiw, N.G. and D. Romer (Eds.) (1991), New Keynesian Economics, (2Vols.), MIT Press, Cambridge.
- Rana & Verma: Macro-economics Analysis.
- Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
- Ruggles R. and N. Ruggles (1956), National Income Accounts and Income Analysis Mc Graw Hill, Newyork.
- Samuelson P.A, and Nordham, W.D(1998):Economics, Tata- McGraw Hill, New Delhi.
- Sheffirin, S.M. (1996), Rational Expectations, Cambridge University Press, Cambridge.
- Taylor, L. (1983), Structuralist Macroeconomics, Basic Books, New Longman.
- Turnovsky, S.J. (1977), Macroeconomic Analysis and Stabilization Policy, Cambridge University Press, Cambridge.
- Veniers, Y.P. and F.D.Sebold, (1977) Macroeconomics; Models and Policy John Wiley and Inc, USA.

**Master of Science Economics(Honors)5-year integrated
Semester-I
Money, Banking&Finance-1
GE1-IN-ECX-103**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Barter system – Characteristics and difficulties; Money-Definition, functions, classification, and significance; (i-b) Money supply determinants, High-powered money and money multiplier; RBI measures of monetary aggregates.	(i-a) Aims at introducing the students about Barter& money; nature and functions to money (i-b) aims at making the students acquainted with money supply, its determinants and components of money supply
UNIT-2 (ii-a) Money market and Capital market-constituents(lenders and borrowers) instruments, structure and Functioning (ii-b) Nature& role of money& capital markets in India; SEBI-Management, functions, power, guidelines.	(ii-a) Has the objective of giving exposure about money and capital markets, organization&functions (ii-b) Aims at introducing students about dynamics of money and capital markets in India, and functions of SEBI
UNIT-3 (iii-a) Commercial banks –functions; credit creation; Assets and liabilities of Banks; Methods of notes issue in India; problem of non- performing assets (iii-b) Reserve bank of India-functions; credit	iii-a aims at developing understanding in students' mind about commercial banks and their functions , methods of note issue, and problem of NPAs iii-b has the objective of functions of RBI, and its monetary policy

control instruments	
UNIT-4 (iv-a) Recent Monetary Policy; Need of Reform in Banking and Financial System	iv-a has the objective of describing and explaining the basics of latest monetary policy, and need of banking reforms
(iv-b) The Narasimham Committee Report: Report of Committee to Review the Financial System 1991, Narsimham Committee Report on Banking Sector Reforms 1998.	iv-b Aims at explaining the relevance and rationale of recommendations of various committees relating to banking reforms..

Overview of Outcomes

GE COURSE- Money, Banking&Finance-1

After the successful completion of the course, the students will be able to

Course Objective

- Ex.103.1 Have knowledge about the money & money supply determinants
 Ex.103.2 Have understanding of money and capital markets, their Functions, and regulatory body of capital market
 Ex.103.3 Have knowledge about commercial banks, RBI, and problem of NPAs
 Ex.103.4 Have understanding about basic elements of latest monetary Policy and banking reforms.

GE-COURSE- Money, Banking&Finance-1

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.103.1	3	3	1	2	1	2	1	3	2	2	1
Ex.103.2	3	3	2	2	1	1	2	3	2	2	1
Ex.103.3	3	3	1	3	2	1	1	3	2	2	1
Ex.103.4	3	3	1	2	2	1	2	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	1

Suggested Reading List

- A.D. Bain (1992) Economics of the Financial System
- Committee Report II) Summary in RBI Bulletin, July, 1998.
- DM Mithani: Money, Banking and Public Finance
- Goodhart, C.A.E (1978), Money. Information and Uncertainty, The Macmillan Press Ltd., London.
- Johnson, H.G (1972), Further Essays in Monetary Economics, George Allen and Unwin, London.
- Johnson, H.G and Nobay A.R. (1974), Issues in Monetary Economics, Oxford University Press, Delhi.

- Khan, MY: Indian Financial System; Tata-McGrawhill
- Krishna, K.L (1999), Econometric Applications in India, Oxford University Press, New Delhi.
- Laidler, D.E.W. (1977), Demand for Money: Theory and Evidence, Dum-Don Valley, New York.
- Narendra Jadhav (1993), Monetary Economics for India, Macmillan India Ltd., Madras.
- Pierce, David G and Shaw, David M (1974), Monetary Economics: Theories, Evidence and Policy, Butterworths, London.
- R.B.I - Report of the Working Group : Money Supply Analytics and Methodology of Compilation, 1998.
- R.B.I. - Report of the Committee on Banking Sector Reforms (Narasimham
- Roy Bailey (2005) The Economics of Financial Markets
- Suraj.B.Gupta: Monetary Economics - Institutions, Theory & Policy; S Chand publications
- Suraj.B.Gupta: Monetary Planning for India
- Venugopal Reddy, Y (2000), Monetary and Financial Sector Reforms in India, UBS Publishers' Distributors Ltd., Chennai.
- Wrightsman, Dwayne (1971), An Introduction to Monetary Theory and Policy, The Free Press, New York. Gibson, Williamson E and Kaufman, George G (1971), Monetary Economics: Readings on Current Issues, TATA McGraw-Hill Publishing Company Ltd., New Delhi.
- Y.V. Reddy (2000), Monetary and Financial Sector Reforms in India UBSPD, New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-II
Micro Economics-II
CC3-IN-ECX-201**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively. All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Theory of Factor Pricing-Marginal Productivity theory, Modern theory (i-b) Rent: classical, Modern theory of rent, Quasi rent; wage, profit & interest	(i-a) has the objective of introducing students with elaborate view of factor pricing in classical and modern approach (i-b) aims at making the students acquainted with determination of Rent, wage, interest and profit.
UNIT-2 (ii-a) Forms of Imperfect competition: Oligopoly-Cournot's duopoly Model, Bertrand's model, Reaction curves, Kinked Demand Model (ii-b) Cartels & Mergers;	(ii-a) aims at giving the pupils knowledge about behavior of Imperfectly competitive firm under oligopoly non-collusion (ii-b) has the objective of giving knowledge about behavior of imperfectly competitive firm under Oligopoly collusion
UNIT-3 (iii-a) Factor pricing in perfectly competitive market: Demand and Supply of labor in competitive market and imperfect competition: Bilateral monopoly. (iii-b) Cobweb model;	iii-a aims at developing understanding about modern theory of factor pricing in perfect and imperfect competition . iii-b This has the objective of introducing students about price oscillations.
UNIT-4 (iv-a) General Equilibrium Theory: The	iv-a has the objective of explaining General equilibrium , and its condtions to the students

Walrasian System, Existence, Uniqueness and Stability of an equilibrium, Graphical analysis of general equilibrium theory (iv-b) Pareto Improvement & Optimality Criterion (Efficiency of household, producer and product mix).	iv-b aims at introducing the basics of welfare economics.
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Overview of Outcomes

CORE COURSE- MicroEconomics-II

After the successful completion of the course, the students will be able to

Course Objective #

Ecx201.1 Have insight about factor pricing under classical and modern approach

Ecx201.2 Have further understanding of imperfect markets in terms of Duopoly and Oligopoly.

Ecx201.3 Have knowledge about nature of factor pricing under perfect and imperfect markets

Ecx201.4 Have understanding about General equilibrium and elementary welfare economics.

CORE-COURSE- Micro Economics-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ecx201.1	3	3	1	2	1	2	1	3	2	2	1
Ecx201.2	3	3	2	2	1	1	2	3	1	2	1
Ecx201.3	3	3	1	2	2	1	2	3	2	2	1
Ecx201.4	3	3	1	2	2	1	2	3	2	2	1
Average	3	3	1.25	2	1.5	1.25	1.75	3	1.75	2	1

Suggested Reading List

- Archibald, G.C: (ed) (1971): Theory of the Firm, Penguin, Harmondsworth.
- Bain, J: (1958): Barriers to New Competition, Harvard University Press, Harvard.
- Baumol, W.J: (1982): Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.
- Dacosta, G.C: (1980): Production, Prices and Distribution, Tata Mc Graw Hill, New Delhi.
- Henderson, J.M. and Quandt (1980): Micro Economic Theory: A Mathematical Approach, Mc Graw Hill, New Delhi.
- Koutsoyiannis, A: (1979): Modern Microeconomics (2nd ed), Macmillan Press, London.
- Sen, A: (1999): Microeconomics: Theory and Applications, Oxford University Press, New Delhi.
- Stigler, G: (1996): Theory of Price, (4th ed), Prentice Hall of India, New Delhi. Varian, H: (2000): Microeconomic Analysis, W.W. Norton, New York.
- Stonier, A.W and Hague (1972): A Text Book of Economic Theory, ELBS, London. Ahuja, H.L. (2006): Advanced Economic Theory, Sultan Chand and Co., New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-II
Macro Economics-II
CC4:IN-ECX-202**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I (i-a) Aggregate demand, aggregate supply and the price level: the aggregate demand curve; short and long run aggregate curves; Derivation of Aggregate Demand Curve, Shift in Aggregate Demand Curve and Multiplier Effect</p> <p>(i-b) Aggregate Supply: Short Run and Long Run Aggregate supply curve, Derivation of Aggregate Supply Curve, Shift in Aggregate Supply Curve. AD-AS Model: Friedman's Natural Rate Hypothesis</p>	<p>i-a Objective is to introduce the students about Aggregate demand, nature, derivation, shifts in Aggregate demand, and its relationship with price level, as well as with income generation</p> <p>i-b is meant to give a broad view to students about Aggregate supply, nature, derivation, and interaction with Aggregate demand, and natural rate hypothesis</p>
<p>UNIT-2 (ii-a) Fluctuations in Value of money: Inflation-Concept, types-Demand pull, and Cost-push, Measurement of Inflation(price-index)</p> <p>(ii-b) Phillips Curve, Policy-measures; Deflation-nature, causes, and policy-measures</p>	<p>ii-a Objective is to acquaint the students with value of money, its fluctuations, Inflation-typology, measurement and causes</p> <p>ii-b Students are expected to get exposure about Phillips curve, and inquiry into the causes &measures of deflation</p>
<p>UNIT-3 (iii-a) Rate of Interest: Classical, Keynesian and</p>	<p>iii-a Objective is to make students' exposure to the</p>

<p>IS-LM Analysis. IS – LM Model: commodity market equilibrium and the IS curve, money market equilibrium and the LM curve (iii-b) macroeconomic equilibrium and the adjustment process: Monetary & Fiscal Policy co-ordination</p>	<p>theories of interest rate in classical, Keynesian viewpoint; later development as IS-LM model, its working. iii-b The students are expected to learn about adjustment process under IS-LM framework, and monetary-fiscal policy co-ordination</p>
<p>UNIT-4 (iv-a) Trade Cycles-nature, characteristics</p>	<p>iv-a Aims at introducing the students about trade cycles, phases, characteristics</p>
<p>(iv-b) Theories of trade cycles-Hicks, Samuelson and Kaldor; Policy-measures.</p>	<p>iv-b \has the objective of giving exposure to students about explanation of trade cycles in terms of approaches by Hicks, Samuelson, Kaldor, as well as remedial measures</p>

Overview of Outcomes

CORE COURSE- MacroEconomics-II

After the successful completion of the course, the students will be able to

Course Objective

EcX202.1 Have insight about Aggregate demand and Aggregate Supply and its role in macroeconomic equilibrium and income generation

EcX202.2 Have further understanding of value of money, inflation and Inflation and employment relationship.

EcX202.3 Have knowledge about nature of interest rate, IS-LM framework and monetary-fiscal policy interaction

EcX202.4 Have understanding about trade cycles, and theories /models

CORE-COURSE- MACROECONOMICS-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
EcX202.1	3	3	1	2	1	2	1	3	1	2	1
EcX202.2	3	3	2	2	1	1	2	3	2	2	1
EcX202.3	3	3	1	2	2	1	2	3	1	2	1
EcX202.4	3	3	1	2	2	1	2	3	2	2	1
Average	3	3	1.25	2	1.5	1.25	1.75	3	1.5	2	1

Suggested Reading List

- Ackley, G. (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
- Bernanke and Abel: *Macroeconomics*, 4th Edition
- Blackhouse, R. and A. Salansi (Eds.) (2000), *Macroeconomics and the Real World* (2 Vols.), Oxford University Press, London.
- Blanchard: *Macroeconomics* (Pearson Education), 4th Edition.
- Branson, W.A. (1989), *Macroeconomic Theory and Policy*, (3rd Edition), Harper and Row,

New York.

- Dernburg, T.F. and D. M. Mc Dougall, Macroeconomics, McGraw Hill International Book Company.
- Dornbusch, Fisher and Startz: Macroeconomics (Tata McGraw-Hill), 9th Edition.
- Dornbusch, R. and F. Stanley (1999), Macroeconomics, Irwin McGraw Hill, Inc. New York, 7th Edition.
- Edward Shapiro : Macroeconomic Analysis.
- Frisch, H. (1983), Theories of Inflation, Cambridge University Press, Cambridge.
- Gardner Ackley : Macroeconomic Theory
- Heijdra, B.J. and V.P. Fredericck (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
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- Karl E. Case, Ray C. Fair : Principles of Macroeconomics, Publisher: Prentice Hall
- Lucas, R. (1981), Studies in Business Cycle Theory, MIT Press, Cambridge, Massachusetts.
- Mankiw N.G: Macroeconomics (Worth Publishers), 5th Edition,
- Mankiw, N. Gregory (2000), Macroeconomics Macmillan Worth Publishers 4th Edition.
- Mankiw, N.G. and D. Romer (Eds.) (1991), New Keynesian Economics, (2Vols.), MIT Press, Cambridge.
- Rana & Verma: Macro-economics Analysis.
- Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
- Ruggles R. and N. Ruggles (1956), National Income Accounts and Income Analysis McGraw Hill, New York.
- Samuelson P.A, and Nordham, W.D (1998): Economics, Tata- McGraw Hill, New Delhi.
- Sheffirin, S.M. (1996), Rational Expectations, Cambridge University Press, Cambridge.
- Taylor, L. (1983), Structuralist Macroeconomics, Basic Books, New Longman. Turnovsky, S.J. (1977), Macroeconomic Analysis and Stabilization Policy, Cambridge University Press, Cambridge.
- Veniers, Y.P. and F.D. Sebold, (1977) Macroeconomics; Models and Policy John Wiley and Inc, USA.

**Master of Science Economics(Honors)5-year integrated
Semester-II
Money, Banking & Finance-II
GE2-IN-ECX-203**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A & B, comprising 15 and 9 marks respectively. All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Demand for Money- Classical: Quantity Theory Approach, Fisher's Equation; Neoclassical: Cambridge Quantity Theory; Keynesian Liquidity Preference Approach: Transaction, Precaution, Speculative Demand for Money, Liquidity Trap (i-b) Monetarists' approach: Friedman's Modern Quantity Theory of Money; Determinants of demand for money: Income, Wealth and Interest Rate, Shoe-Leather Approach.	(i-a) Aims at introducing the students about DEMAND FOR MONEY: approach of classicals, neoclassical and Keynes' (i-b) aims at making the students acquainted with monetarist approach to the demand for money; Interest rate and portfolio
UNIT-2 (ii-a) Money and Capital markets-Call Money Operations: Inter-Bank Call Money Market; Bill market operations: Treasury Bill, Commercial Bill; (ii-b) Stock markets: Mechanism, Instruments and Operations; National Stock Exchange; Bombay Stock Exchange.	(ii-a) Has the objective of giving exposure about money market instruments & operations (ii-b) Aims at introducing students about capital market instruments and operations, and working of NSE & BSE
UNIT-3 (iii-a) Exchange Rates: meaning, types: Fixed and Flexible Exchange Rate, Policy of Managed Flexibility: Adjustable Peg System, Crawling peg	iii-a aims at developing understanding in students' mind about EXCHANGE RATES, and exchange rate adjustments in historical perspective by leading nations of Europe and US

<p>system, Policy of Managed Floating: Clean & Dirty Floating, European Snake (iii-b) Multiple Exchange Rates; Speculation, Hedging, Swapping and arbitrage operations in foreign currency.</p>	<p>iii-b has the objective of giving understanding about multiple exchange rates and various operations in foreign exchange market</p>
<p>UNIT-4 (iv-a) Development Banking: Role, Nature and Functions, Non-Banking Financial intermediaries, Merchant Banking, Investment Banking</p> <p>(iv-b) Refinancing institutions; Financing of foreign trade-modes and instruments; Export-Import Bank(EXIM): Role and Functions.</p>	<p>iv-a has the objective of describing and explaining the basics of development banks , merchant banks and NBFIs</p> <p>iv-b Aims at explaining the relevance and rationale of refinancing institutions, and export-import procedures and EXIM bank functions</p>

OVERVIEW OF OUTCOMES

GE COURSE- Money, Banking&Finance-II

After the successful completion of the course, the students will be able to

Course Objective

EcX.203.1 Have knowledge about the demand for money and Classical, neoclassical and Modern approach to it

EcX.203.2 Have understanding of money and capital market instruments, mechanism of stock markets and leading stock exchanges

EcX.203.3 Have knowledge about exchange rate mechanism, adjustments ,And foreign exchange market operations

EcX203.4 Have understanding about development banking, refinancing and EXIM bank operations for trade financing..

GE-COURSE- Money, Banking&Finance-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
EcX.203.1	3	3	1	2	1	2	1	3	2	2	1
EcX203.2	3	3	2	2	1	1	2	3	2	2	1
EcX203.3	3	3	1	3	2	1	1	3	2	2	1
EcX203.4	3	3	2	2	2	1	2	3	2	2	1
Average	3	3	1.5	2.25	1.5	1.25	1.5	3	2	2	1

Suggested Reading List

- A.D. Bain (1992) Economics of the Financial System
- Committee Report II) Summary in RBI Bulletin, July, 1998.
- DM Mithani:Money, Banking and Public Finance
- Goodhart, C.A.E (1978), Money. Information and Uncertainty, The Macmillan Press Ltd., London.

- Johnson, H.G (1972), Further Essays in Monetary Economics, George Allen and Unwin, London.
 - Johnson, H.G and Nobay A.R. (1974), Issues in Monetary Economics, Oxford University Press, Delhi.
 - Khan, MY: Indian Financial System; Tata-McGrawhill
 - Krishna, K.L (1999), Econometric Applications in India, Oxford University Press, New Delhi.
 - Laidler, D.E.W. (1977), Demand for Money: Theory and Evidence, Dum-Don Valley, New York.
 - Narendra Jadhav (1993), Monetary Economics for India, Macmillan India Ltd., Madras.
 - Pierce, David G and Shaw, David M (1974), Monetary Economics: Theories, Evidence and Policy, Butterworths, London.
 - R.B.I - Report of the Working Group : Money Supply Analytics and Methodology of Compilation, 1998.
 - R.B.I - Report of the Committee on Banking Sector Reforms (Narasimham
 - Roy Bailey (2005) The Economics of Financial Markets
 - Suraj.B.Gupta: Monetary Economics - Institutions, Theory & Policy; S Chand publications
 - Suraj.B.Gupta: Monetary Planning for India
 - Venugopal Reddy, Y (2000), Monetary and Financial Sector Reforms in India, UBS Publishers' Distributors Ltd., Chennai.
 - Wrightsman, Dwayne (1971), An Introduction to Monetary Theory and Policy, The Free Press, New York. Gibson, Williamson E and Kaufman, George G (1971), Monetary Economics: Readings on Current Issues, TATA McGraw-Hill Publishing Company Ltd., New Delhi.
- Y.V. Reddy (2000), Monetary and Financial Sector Reforms in India UBSPD, New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-III
Mathematics for Economists-I
CC5-IN-ECX-301**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I (i-a) Concepts of set, elementary set operations, laws of set operations, Number of elements in a set, applications of sets (i-b) Functions, limits & continuity: Types of functions, Factors, Substitution and rationalization Methods, continuity and discontinuity of functions;</p>	<p>(i-a) Aims at introducing the students about fundamentals of Set theory and applications (i-b) aims at making the students understand the concept of functions, limit and continuity.</p>
<p>UNIT-2 (ii-a) Matrices-types, addition, multiplication of Matrices, Inverse of matrix, Cramer's rule and matrix inverse method, (ii-b) Applications of matrices in economics, Input-output analysis; more on matrices (vectors, quadratic forms, Eigen roots and Eigen vectors)</p>	<p>(ii-a) Has the objective of giving exposure about Matrices, and operations on matrices (ii-b) Aims at introducing students about applications of matrices, and higher operations on them.</p>
<p>UNIT-3 (iii-a) Differentiation, simple derivatives, higher order derivatives of one variable, their economic applications. Partial total derivatives, double order partial derivative, economic applications;</p>	<p>iii-a aims at developing understanding in students' mind about derivatives, partial and total, and their economic applications iii-b</p>

<p>(iii-b) Maxima & minima of functions: necessary and sufficient conditions for functions, economic application of unconstrained & constrained maxima & Minima.</p>	<p>has the objective of detailing about maxima and minima of functions, and applications of constrained and unconstrained maxima and minima.</p>
<p>UNIT-4 (iv-a) Linear Programming: Graphical and Simplex method, Dual Problem in linear programming (iv-b) , Game Theory: odd moments method, principle of dominance & simplex method, Prisoner's dilemma in game theory, concept of Nash Equilibrium.</p>	<p>iv-a has the objective of describing and explaining the basics of Linear programming problems and solution iv-b Aims at explaining the applications of game theory and Nash equilibrium...</p>

OVERVIEW OF OUTCOMES

CORE COURSE- Mathematics for Economists-I

After the successful completion of the course, the students will be able to

Course Objective

Ex.301.1 Have knowledge about the basics of set theory, economic applications

Ex.301.2 Have understanding of matrix algebra and economic applications of matrices

Ex.301.3 Have knowledge about derivatives and differentiation, maxima and minima of a function.

Ex.301.4 Have understanding about basic elements of linear programming and game theory.

CORE-COURSE- Mathematics for Economists-I

CO#	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.301.1	3	3	1	2	1	2	1	3	2	2	1
Ex.301.2	3	3	2	2	1	1	1	3	2	2	1
Ex.301.3	3	3	1	3	2	1	2	3	2	2	1
Ex.301.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.25	3	2	2	1

Suggested Reading list

- AC Chaing, K Wainwright: Fundamental Methods of mathematical economics, McGraw-Hill Publishing co.
- Aggarwal, H.S. : Modern Micro -Economics, Konark, New Delhi, 1998.
- Allen R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press, London.
- Bhardwaj RS: Mathematics for Economics and Business, EXCEL Books, New Delhi
- Black, J. and J.F. Bradley (1973), Essential Mathematics for Economists, John Wiley and Sons.

- Elias J. Richard: Mathematics for Business and Economics, D. Van Nostrand Company, New York, Cincinnati, Toronto, London, Melbourne
- Henderson J. and Quandt R.E.(1980): Micro-economic Theory: A Mathematical Approach; McGraw-Hill, New Delhi
- Jain TR, Aggarwal SC, Rana, RK: Basic Mathematics for Economists, V Publications, New Delhi
- Leontief, W. (1936) Quantitative input-output relations in the economic systems of the United States. Review of Economics and Statistics, Vol 18, pp.105-125.
- Mathematics for Economics by Michael Hoy et al, PHI, New Delhi, 2004.
- Miller, R.E. and P.D. Blair (1985) Input-Output Analysis: Foundations and Extensions. Prentice-Hall, Englewood Cliffs, New Jersey.
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- Quantitative Methods by D.R. Aggarwal ,Basic Mathematics for Economists by R.C. Joshi, New Academic Publishing.
- Quantitative Methods for Business and Economics by Adil H. Mouhammed, PHI, New Delhi, 2003.
- Quantitative Techniques in Management by N.D. Vohra, TMH.
- Sydsaeter K, Hammond. P. J(2002): Mathematics for economic analysis, Pearson Education Asia, Delhi Taro Yamane, Mathematics for Economists, PHI, 1973

**Master of Science Economics(Honors)5-year integrated
Semester-III
Environmental Economics-1
CC6- IN-ECX-302**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Environment and Economy: Nature and scope of environmental economics; Linkage between environment and economy (i-b) Population-environment linkage; Sustainable Development.	(i-a) Aims at introducing the students about environment economics, and linkage between environment and economy (i-b) aims at making the students acquainted with linkage of environment with population, and sustainable development
UNIT-2 (ii-a) Market failure: Incomplete markets; Externalities (ii-b) Environment as public good – Non-exclusion, Non-rivalry; Non-convexities; Asymmetric information.	(ii-a) Has the objective of giving exposure about market failures, and nature of externalities. (ii-b) Has the objective of acquainting pupils about environment as public good;qualifying features and asymmetric information
UNIT-3 (iii-a) Environment and Development: Natural resources; Human capital vs. Physical capital: Their use & effect on Environment (iii-b) Role of Environment Education in	iii-a aims at developing understanding in students' mind about Role of environment in natural resource development and capital and rational use. iii-b has the objective of making the understanding of role of environment education, Green GDP

controlling pollution; Environmental Educational in India. Green GDP; Environmental Kuznets Curve;	
UNIT-4	iv-a has the objective of describing and explaining the basics of Environment laws in India, Pollution control
(iv-a)Environmental legislation: Pollution-causes, control and abatement	
(iv-b)Environment protection mechanism in India; Environmental institutions and grass root movements.	iv-bAims at explaining the relevance and rationale of environment protection, and role of institutions.

OVERVIEW OF OUTCOMES

CORE COURSE- Environment Economics-1

After the successful completion of the course, the students will be able to

Course Objective

EcX.302.1 Have knowledge about constituents of environment, its Linkage with economy and population

EcX.302.2 Have understanding of market failure, and role of externalities

EcX.302.3 Have knowledge about relationship of environment with Natural resources, and role of environment education

EcX302.4 Have understanding about basic elements of environment laws, and measures to protect the environment.

CORE-COURSE- Environment Economics-1

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
EcX.302.1	3	3	1	2	1	2	1	3	2	2	1
EcX302.2	3	3	2	2	1	3	1	3	2	2	1
EcX302.3.3	3	3	1	3	2	3	1	3	2	2	1
EcX302.4	3	3	1	2	2	3	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	2.75	1	3	2	2	1

Suggested Readings List

- Baumol, W.J. and W.E. Oates (1988), The Theory of Environmental Policy, (2nd Edition), Cambridge University Press, Cambridge.
- Berman, P. (Ed.) (1995), Health Sector Reform in Developing Countries :Making Health Development Sustainable, Boston: Harvard Series on Population and International Health.
- Blaug, M. (1972), Introduction to Economics of Education, Penguin, London.
- Bromely, D.W. (Ed.) (1995), Handbook of Environmental Economics, Blackwell, London.
- Chary, S.N. and Vyasulu, Vinod (2000), Environmental Management - an Indian Perspective, Macmillan
- Cohn, E. and T. Gaske (1989), Economics of Education, Pergamon Press, London.
- Fisher, A.C. (1981), Resource and Environmental Economics, Cambridge University Press, Cambridge.
- Hanley, N., J.F. Shogern and B. White (1997), Environmental Economics in Theory and

Practice, Macmillan.

- Hussen, A.M. (1999), Principles of Environmental Economics, Routledge, London.
- Jeroen, C.J.M. van den Bergh (1999), Handbook of Environmental and Resource Economics, Edward Elgar Publishing Ltd., U.K.
- Kolstad, C.D. (1999), Environmental Economics, Oxford University Press, New Delhi.
- Pearce, D.W. and R. Turner (1991), Economics of Natural Resource Use and Environment, John Hopkins University Press, Baltimore.
- Perman, R. Ma and J. McGilvary (1996), Natural Resource and Environmental Economics, Longman, London.
- Sankar, U. (Ed.) (2001), Environmental Economics, Oxford University Press, New Delhi.
- Schultz, T.W. (1971), Investment in Human Capital, Free Press, New York.
- Tietenberg, T. (1994), Environmental Economics and Policy, Harper Collins, New York.

**Master of Science Economics(Honors)5-year integrated
Semester-III
Statistics for Economics-1
CC7- IN-ECX-303**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Measures of Central Tendency: Arithmetic Mean, Weighted Arithmetic Mean, Median, Mode, Geometric Mean and Harmonic Mean (i-b) Partition values-Quartiles, Deciles, Percentiles Standard Deviation and Lorenz Curve	(i-a) Aims at making basic understanding the computation of first order measures, their interrelationship (i-b) Has the objective of introducing about the partition values and measures of dispersion.
UNIT-2 (ii-a) Skewness: Types, measures of skewness, Pearson's, Bowley's, Kelly's Method, Moments, moments about mean and zero (ii-b) Measures of Kurtosis: Beta and Gamma Coefficients based on Moments	(ii-a) Aims at developing students' minds about the concept of skewness and moments (ii-b) Aims at making understanding of kurtosis, and the measure based on moments
UNIT-3 (iii-a) Correlation: Definition, types, degrees and methods-scatter diagram, Karl Pearson's Coefficient of Correlation, Variance-Covariance Method, Rank Correlation, Concurrent Deviation Method, Coefficient of Determination,	iii-a aims at developing understanding in students' mind about correlation, its properties and measurement iii-b has the objective of acquainting students with basic elements of regression, and standard error of estimate.

<p>Probable Error</p> <p>(iii-b) Linear Regression Analysis- meaning, types, regression lines, regression co-efficient and regression equations and least square method</p>	
<p>UNIT-4</p> <p>(iv-a) Index Numbers: meaning, types, uses and limitations of index numbers, Problems in construction of index numbers, methods of construction of index numbers, Tests of adequacy of index numbers; Some specific problems: chain-base & fixed-base index, base shifting, splicing, deflating of index numbers, Consumer Price index.</p> <p>(iv-b) Time-Series: meaning & components of time-series, model of analysis of time series, methods of measuring trend, and its components; seasonal variations: simple average method, moving average method, ratio to moving average, ratio to trend method and link relative method</p>	<p>iv-a</p> <p>aims at developing understanding about Index numbers, tests and operations on index number series</p> <p>iv-b</p> <p>Goal is to make students familiar with Time series analysis, measurement of trend and seasonal variations by various methods</p>

OVERVIEW OF OUTCOMES

CORE COURSE- Statistics for Economics-1

After the successful completion of the course, the students will be able to

Course Objective #

Ecx.303.1 Have knowledge about the measures of central tendency and partition values

Ecx.303.2 Have understanding about the skewness and kurtosis

Ecx.303.3 Have knowledge about correlation and regression. Forecasting method based on least squares

Ecx303.4 Have understanding about basic elements of Index numbers and time series, trend measurement

CORE-COURSE- Statistics for Economics-1

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ecx.303.1	3	3	1	2	1	2	1	3	2	2	1
Ecx303.2	3	3	2	2	1	1	1	3	2	2	2
Ecx303.3	3	3	1	3	2	1	1	3	2	2	2
Ecx303.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1	3	2	2	1.5

Suggested Reading List

- Cochran, W. G., Sampling Techniques, John Wiley, New York.
- Gupta S. C. Fundamentals of statistics, Himalaya Publishing house, New Delhi.
- Gupta S.C. and V.K. Kapoor, Fundamentals of Applied Statistics, S. Chand and Sons New Delhi.
- Gupta S.P. and Gupta M. P. Business statistics, Sultan chand and sons, New Delhi.
- Hansen, Hurst and Meadow, Sample Survey Methods and Theory, John Wiley New York.
- Horace Secrist: Readings and Problems in statistical methods; Macmillan
- Kmenta J. Elements of Econometrics, Macmillan Publishing Co., Inc. New York.
- Murray.R Spiegel: Statistics; Schaum Outline Series
- Spiegel, M. R. Theory and Problems of Statistics, McGraw Hill Book, London & Croxton, F. E., D. Cowden and S. Klein, Applied General Statistics, Prentice Hall, New Delhi.
- TR Jain, SC Aggarwal, RK Rana: Basic Statistics for Economists; VK Publications
- Vohra, N. D. Quantitative Techniques in Management, Tata McGraw Hill, New Delhi.
- Yates, Frank, Sampling Methods for Census and Surveys, Charles, Griffin Co., London.

**Master of Science Economics(Honors)5-year integrated
Semester-III
Indian Economy-I
GE3-IN-ECX-304**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Nature and Characteristics of Indian Economy: India as Underdeveloped and Developed economy. Colonialism and Underdevelopment of the Indian Economy: (i-b) British Rule and the Exploitation of India, The British Rule and India's Underdevelopment, State Policies and Economic Underdevelopment.	(i-a) Aims at introducing the students about nature of Indian economy, and underdevelopment in historical perspective (i-b) Aims at introducing the students about impact of exploitation of Indian economy during British rule
UNIT-2 (ii-a) Economic Planning: Rationale, Features and Objectives, Strategy of Economic Planning (ii-b) Current plan scenario: Objectives and Targets of perspective plan; NITI Aayog.	(ii-a) Has the objective of giving exposure about planning and strategy of plans (ii-b) Has the objective of acquainting pupils about latest status of planning process in India, and current long term plan
UNIT-3 (iii-a) Problems in Indian Economy: Nature of Employment and Unemployment in India, Concepts, Types, Trends and Structure of Unemployment, Causes of Unemployment (iii-b) Poverty: Concepts of Poverty Line, Incident of Poverty in India, Causes and Measures; Social Exclusion in India.	iii-a aims at developing understanding in students' mind about nature of problem of unemployment in India iii-b has the objective of making the understanding of nature, causes of poverty, and and measures to do away with social exclusion.

<p>UNIT-4</p> <p>(iv-a)Demographic features of Indian Economy</p> <p>(iv-b) Problems of Rural-Urban Migration, causes and Remedies, Urbanization, Recent Population Policy.</p>	<p>iv-a has the objective of describing and explaining the basics of demography of India, trends.</p> <p>iv-b Aims at explaining the nature of rural-urban migration in India, and population planning measures. .</p>
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OVERVIEW OF OUTCOMES

GE COURSE- Indian Economy-1

After the successful completion of the course, the students will be able to

Course Objective #

EcX.304.1 Have knowledge about the distinguishing features of Indian economy, and historical impact of British rule

EcX.304.2 Have understanding about the concept of planning and latest facts about planning system and plans

EcX.304.3 Have knowledge about causes of unemployment and poverty in India, and strategy.

EcX304.4 Have understanding about basics of demography of India, urbanization, population policy

GE – Indian Economy-1

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
EcX304.1	3	3	1	2	1	2	1	3	2	2	1
EcX304.2	3	3	2	2	1	1	1	3	2	2	1
EcX304.3	3	3	1	3	2	1	1	3	2	2	1
EcX304.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1	3	2	2	1

Suggested Reading List

- Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999), India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
- Bardha, P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi.
- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-State Perspectives, Bookwell, Delhi.
- Datt, R. (Ed.) (2001), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- Goel, MM (2011): Economics of Human Resource Development in India, VK Global Publications, New Delhi
- Government of India, Economic Survey, (Annual), Ministry of Finance, New Delhi.
- Government of India, Planning Commission; Five Year Plan Development.
- Jalan, B. (1992), The Indian Economy – Problems and Prospects, Viking, New Delhi.

- Jalan, B. (1996), India's Economic Policy- Preparing for the Twenty First Century, Viking, New Delhi.
- Kapila Uma Indian Economy Academic Foundation New Delhi Latest Edition.
- Mishra S.K.and Puri V.K, Indian Economy Himalya Publication House Latest Edition.
- Monga G.S.and Goel M.M. (2001) Wage Goods Approach and Development Deep and Deep New Delhi.
- Parikh, K.S. (1999), India Development Report – 1999-2000, Oxford University Press, New Delhi.
- Reserve Bank of India, Report on Currency and Finance, (Annual).
- Rudar Dutt and Sundram; Indian Economy S Chand and Company Latest Edition
- Sen, R.K. and B. Chatterjee (2001), Indian Economy: Agenda for 21st Century (Essays in honour of Prof. P.R. Brahmananda), Deep & Deep Publications, New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-IV
Mathematics for Economists-II
CC8-IN-ECX-401**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Analytical geometry- Equation of straight line Slope: Positive & Negative slope, Zero slope, Undefined Slope (i-b) The point slope formula; circle, conic sections, parabola, rectangular hyperbola; Applications in economics	(i-a) Aims at introducing the students about fundamentals of straight line equation and its parameters (i-b) aims at making the students understand the point slope formula, and derivation in case of circle, conic sections, and applications in economics
UNIT-2 (ii-a) Integration-rules of integration, by parts, and by substitution, by partial fractions (ii-b) Integration of logarithmic & exponential functions, evaluation of areas, Definite Integral, Economic applications.	(ii-a) Has the objective of giving exposure about Integration, and methods (ii-b) Aims at introducing students about integration of logarithmic and exponential functions;definite integral; economic applications
UNIT-3 (iii-a) Differential equations-solution; homogeneous& non-homogeneous differential equations, Exact differential equation, Economic applications (iii-b) Difference equations-Solution, general& particular; Homogeneous & General linear difference equations with constant co-	iii-a aims at developing understanding in students' mind about differential equations, solution, and its economic applications iii-b has the objective of detailing about difference equations, solution and their economic applications

efficient, economic applications.	
UNIT-4	iv-a
(iv-a) Linear and quadratic equation and its economic applications, Rate of growth (Compound Annual Growth Rate) and its measurement	has the objective of describing and explaining the basics of Linear and quadratic equations, and their applications
(iv-b) Present value (Or capital value) and its application; Annuities: types, amount and Present value	iv-b Aims at explaining the applications of linear and quadratic equations in present value of assets and fixed regular inflows..

OVERVIEW OF OUTCOMES

CORE COURSE- Mathematics for Economists-II

After the successful completion of the course, the students will be able to

Course Objective #

Ex.401.1 Have knowledge about the basics of analytical geometry, economic applications

Ex.401.2 Have understanding of differential and difference equations, Economic applications

Ex.401.3 Have knowledge about integration, methods and economic applications

Ex.401.4 Have understanding about basic elements of linear and quadratic equations and applications in economics.

CORE-COURSE- MATHEMATICS FOR ECONOMISTS-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.401.1	3	3	1	2	1	2	1	3	2	2	1
Ex.401.2	3	3	2	2	1	1	1	3	3	2	1
Ex.401.3	3	3	1	3	2	1	1	3	3	2	1
Ex.401.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1	3	2.5	2	1

Suggested Reading list

- AC Chaing, K Wainwright: Fundamental Methods of mathematical economics, McGraw-Hill Publishing co.
- Aggarwal, H.S. : Modren Micro -Economics, Konark, New Delhi, 1998.
- Allen R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press, London.
- Bhardwaj RS: Mathematics for Economics and Business, EXCEL Books, New Delhi
- Black, J. and J.F. Bradley (1973), Essential Mathematics for Economists, John Wiley and Sons.
- Elias J. Richard: Mathematics for Business and Economics, D. Van Nostrand Company, New York, Cincinnati, Toronto, London, Melbourne
- Henderson J. and Quandt R.E.(1980): Micro-economic Theory: A Mathematical Approach; McGraw-Hill, New Delhi
- Jain TR, Aggarwal SC, Rana, RK: Basic Mathematics for Economists, V Publications, New Delhi

- Leontief, W. (1936) Quantitative input-output relations in the economic systems of the United States. Review of Economics and Statistics, Vol 18, pp.105-125.
- Mathematics for Economics by Michael Hoy et al, PHI, New Delhi, 2004.
- Miller, R.E. and P.D. Blair (1985) Input-Output Analysis: Foundations and Extensions. Prentice-Hall, Englewood Cliffs, New Jersey.
- Operations Research by Hamdy A. Taha
- Operations Research by R. Wagner
- Proops, J., Faber, M. and Wagenhals, G. (1993) Reducing CO2 Emissions: A Comparative Input-Output Study for Germany and the UK, Springer-Verlag, Heidelberg.
- Quantitative Methods by D.R. Aggarwal ,Basic Mathematics for Economists by R.C. Joshi, New Academic Publishing.
- Quantitative Methods for Business and Economics by Adil H. Mouhammed, PHI, New Delhi, 2003.
- Quantitative Techniques in Management by N.D. Vohra, TMH.
- Sydsaeter K, Hammond. P. J(2002): Mathematics for economic analysis, Pearson Education Asia, DelhiTaro Yamane, Mathematics for Economists, PHI, 1973

**Master of Science Economics(Honors)5-year integrated
Semester-IV
Environmental Economics-II
CC9-IN-ECX-402**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I</p> <p>(i-a) Concept and indicators of sustainable development - sustainability rules,</p> <p>(i-b) Common-Perrings model; The Solow/Hartwick approach to sustainability.</p>	<p>(i-a) Aims at introducing the students about SUSTAINABLE development, and criteria of sustainability</p> <p>(i-b) aims at making the students understand the approaches to sustainable development by leading environment economists.</p>
<p>UNIT-2</p> <p>(ii-a)Management of common property resources; CPRs, LDCs and sustainable development</p> <p>(ii-b)Subsidies, Controls and use of natural capital in India.</p>	<p>(ii-a) Has the objective of giving exposure about the management of common property resources</p> <p>(ii-b) Aims at introducing students about rational approach to subsidies and utilization of natural resources</p>
<p>UNIT-3</p> <p>(iii-a) Environment and energy; Water resource planning; Water and air pollution - existing pollution control mechanisms</p> <p>(iii-b) Land and forest degradation and the strategy for regeneration.</p>	<p>iii-a aims at developing understanding in students' mind about relationship of energy-use, water-use and pollution ;control measures</p> <p>iii-b has the objective of detailing about impact of land and forest degradation; regeneration strategies</p>
<p>UNIT-4</p> <p>(iv-a)</p>	<p>iv-a</p>

Global environmental issues; Problems in managing climate change; I (iv-b) International trade and environment; Trade and environment in WTO regime.	has the objective of describing and explaining the basics of climate change among Global environmental issues iv-bAims at explaining the relationship of trade and environment, and WTO's measures for environment protection.
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OVERVIEW OF OUTCOMES

CORE COURSE- Environmental Economics-II

After the successful completion of the course, the students will be able to

Course Objective

EcX.402.1 Have knowledge about the basics of sustainable development, and approaches to sustainable development

EcX.402.2 Have understanding of common property resource management, and natural capital

EcX.402.3 Have knowledge about impact of energy use and water use on quality of environment, pollution control strategy

EcX.402.4 Have understanding about basic elements of climate change and WTO measures for protection of environment.

CORE-COURSE- ENVIRONMENTAL ECONOMICS-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
EcX402.1	3	3	1	2	1	2	2	3	2	2	1
EcX402.2	3	3	2	2	1	2	2	3	2	2	2
EcX402.3	3	3	1	3	2	2	2	3	2	2	1
EcX402.4	3	3	1	2	2	2	2	3	2	2	2
Average	3	3	1.25	2.25	1.5	2	2	3	2	2	1.5

Suggested Reading List

- Barro, Robert. "Economic Growth in a Cross Section of Countries," *Quarterly Journal of Economics*, 1991
- Brian G. Dahlin , The Impact of Education on Economic Growth -Theory, Findings, and Policy Implications, Duke University, pdf from internet.
- Chary, S.N. and Vyasulu, Vinod (2000), Environmental Management - an Indian Perspective, Macmillan, New Delhi.
- Education and economic growth, Jonathan Temple*, Department of Economics, University of Bristol, 8 Woodland Road, Bristol BS8 1TN, pdf from internet.
- Education and Economic Growth, Robert J. Barro, pdf from internet.

- Hanley, N., J.F. Shogern and B. White (1997), Environmental Economics in Theory and Practice, Macmillan.
- Hussen, A.M. (1999), Principles of Environmental Economics, Routledge, London.
- Jeroen. C.J.M. van den Berg (1999), Handbook of Environment and Resource Economics, Edward Elgar Publishing Ltd., U.K.
- Painuly, J P, Economic Instruments: Application to Environmental Problems, Working paper no 3, by UNEP from IGIDR, Bombay, 1995.
- Panchmukhi, P.R. (1980), Economics of Health: A Trend Report in ICSSR, A Survey of Research in Economics, Vol. VI, Infrastructure, Allied, Delhi.
- Pearce, D.W. and R. Turner (1991), Economics of Natural Resource Use and Environment, John Hopkins University Press, Baltimore.
- Psacharopoulos, G. 1973. Returns to Education: An International Comparison. Amsterdam: Elsevier.
- Schultz, T.W. (1971), Investment in Human Capital, Free Press, New York.
- Value of Life, Value of Time, and Costant Relative, Blaug, M. (1972), Introduction to Economics of Education, Penguin, London.
- World Bank (1993), The World Development Report, 1993: Investing in Health, Oxford University Press, New York.

**Master of Science Economics(Honors)5-year integrated
Semester-IV
Statistics For Economics-II
CC10-IN-ECX-403**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Probability-Basic Concepts, Definitions-Classical and Statistical Definition, Theorems of Probability: Addition Theorem, Multiplication Theorem and Bay's Theorem (i-b) Probability Distribution: Binomial, Poisson and Normal Probability Distribution and their Properties	(i-a) Aims at introducing the students about probability, addition, multiplication theorems (i-b) aims at making the students acquainted with nature of discrete and continuous probability distributions
UNIT-2 (ii-a) Sampling and Sampling Distribution: Some Basic Concepts, Method of Sampling- Census and Sample Method, Sampling and Non Sampling Errors, Sampling Distribution (ii-b) Tests of Hypothesis: Large-Sample Tests- Basic Concepts of Hypothesis Testing and Small Sample Tests-t-test, Fisher's Z-test and F-test.	(ii-a) Has the objective of giving exposure about sampling and methods and concept of sampling distribution (ii-b) Has the objective of acquainting pupils about statistical inference and testing of hypotheses, large sample and small sample tests.
UNIT-3 (iii-a) Chi-Square Test (iii-b) Other Non-Parametric Tests-Sign Test, Wilcoxon Signed Rank Tests, Mann-Whitney U-test, Kruskal-Willis Test.	iii-a aims at developing understanding in students' mind about Chi square tests, its applications. iii-b has the objective of making the understanding of various non-parametric tests

<p>UNIT-4</p> <p>(iv-a)Statistical Estimation Theory: Properties of Good Estimator, Applications of Point Estimation, Interval Estimation for Small Samples</p> <p>(iv-b) Statistical Decision theory: Elements of Decision Problem, Decision Criteria, Applications of Decision Making Under Risk and Decision Tree; Statistical Quality Control (S.Q.C.): meaning, Definition, advantages and Methods of S.Q.C., Control Chart, Types of Control Charts.</p>	<p>iv-a</p> <p>has the objective of describing and explaining the basics of point and interval estimation, and criteria of good estimators</p> <p>iv-b</p> <p>Aims at explaining the relevance and rationale of decision;under risk and uncertainty, and quality control..</p>
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OVERVIEW OF OUTCOMES

CORE COURSE- STATISTICS FOR ECONOMICS-II

After the successful completion of the course, the students will be able to
Course Objective #

Ex.403.1 Have knowledge about the concept of probability and Probability distributions

Ex.403.2 Have understanding about sampling theory, and testing of Hypotheses.

Ex.403.3 Have knowledge about non-parametric tests of significance

Ex.403.4 Have understanding about basic elements of decision theory and statistical quality control

CORE-COURSE- Statistics for Economics-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.403.1	3	3	1	2	1	2	1	3	2	2	1
Ex.403.2	3	3	2	2	1	1	2	3	2	2	1
Ex.403.3	3	3	1	3	2	1	1	3	2	2	2
Ex.403.4	3	3	1	2	2	1	2	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	.25

Suggested Reading List

- Cochran, W. G., Sampling Techniques, John Willey, New York.
- Gupta S. C. Fundamentals of statistics, Himalaya Publishing house, New Delhi.
- Gupta S.C. and V.K. Kapoor, Fundamentals of Applied Statistics, S. Chand and Sons New Delhi.
- Gupta S.P. and Gupta M. P. Business statistics, Sultan chand and sons, New Delhi.
- Hansen, Hurditz and Meadow, Sample Survey Methods and Theory, John Willey New York.
- Horace Secrist: Readings and Problems in statistical methods; Macmillan
- Kamenta J. Elements of Econometrics, Machmillan Publishing Co., Inc. New York.
- Murray.R Spiegel: Statistics; Schaum Outline Series
- Speigal, M. R. Theory and Prodblems of Statistics, McGraw Hill Book, London § Croxton,

- F. E., D. Cowden and S. Kliein, Applied General Statistics, Prentice Hall, New Delhi.
- TR Jain, SC Aggarwal, RK Rana: Basic Statistics for Economists; VK Publication

Master of Science Economics(Honors)5-year integrated
Semester-IV
Indian Economy-II
GE4-IN-ECX-404

External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively. All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) National Income of India: Trends, Estimation and Distribution (i-b) Structural changes in Indian Economy-Changes in Occupational pattern and Sectoral distribution of Income	(i-a) Aims at introducing the students about National Income of India, trends and composition (i-b) Aims at introducing the students about structural changes in Indian economy w.r.t National income of India
UNIT-2 (ii-a) Agriculture & Industry in India: Nature & Importance; Trends in Agricultural Production & productivity (ii-b) Green Revolution, Latest Agricultural Policy in India; Industrialization in India; Latest Industrial Policy.	(ii-a) Has the objective of giving exposure about Agriculture, trends in productivity (ii-b) Has the objective of acquainting pupils about latest agricultural policy and Industrial policy measures.
UNIT-3 (iii-a) External sector: Balance of Payment since 1991; Composition & Direction of India's foreign Trade (iii-b) Export promotion & Import Substitution; Special Economic Zones (SEZ).	iii-a) aims at developing understanding in students' mind about nature of foreign trade :direction and composition iii-b) has the objective of making the understanding of inward oriented trade policy, and SEZs as export promotion
UNIT-4	

<p>(iv-a) Economic Reforms and Liberalization: The Origin of Economic Crisis in the Early 1990s, Economic Reforms in India</p> <p>(iv-b) Macroeconomic Stabilisation, Structural Reforms in India.</p>	<p>iv-a) has the objective of describing and explaining the background of economic reforms and policy initiatives</p> <p>iv-b Aims at explaining the nature of macroeconomic stabilization, and latest structural reforms in india</p>
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OVERVIEW OF OUTCOMES

GE COURSE- Indian Economy-II

After the successful completion of the course, the students will be able to

Course Objective

Exx.404.1 Have knowledge about the distinguishing features of National Income of India , its trends

Exx.404.2 Have understanding about the significance of Agriculture and industry;latest and agri policy initiatives.

Exx.404.3 Have knowledge about Foreign trade, its trends and trade policy measures.

Exx404.4 Have understanding about economic and structural reforms in India, and the present position

GE-COURSE- INDIAN ECONOMY-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Exx404.1	3	3	1	2	1	2	1	3	2	2	1
Exx404.2	3	3	2	2	1	1	1	3	2	2	2
Exx404.3	3	3	1	3	2	1	2	3	2	2	2
Exx404.4	3	3	1	2	2	2	2	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.5	1.5	3	2	2	1.5

Suggested Reading List

- Kapila Uma Indian Economy Academic Foundation New Delhi Latest Edition.
- Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999), India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
- Bardha, P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi.
- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-State Perspectives, Bookwell, Delhi.
- Datt, R. (Ed.) (2001), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- Goel, MM (2011): Economics of Human Resource Development in India, VK Global Publications, New Delhi
- Government of India, Economic Survey, (Annual), Ministry of Finance, New Delhi.
- Government of India, Planning Commission; Five Year Plan Development.
- Jalan, B. (1992), The Indian Economy – Problems and Prospects, Viking, New Delhi.
- Jalan, B. (1996), India's Economic Policy- Preparing for the Twenty First Century, Viking, New Delhi.

- Mishra S.K.and Puri V.K, Indian Economy Himalya Publication House Latest Edition.
- Monga G.S.and Goel M.M. (2001) Wage Goods Approach and Development Deep and Deep New Delhi.
- Parikh, K.S. (1999), India Development Report – 1999-2000, Oxford University Press, New Delhi.
- Reserve Bank of India, Report on Currency and Finance, (Annual).
- Rudar Dutt and Sundram; Indian Economy S Chand and Company Latest Edition
- Sen, R.K. and B. Chatterjee (2001), Indian Economy: Agenda for 21st Century (Essays in honour of Prof. P.R. Brahmananda), Deep & Deep Publications, New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-V
Basic Econometrics
CC11:IN-ECX-501**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I</p> <p>(i-a) Nature and scope of econometrics; Methodology of econometric research; Desirable properties of an econometric model</p> <p>(i-b) Random variables and sampling theory (only review); Covariance, variance, and correlation.</p>	<p>(i-a) Aims at introducing the students to econometrics, and econometric models and methodology</p> <p>(i-b) aims at making the students understand the random variables in sampling theory, and implications of covariance of variables</p>
<p>UNIT-2</p> <p>(ii-a)Nature of the regression analysis; Two variable regression analysis: Some basic ideas; Assumptions of the linear stochastic regression model;</p> <p>(ii-b)Distribution of the dependent variable Y; Problem of estimation: The least square criterion and normal equations.</p>	<p>(ii-a) Has the objective of giving exposure about regression analysis, and indepth meaning of assumptions of linear regression model</p> <p>(ii-b) Aims at introducing students about regression by least square approach, and distribution of the explained variable</p>
<p>UNIT-3</p> <p>(iii-a)Test of the goodness of fit with R^2; Tests of the significance of parameter estimates: Mean and variance of the OLS estimates; Variance of the random variable</p> <p>(iii-b) Sampling distribution of the OLS estimates (standard error test, Z test and student's t test); Confidence intervals for</p>	<p>iii-a aims at developing understanding in students' mind about relationship of goodness of fit with R^2, tests, mean and variance of OLS estimates, and behavior of error term</p> <p>iii-b has the objective of detailing about sampling distribution of OLS estimates, and intervals</p>

OLS estimates; Test of significance for sample correlation coefficient.	estimates, also test for sample correlation coefficient.
UNIT-4 (iv-a) Desirable properties of estimators; Properties of OLS estimators; Second order tests of the assumptions of linear regression model: The assumption of the randomness of u, The assumption of zero mean of u, The assumption of normality of u (iv-b) The problem of Heteroscedasticity, Autocorrelation and Multicollinearity (Nature, causes and consequences).	iv-a has the objective of describing and explaining the basics of desirable properties of estimators, test of OLS assumptions iv-b Aims at explaining the relationship of reliability of estimates in the presence of Heteroscedasticity, autocorrelation and multicollinearity, implications.

OVERVIEW OF OUTCOMES

CORE COURSE- Basic Econometrics

After the successful completion of the course, the students will be able to

Course Objective

Ex.501.1 Have knowledge about the basics of econometrics, econometric models

Ex.501.2 Have understanding of nature of regression analysis, with regard to its assumptions, and least square method

Ex.501.3 Have knowledge about tests of significance of parameter Estimates, and sampling distribution of the estimates, tests

Ex.501.4 Have understanding about basic elements of Best Linear Unbiased efficient estimates, problems of autocorrelation, Multi-collinearity and heteroscedasticity

CORE-COURSE- BASIC ECONOMETRICS

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.501.1	3	3	1	2	1	2	1	3	2	2	1
Ex.501.2	3	3	2	2	1	1	1	3	2	2	1
Ex.501.3	3	3	1	3	2	1	2	3	2	2	2
Ex.501.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.25	3	2	2	1.25

Suggested Reading List

- Amemiya, T. (1985), Advanced Econometrics, Harvard University Press, Cambridge, Mass.
- Baltagi, B.H. (1988), Econometrics, Springer, New York.
- Goldberger, A.S. (1998), Introductory Econometrics, Oxford University Press, New York.
- Gujarati, D.N. (1995), Basic Econometrics (2nd Edition) MC Graw Hill New Delhi.
- Intrilligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall Englewood Cliffs, New Jersey.
- Johnson J. (1991), Econometric Methods, MCGraw Hall Book Co. London
- Kmenta J. (1998), Elements of Econometrics, University of Michigan Press, New York

- Koutsoyiannis, A. (1977), Theory of Econometrics, The Macmillan Press Ltd. London
- Maddala G.S.(Ed) (1993), Econometric Methods and application, Aldershot U.K.
- Pindyck R.S. and D.L. Rubinfeld (1976), Econometric Models and Economic Forecasts, MCGraw Hill Kogakusha Tokyo
- Theil H. (1981), Introduction to Econometrics, Prentice Hall of India, New Delhi

**Master of Science Economics(Honors)5-year integrated
Semester-V
Development Economics-1
CC12-IN-ECX-502**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I</p> <p>(i-a) Growth and Development Meaning of Economic Growth and Development, Features of Developing and Developed Countries, Concepts of Development,</p> <p>(i-b) Measuring Economic Development: Income Measure, Physical Quality of Life Index (PQLI) and Human Development Index (HDI), Determinants and Obstacles to Economic Development</p>	<p>(i-a) Aims at introducing the students about growth and development, distinction between the two in nature and features.</p> <p>(i-b) aims at making the students understand the measurement of economic development in terms of HDI, PQLI., and roadblocks in path of development</p>
<p>UNIT-2</p> <p>(ii-a) Classical Theories of Economic Developmen Adam Smith: Role of Capital Accumulation, Division of Labour, Natural Law and Stage of Stationary State, Theory of Value; Ricardian Theory of Economic Development: Dynamic system of Ricardo, Theory of Rent and Grades of Land</p> <p>(ii-b) Schumpeter: Dynamic Process, Technology, Entrepreneur, Bank Credit; Karl Marx: The Materialistic Interpretation</p>	<p>(ii-a) Has the objective of giving exposure about Smith and Ricardo's views on economic development process, and its determinants</p> <p>(ii-b) Aims at introducing students about Schumpeter and Marx's views on development process, and its determinants</p>

of History, The Theory of Surplus Value, Destruction of Capitalistic Process	
UNIT-3 (iii-a) Sectoral Aspects of Development Role of Agriculture in Economic Development, Green Revolution, Problems of Agriculture Development; (iii-b) Rationale and Pattern of Industrialization in Developing Countries, Terms of Trade between Agriculture and Industry	iii-a aims at developing understanding in students' mind about role of Agriculture in economic development w.r.t. India iii-b has the objective of detailing about Industrialisation and its role in economic development w.r.t India, and terms of trade between the two sectors
UNIT-4 (iv-a) Economic Development and Human Capital Man Power planning: Meaning, Objectives and Methodology of Man Power planning, Man Power Problems and Man Power Planning in LDCs (iv-b) Human Capital Formation and Policy Issues, Sustainable Development with special reference to India	iv-a has the objective of describing and explaining the basics of contribution of manpower planning in economic development iv-b Aims at explaining the relationship of human capital formation and sustainable development in context of Indian economy

OVERVIEW OF OUTCOMES

CORE COURSE- Development Economics-1

After the successful completion of the course, the students will be able to

Course Objective

Ec502.1 Have knowledge about the basics of Economic development and economic growth, measurement by revised standards

Ec502.2 Have understanding of nature of development process in the shape of theories of Smith, Ricardo, Schumpeter and Marx

Ec502.3 Have knowledge about significance of role of Agriculture and industry in economic development in general, and w.r.t India

Ec502.4 Have understanding about basic elements of manpower Planning, and human capital formation, and role in economic Development for developing countries in general, and for India in particular

CORE-COURSE- DEVELOPMENT ECONOMICS-1

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ec502.1	3	3	1	2	1	2	1	3	2	2	1
Ec502.2	3	3	2	2	1	1	1	3	2	2	1
Ec502.3	3	3	1	3	2	2	2	3	2	2	2
Ec502.4	3	3	1	2	2	1	2	3	2	2	1

Average	3	3	1.25	2.25	1.5	1.5	1.5	3	3	2	1.25
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Suggested Reading List:

- Chakravarti, S. (1987), Development Planning: The Indian Experience, Clarendon Press, Oxford.
- Chenery, H. and T.N. Srinivasan (Eds.) (1989), Handbook of Development
- Dasgupta, P. (1993), An Enquiry into Well-being and Destitution, Clarendon Press, Oxford.
- Development, (3rd Edition), W.W. Norton, New York.
- Economics, Vols. 1 & 2, Elsevier, Amsterdam.
- Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
- Gillis, M., D.H. Perkins, M. Romer and D.R. Snodgrass (1992), Economics of
- Grossman, G. and E. Helpman (1991), Innovation and Growth in the Global Economy, MIT Press, Cambridge, Mass.
- Higgins, B. (1959), Economic Development, W.W. Norton, New York.
- Hirschman, A.O. (1958), The Strategy of Economic Development, Yale University Press, New York.
- Kindleberger, C.P. (1977), Economic Development, (3rd Edition), McGraw Hill, New York.
- Meier, G.M. and J.E. Rauch (2005), Leading Issues in Economic Development, (8th Edition), Oxford University Press, New Delhi.
- Nayyar, D. (Ed.) (1994), Industrial Growth and Stagnation: The Debate in India, Oxford University Press, New Delhi.
- Sen, A. (1992), Inequality Reexamined, Oxford University Press, Oxford.
- Sen, A.K. (Ed.) (1990), Growth Economics, Penguin, Harmondsworth.
- Sen, A. (1983), Poverty and Famines, Oxford University Press, Oxford.
- Thirlwal, A.P. (1999), (6th Edition), Growth and Development, Macmillan, U.K.
- Todaro, M.P. and S.C. Smith (2003), (8th Edition), Economic Development, Pearson Education, Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-V
History of Economic Thought
DSE1-IN-ECX-503**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I</p> <p>(i-a) Classical economics- Adam Smith: Growth, distribution and value; David Ricardo: Distribution theory and views on International trade</p> <p>(i-b)Malthus: Theory of population; Reaction against classicals- Karl Marx: Theory of Capital Exploitation and Surplus value.</p>	<p>(i-a) Aims at introducing to the students about economic thoughts of A Smith and D Ricardo on growth, distribution, and foreign trade</p> <p>(i-b) aims at making the students understand ideas of Malthus and Marx on growth of population and economic growth</p>
<p>UNIT-2</p> <p>(ii-a) Neo-classical- Marshall: Views on Elasticity, Consumer's and Producer's Surplus, Time Element in determination of Prices, Quasi Rent; Keynesian Economics: Underemployment Equilibrium, MEC, Investment Multiplier and Liquidity Preference,</p> <p>(ii-b) Development economists – Hicks: Consumer's surplus, Super Multiplier; Samuelson theory of trade cycle.</p>	<p>(ii-a)</p> <p>Has the objective of giving exposure about neoclassical economic thought with Marshall as a great synthesizer, and Conceptual framework of Keynesian economics</p> <p>(ii-b)</p> <p>Aims at introducing to students about Development economists-Hicks and Samuelson</p>
<p>UNIT-3</p> <p>(iii-a) Cambridge School of economists, Chicago school of economists</p> <p>(iii-b) Mathematical School of economics: Jevons, Walras and Pareto.</p>	<p>iii-a</p> <p>aims at developing understanding in students' mind about economic ideology of Cambridge school and Chicago school of thought</p> <p>iii-b</p> <p>has the objective of detailing about the</p>

	ideology oriented toward mathematical approach by Jevons, Walras and Pareto
UNIT-4	iv-a
(iv-a) Indian economic Thought- Kautilya: wealth, Divisions of economics, Production, Agriculture, Trade, Public Finance and Economic Functions of State; M.K.Gandhi: Economic Philosophy and ideas, Socialism, The Sarvodaya Plan	has the objective of describing and explaining the basics of contribution of Indian thinkers viz Kautilya and Gandhi
(iv-b) VKRV Rao: Economic Planning and their economic thoughts; Amartya Sen: Social Welfare and economic justice, poverty Index.	iv-b Aims at discussing the economic thoughts of VKRV Rao and Amartya Sen

OVERVIEW OF OUTCOMES

DS ELCTIVE- History of Economic Thought

After the successful completion of the course, the students will be able to

Course Objective

Ex.503.1 Have knowledge about the basic ideology of Classical economists

Ex.503.2 Have understanding of evolution of neoclassical ideology Keynesian economics and development economics of Hicks And Samuelson

Ex.503.3 Have knowledge about evolution of economic thought by Cambridge school, Chicago school, and mathematical school

Ex503.4 Have understanding about basic elements of Indian economic thought ranging from Kautilya, Gandhi, VKRV Rao to Sen

DS ELECTIVE- HISTORY OF ECONOMIC THOUGHT

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.503.1	3	3	1	2	1	2	1	3	2	2	1
Ex.503.2	3	3	2	2	1	1	1	3	2	2	1
Ex.503.3	3	3	1	3	2	1	1	3	2	2	1
Ex.503.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1	3	2	2	1

Suggested Reading List

- Blackhouse, R.E: Truth and Progress in Economic knowledge.
- Blaug, M: Economic Theory in retrospect Schumpeter, J: History of economic analysis O'Brien, D.P: Classical Economists.
- Hunt EK: History of economic thought, India ed. Shilpi Publications, Delhi
- Paul, RR: History of economic thought, India, Kalyani Publishers, New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-V
Communication Skills for Economists
DSE1-IN-ECX-504**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Introduction-Business Communication; Basic Forms of communicating, Communication process (i-b) Effective communication, Audience Analysis.	(i-a) Aims at introducing to the students about Business Communication and communication process (i-b) aims at making the students understand about effective communication, and Audience analysis
UNIT-2 (ii-a) Self-development & Communication: development of positive personal attitudes, SWOT analysis (ii-b) Whole communication. Body Language: kinesics, Proxemics, Para-language. Effective listening: Principles of effective listening; Factors affecting listening; Exercise-oral, written& video sessions.	(ii-a) Has the objective of giving exposure about self – development and positive personality attributes (ii-b) Aims at introducing to students about Holistic view of communication;body language and effective listening
UNIT-3 (iii-a) Corporate communication: formal & informal communication network, Business miscommunication(barriers), Improving communication (iii-b)	iii-a aims at developing understanding in students’ mind about corporate communication and communication barriers iii-b has the objective of detailing about the Group discussions,

Practices in business communication; Group discussions; Mock Interviews; Seminars; Effective listening exercises; Individual & group presentation; Art of interviewing and Report writing	Mock interviews, report writing, and art of interviewing
UNIT-4	iv-a
(iv-a) Modern Forms of communication: e-mail, Fax, SMS, Video- conferencing	has the objective of describing and explaining the basics of modes of modern communication
(iv-b) Communication for the Disabled: Introduction to Braille and American Sign Language	iv-b Aims at discussing the introductory knowledge about Braille and ASL

OVERVIEW OF OUTCOMES

DS ELECTIVE- Communication Skills for The Economists

After the successful completion of the course, the students will be able to

Course Objective

Ecx.504.1 Have knowledge about the basics of communication process and effective business communication

Ecx.504.2 Have understanding of positive personality traits and , holistic analysis of expressions through body language

Ecx.504.3 Have knowledge about corporate communication practices barriers, and communication practices viz discussions and interviews

Ecx504.4 Have understanding about basic modes of modern Communication and communication modes for the disabled

DS ELCTIVE- COMMUNICATION SKILLS FOR THE ECONOMISTS

CO#	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ecx504.1	3	3	1	2	1	2	1	3	2	2	3
Ecx504.2	3	3	2	2	1	1	3	3	2	2	3
Ecx504.3	3	3	1	3	2	1	1	3	2	2	3
Ecx504.4	3	3	1	2	2	1	2	3	2	2	3
Average	3	3	1.25	2.25	1.5	1.25	1.75	3	2	2	3

Suggested Reading List

- Bovee & Thill: Business communication Today, Tata- McGraw Hill, New Delhi.

- Randall E. Magors: Business Communication; Harper& Row, New York
- Ronald E. Dulek and John S Fielder: Principles of Business Communication; McMillan Publishing company, London
- Webster Guide to Effective Letter-writing, Harper& Row, New York

**Master of Science Economics(Honors)5-year integrated
Semester-V
Economics of Health And Education
DSE2-IN-ECX-505**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Role of Health and Education in Human Development: Importance in poverty alleviation (i-b) health and education outcomes and their relationship with macroeconomic performance	(i-a) Aims at introducing to the students about health and education as stimulants to human development , and poverty alleviation (i-b) aims at making the students understand about health and education outcomes and economic development
UNIT-2 (ii-a) Health Sector in India: Overview; Health outcomes (ii-b) healthcare systems; health financing.	(ii-a) Has the objective of giving knowledge about health sector of India and indicators of health quality (ii-b) Aims at introducing to students about Health care systems and funding of healthcare infrastructure
UNIT-3 (iii-a) Education: Investment in Human Capital: Rate of return to education: private and social; quality of education; (iii-b) Signalling of human capital; theories of discrimination; gender and caste discrimination in India.	iii-a aims at developing understanding in students' mind about education as investment in human capital, and quality of education iii-b has the objective of detailing about the return of education as asset; problems of discrimination
UNIT-4 (iv-a) Education Sector in India: Overview;	iv-a has the objective of describing and explaining the

Literacy rates, school participation, school quality measures (iv-b) Role of Higher Education and Vocational Education in India; Skill India campaign	basics of education sector; school education iv-b Aims at discussing the role of higher education and skill creation.
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OVERVIEW OF OUTCOMES

DS ELECTIVE- ECONOMICS OF HEALTH AND EDUCATION

After the successful completion of the course, the students will be able to

Course Objective

Ex.505.1 Have knowledge about the basics of role and outcomes education and health w.r.t. economic development

Ex.505.2 Have understanding of healthcare systems and funding of health infrastructure

Ex.505.3 Have knowledge about education as investment in human Resources, and problem of discrimination

Ex.505.4 Have understanding about school and higher education In India and skill creation campaign

DS ELCTIVE- ECONOMICS OF HEALTH AND EDUCATION

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex505.1	3	3	1	2	1	2	3	3	2	2	1
Ex505.2	3	3	2	2	1	1	2	3	2	2	2
Ex505.3	3	3	1	3	2	1	3	3	2	2	1
Ex505.4	3	3	1	2	2	1	3	3	2	2	2
Average	3	3	1.25	2.25	1.5	1.25	2.75	3	2	2	1.5

Suggested Reading List:

- Institute Development Studies, 1999.
- Mishra S.K.and Puri V.K, Indian Economy Himalya Publication House Latest Edition.
- Monga G.S.and Goel M.M. (2001) Wage Goods Approach and Development Deep and Deep New Delhi.
- Parikh, K.S. (1999), India Development Report – 1999-2000, Oxford University Press, New Delhi.
- Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics:
- Sen, A. (1992), Inequality Reexamined, Oxford University Press, Oxford.
- Sen, A.K.(Ed.) (1990), Growth Economics, Penguin, Harmondsworth.
- Sen, A. (1983), Poverty and Famines, Oxford University Press, Oxford.
- Theory and Public Policy, Addison Wesley, 2005
- Thirlwal, A.P. (1999), (6th Edition), Growth and Development, Macmillan, U.K.
- Todaro, M.P. and S.C. Smith (2003), (8th Edition), Economic Development, Pearson Education, Delhi.
- William, Jack, Principles of Health Economics for Developing Countries, World Bank
- World Development Report, Investing in Health, The World Bank, 1993.

**Master of Science Economics(Honors)5-year integrated
Semester-V
PUBLIC ECONOMICS
DSE-2-IN-ECX-506**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I</p> <p>(i-a) Economic rationale of Mixed Economy; Role of govt in a state, Introduction to positive and tools of normative analysis: Pareto efficiency, equity and the social welfare function</p> <p>(i-b) Fiscal federalism, the economic basis of decentralisation: the Tiebout Hypothesis: voting with your feet</p>	<p>(i-a) Aims at introducing to the students about health and education as stimulants to human development , and poverty alleviation</p> <p>(i-b) aims at making the students understand about health and education outcomes and economic development</p>
<p>UNIT-2</p> <p>(ii-a) Public goods: definition, models of efficient allocation: Lindahl model(in brief)</p> <p>(ii-b) Samuelson model of efficient allocation (in brief), pure and impure public goods, free riding problem.</p>	<p>(ii-a) Has the objective of giving knowledge about health sector of India and indicators of health quality</p> <p>(ii-b) Aims at introducing to students about Health care systems and funding of healthcare infrastructure</p>
<p>UNIT-3</p> <p>(iii-a) Externalities: The problem and its solutions, taxes versus regulation,</p> <p>(iii-b)</p>	<p>iii-a aims at developing understanding in students' mind about education as investment in human capital, and quality of education</p>

Property rights, the Coase Theorem(in brief).Inverted-U Kuznets curve hypothesis.	iii-b has the objective of detailing about the return of education as asset; problems of discrimination
UNIT-4	iv-a
(iv-a)Indian Tax system, Recent reforms, Public Expenditure, Public debt , deficits and subsidies in the Indian economy	has the objective of describing and explaining the basics of education sector:school education
(iv-b) Centre-State financial relations, Recommendations of 15 th finance Commission.	iv-b Aims at discussing the role of higher education and skill creation.

OVERVIEW OF OUTCOMES DS ELECTIVE- PUBLIC ECONOMICS

After the successful completion of the course, the students will be able to

Course Objective #

Ecx.506.1 Have knowledge about the basics of efficiency and equity and rationale of fiscal federalism

Ecx.506.2 Have understanding of nature of public goods and efficient allocation of public goods

Ecx.506.3 Have knowledge about externalities and property rights w.r.t public choice

Ecx506.4 Have understanding about Indian tax system, recent reforms, Public debt and public expenditure, centre-state financial relations

DS-ELCETIVE- PUBLIC ECONOMICS

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ecx506.1	3	3	1	2	1	2	1	3	2	2	1
Ecx506.2	3	3	2	2	1	1	2	3	2	2	2
Ecx506.3	3	3	1	3	2	2	2	3	2	2	2
Ecx506.4	3	3	1	2	2	1	2	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.5	1.75	3	2	2	1.5

Suggested Reading List

- Arrow Kenneth, J. (1963), Social Choice and Individual Value, Yale University Press, New Haven
- Atkinson A. B., and Sigitz J. E. (1980), Lectures on Public Economics, Tata MacGraw Hill, New York.
- Bagchi, Amaresh (2005) Reading in Taxation, Oxford Press.

- Baumol, W.J. (ed.) (2001), *Welfare Economics*, Edward Elgar Publishing Ltd., U.K.
- Broadway, R.W. and N. Bruce (1984), *Welfare Economics*, Basil Blackwell, Oxford.
- Bruce, Neil, *Public Finance*, Addison-Wesley Educational Publishers, Inc).
- Buchanan, J. M. (1970), *The Public Finances*, Richard D. Irwin, Homewood.
- Chelliah, Raja J.(ED.) 1997, *Towards, Sustainable Growth*, Oxford University Press, New Delhi.
- Cullis, John and John Philip (2010), *Public Finance and Public Choice*, IIIrd Edition, Oxford University Press, Oxford.
- DK Khatri: *Investment Management & Security Analysis : Text and Cases*; McMillan India
- DK Khatri: *Investment Management & Security Analysis: Text and Cases*; McMillan Indian
- Dornbusch R., Fischer and Startz (1998), *Macroeconomics*, McGraw Hill, New York
- Downs, A, *An Economic Theory of Democracy*, Harper and Row, New York.
- Goode R. (1986), *Government Finance in Developing Countries*, Tata McGraw Hill, New Delhi.
- Harberger, Arnold, C. (1966); *Efficiency Effects of Taxes on Income from Capital; Effects of Corporation Income Tax*, Wayne State University Press, Detroit.
- Hicks, J.R. (1956), *A Revision of Demand Theory*, Clarendon Press, Oxford.
- IM Pandey: *Financial management*
- Jha , R. (1998), *Modern Public Economics*, Routledge, London.
- Khan and Jain: *Financial Management* Fourth Ed. Tata McGraw Hill.
- Little, I.M.D. (1949), *The Foundations of Welfare Economics*, Oxford Economic Papers, Vol. 1.
- Menutt, P. (1986), *The Economics Of Public Choice*, Edward Elgar, London.
- Mishan E. J.(1982), *Cost-Benefit Analysis: An Informal Introduction*, George Allen and Unwin, London.
- Mueller, Dennis, C. (2003), *Public Choice III*, Cambridge University Press
- Musgrave R. A. and Musgrave P. B. (2001), *Public Finance in Theory and Practice*, McGraw Hill Book Company, New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-V
International Trade-1
GE5-IN-ECX-507**

**External marks:120
Internal Marks:30
Time: 3 hours
Credit:6**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I</p> <p>(i-a) International trade: contents of international trade; Need for a separate theory;</p> <p>(i-b) Distinguishing features of international trade; Importance: Advantages and Dis-Advantages of international trade; Trade as engine of growth</p>	<p>(i-a) Aims at introducing the students about International trade, and rationale for a separate theory</p> <p>(i-b) aims at making the students acquainted with nature and significance of international trade in economic development</p>
<p>UNIT-2</p> <p>(ii-a) Classical Theory of International Trade: – Theories of absolute advantage, comparative advantage.</p> <p>(ii-b) Neo Classical Theory of international Trade (opportunity costs theory); Modern Theory of International Trade (Heckscher-Ohlin Model).</p>	<p>(ii-a) Has the objective of giving exposure about theories of International trade from classical perspective</p> <p>(ii-b) Has the objective of acquainting pupils about opportunity costs theory and factor proportions theory</p>
<p>UNIT-3</p> <p>(iii-a)</p> <p>Alternative theories of international trade:- The Leontief Paradox; Offer curve analysis; J.S. Mill’s theory of reciprocal</p>	<p>iii-a aims at developing understanding in students’ mind about Role of reciprocal demand in determining trade volume and direction</p> <p>iii-b</p>

demand; (iii-b) Factor price equalization theorem; The specific factors model.	has the objective of making the understanding of factor price equalization theorem, and specific factors model
UNIT-4	iv-a
(iv-a) Tariff and Non Tariff Barriers:- Partial and General equilibrium analysis of tariff;	has the objective of describing and explaining the basics of tariffs and their effects
(iv-b) Import Quota and other Non tariff barriers; Arguments for protection; Concepts of terms of trade, their uses and limitations	iv-b Aims at explaining the relevance and rationale of quotas and their effects, also the nature and significance of terms of trade .

OVERVIEW OF OUTCOMES

GE- INTERNATIONAL TRADE-1

After the successful completion of the course, the students will be able to

Course Objective #

- Ex.507.1 Have knowledge about the distinguishing features of International trade, and rationale for a separate theory
- Ex.507.2 Have understanding about the Theories of international trade
- Ex.507.3 Have knowledge about trade theories based on reciprocal and specific factors
- Ex.507.4 Have understanding about basic elements of tariffs and quotas, and terms of trade.

GENERIC ELECTIVE- INTERNATIONAL TRADE-1

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.507.1	3	3	1	2	1	2	1	3	2	2	1
Ex.507.2	3	3	2	2	1	1	2	3	2	2	1
Ex.507.3.	3	3	1	3	2	1	1	3	2	2	2
Ex.507.4	3	3	1	2	2	1	2	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	1.25

Suggested Reading List

- Bhagwati J. (1988), Protectionism, Cambridge University Press, Mass.
- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Carbough, R.J. (1999), International Economics, International Thompson Publishing, New York
- Chacholiades, M. (1990), International Trade: Theory and Policy, McGraw Hill, Kogakusha, Japan.
- Dana, M.S. (2000), International Economics: Study, Guide and Work Book, (5th

Edition), Routledge Publishers, London.

- Dunn R.M. and J.H. Mutt (2000), *International Economics*, Routledge, London.
- Gallaway, M.C., Blonigen, B.A., and J.E. Flynn, (1999), "Welfare Costs of the US Antidumping and Countervailing Duty Laws", *Journal of International Economics*, 49, 211-214.
- Goldsten, M. (1998), *The Asian Financial crisis: causes cure and systematic implications*, Institute of International Economics, Washington D.C.
- Hufbauer G.C. and K.A. Elliott (1994), *Measuring the Costs of Protection in the United States*, Institute for International Economics.
- Jackson, J. (1989), *The World Trading System*, Cambridge University Press, Mass.
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- Patel, S. J. (1995), *Indian Economy Towards the 21st Century*, University Press Ltd., India.
- Pomfert, R. (1988), *Unequal Trade: The Economics of Discriminatory International Trade Policies*, Blackwell Publishers, Oxford.
- Satyanarayan, B. (1986), *India's Trade with Asia and the Far East Countries*, B.R. Publishing Corp., New Delhi.
- Sodirston, Bo. (1991), *International Economics*, The Macmillan Press Ltd. London.
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- Vanderbussche, H. and M. Zanardi (2006), "The Global Chilling Effects of Antidumping Proliferation," *CEPR Discussion paper*, 5597.

**Master of Science Economics(Honors)5-year integrated
Semester-VI
Economics of Finance
CC13-IN-ECX-601**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
UNIT-I (i-a) Nature, Scope and Objective of Financial Economics; (i-b) Financial statement: Balance sheet, Profit & Loss Account and ratio analysis; Time value of money	(i-a) Aims at introducing to the students about Nature, scope and objectives of financial economics (i-b) aims at making the students understand basics of financial statements, and time value of money
UNIT-2 (ii-a) Capital Budgeting Decisions: Net Present Value, IRR, Profitability Index, Payback (ii-b) Corporate Restructuring: Mergers, Acquisitions, Amalgamations, Divestments-Meaning, Motives And Strategies; Corporate Governance.	(ii-a) Has the objective of giving exposure to students about Capital budgeting and its methods (ii-b) Aims at introducing to students about Corporate strategies of restructuring, and corporate governance
UNIT-3 (iii-a) Cost of Capital: Concept of Risk and Return; Portfolio Theory, Capital Asset Pricing Model (iii-b) Arbitrage Pricing Theory; Efficient Market Hypothesis-Basic Concept.	iii-a aims at developing understanding in students' mind about Risk and Return and portfolio theory iii-b has the objective of detailing about Arbitrage Pricing theory and efficient market hypothesis
UNIT-4	iv-a

<p>(iv-a)Capital market in India: brief history (iv-b) Major reforms in primary and secondary capital market.</p>	<p>has the objective of describing and explaining the Indian capital market in historical perspective iv-b Aims at discussing the primary capital market and stock market reforms in India</p>
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OVERVIEW OF OUTCOMES

CORE COURSE- Economics of Finance

After the successful completion of the course, the students will be able to

Course Objective

Exx.601.1 Have knowledge about the Financial economics, and financial statements

Exx.601.2 Have understanding of capital budgeting decisions, and Corporate restructuring strategies

Exx.601.3 Have knowledge about Risk and return, portfolio theory and Efficient market hypothesis

Exx601.4 Have understanding about historical review of Indian capital Market,and capital market reforms

CORE-COURSE- ECONOMICS OF FINANCE

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Exx601.1	3	3	1	2	1	2	1	3	2	2	1
Exx601.2	3	3	2	2	1	1	2	3	2	2	2
Exx601.3	3	3	1	3	2	1	1	3	2	2	2
Exx601.4	3	3	1	2	2	1	2	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	1.5

Suggested Reading List

- Arrow Kenneth, J. (1963), Social Choice and Individual Value, Yale University Press, New Haven
- Atkinson A. B., and Siglitz J. E. (1980), Lectures on Public Economics, Tata MacGraw Hill, New York.
- Bagchi, Amaresh (2005) Reading in Taxation, Oxford Press.
- Baumol, W.J. (ed.) (2001), Welfare Economics, Edward Elgar Publishing Ltd., U.K.
- Broadway, R.W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, Oxford.
- Bruce, Neil, Public Finance, Addison-Wesley Educational Publishers, Inc).
- Buchanan, J. M. (1970), The Public Finances, Richard D.li-win, Homewood.
- Chelliah, Raja J.(ED.) 1997, Towards, Sustainable Growth, Oxford University Press, New Delhi.
- Cullis, John and John Philip (2010), Public Finance and Public Choice, IIIrd Edition, Oxford University Press, Oxford.
- DK Khatri:Investment Management & Security Analysis : Text and Cases; McMillan

India

- DK Khatri: Investment Management & Security Analysis: Text and Cases; McMillan Indian
- Dornbusch R., Fischer and Startz (1998), Macroeconomics, McGraw Hill, New York
- Downs, A, An Economic Theory of Democracy, Harper and Row, New York.
- Goode R. (1986), Government Finance in Developing Countries, Tata McGraw Hill, New Delhi.
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- Hicks, J.R. (1956), A Revision of Demand Theory, Clarendon Press, Oxford.
- IM Pandey: Financial Management
- Jha , R. (1998), Modern Public Economics, Routledge, London.
- Khan and Jain: Financial Management Fourth Ed. Tata McGraw Hill.
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- Menutt, P. (1986), The Economics Of Public Choice, Edward Elgar, London.
- Mishan E. J.(1982), Cost-Benefit Analysis: An Informal Introduction, George Allen and Unwin, London.
- Mueller, Dennis, C. (2003), Public Choice III, Cambridge University Press
- Musgrave R. A. and Musgrave P. B. (2001), Public Finance in Theory and Practice, McGraw Hill Book Company, New Delhi.
- Musgrave, R.A., and Peacock A.T., Classics in the Theory of Public Finance, Mcmillan.
- Niskanen, William A. (1971); Bureaucracy and Representative Government, Chicago, Aldine.
- Niskanen, William A. (1994); Bureaucracy and Public Economics.
- Pigou, A.C. (1962), The Economics of Welfare (4th Edition), Macmillan.
- Prasanna Chandra: Financial Management; McGraw-Hill
- Prasanna Chandra: Investment management and Portfolio
- Prasanna Chandra: Investment management and Portfolio Analysis; McGraw-Hill
- Rosen, S Harvey and Gayer, Ted (2012), Public Finance, Mcgraw Hill Education.
- Sen Amartya, ; The Possibility of Social Choice, American Economic Review, Vol. 89(3), 1999, PP. 349-378.
- Stiglitz, J.E. (1999), Economics of Public Sector, W.W. Norton & Company, London.

**Master of Science Economics(Honors)5-year integrated
Semester-VI
Development Economics-II
CC14:IN-ECX-602**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I</p> <p>(i-a) Growth Models: Steady-State Economic Growth and Equilibrium Path: Harrod-Domar Model; Neo-Classical Models of Solow and Meade</p> <p>(i-b) J Robinson's (golden rule of Accumulation) and Kaldor's Growth Models.</p>	<p>(i-a) Aims at introducing to the students about steady state growth, and neoclassical models.</p> <p>(i-b) aims at making the students understand basics of Capital accumulation model of Robinson and Kaldor's growth model</p>
<p>UNIT-2</p> <p>(ii-a) Balanced and unbalanced growth strategy: Big Push, Critical Minimum Effort</p> <p>(ii-b) Economic Growth and Distribution:Models of distribution-Ricardo, Marx and Kaldor,</p>	<p>(ii-a) Has the objective of giving exposure to students about strategies of economic development, Balanced growth , Big Push and Critical minimum effort</p> <p>(ii-b) Aims at introducing to students about macroeconomic theories of distribution</p>
<p>UNIT-3</p> <p>(iii-a) Technological Development: Choice of Techniques: Labour-Intensive, Capital Intensive and Intermediate Techniques</p> <p>(iii-b)</p>	<p>iii-a aims at developing understanding in students' mind about choice of techniques</p> <p>iii-b has the objective of detailing about Investment criteria and project evaluation</p>

Planning Techniques: Investment Criteria and Cost-Benefit Analysis <hr/> UNIT-4 (iv-a) Technical Progress: Capital Saving, Labor Saving and Neutral Technical Progress (Harrod and Hicks); Embodied and Disembodied Technical Progress(Solow and Nelson) (iv-b) Theories of Endogenous Growth: AK Model; Romer	<hr/> iv-a has the objective of describing and explaining the kinds of technical progress iv-b Aims at discussing the sources of growth and models of endogenous growth
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OVERVIEW OF OUTCOMES

CORE COURSE- DEVELOPMENT ECONOMICS-II

After the successful completion of the course, the students will be able to

Course Objective #

EcX.602.1 Have knowledge about the Steady-state growth and its path

EcX.602.2 Have understanding of strategies of economic development and macroeconomic theories of distribution

EcX.602.3 Have knowledge about choice of techniques, investment criteria and cost-benefit analysis

EcX.602.4 Have understanding about Technical progress and sources of economic growth

CORE-COURSE- DEVELOPMENT ECONOMICS-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
EcX602.1	3	3	1	2	1	2	1	3	2	2	1
EcX602.2	3	3	2	2	1	1	1	3	2	2	2
EcX602.3	3	3	1	3	2	2	2	3	2	2	2
EcX602.4	3	3	1	2	2	2	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.75	1.25	3	2	2	1.5

Suggested Reading List:

- Chakravarti, S. (1987), Development Planning: The Indian Experience, Clarendon Press, Oxford.
- Chenery, H. and T.N. Srinivasan (Eds.) (1989), Handbook of Development Economics, Vols. 1 & 2, Elsevier, Amsterdam.
- Dasgupta, P. (1993), An Enquiry into Well-being and Destitution, Clarendon Press, Oxford.
- Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
- Gillis, M., D.H. Perkins, M. Romer and D.R. Snodgrass (1992), Economics of Development, (3rd Edition), W.W. Norton, New York.
- Grossman, G. and E. Helpman (1991), Innovation and Growth in the Global Economy,

MIT Press, Cambridge, Mass.

- Higgins, B. (1959), *Economic Development*, W.W. Norton, New York.
- Hirschman, A.O. (1958), *The Strategy of Economic Development*, Yale University Press, New York.
- Kindleberger, C.P. (1977), *Economic Development*, (3rd Edition), McGraw Hill, New York.
- Meier, G.M. and J.E.Rauch (2005), *Leading Issues in Economic Development*, (8th Edition), Oxford University Press, New Delhi.
- Nayyar, D. (Ed.) (1994), *Industrial Growth and Stagnation: The Debate in India*, Oxford University Press, New Delhi.
- Sen, A. (1983), *Poverty and Famines*, Oxford University Press, Oxford.
- Sen, A.K.(Ed.) (1990), *Growth Economics*, Penguin, Harmondsworth.
- Sen, A. (1992), *Inequality Reexamined*, Oxford University Press, Oxford.
- Todaro, M.P. and S.C. Smith (2003), (8th Edition), *Economic Development*, Pearson Education, Delhi.
- Thirlwal, A.P. (1999), (6th Edition), *Growth and Development*, Macmillan, U.K.

**Master of Science Economics(Honors)5-year integrated
Semester-VI
Research Methodology
DSE3-IN-ECX-603**

**External marks:80
Internal Marks:20
Total Marks:100
Total credits:4
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 10 and 6 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (16 marks each)

Content	Learning objectives
UNIT-I (i-a) Research methodology:Research, and Scientific method; Identifying and defining a research problem; (i-b) Research Design: Experimental, Ex-post facto research:Exploratory, Historical and Descriptive , Field study&Case-study, Survey research, Case study research.	(i-a) Aims at introducing to the students scientific method and Research problem. (i-b) aims at making the students understand the kinds of research designs
UNIT-2 (ii-a) Sample design –probability&Non-probability sampling, Sample size; Measurement Design-measurement scales;errors in measurement, Validity and Reliability (ii-b) Data collection &editing coding; Presentation: Graphical&Content analysis	(ii-a) Has the objective of giving exposure to students about sample design and measurement scales (ii-b) Aims at introducing to students about data collection, editing and presentation.
UNIT-3 (iii-a) Formulation of Research Problem-Pilot Study, Literature Survey, formation of hypothesis (iii-b) Experimental Research-experimental	iii-a aims at developing understading of formulation of research problem and hypothesis setting-up iii-b has the objective of acquainting students with single factor and 2-or more factor experimental

<p>designs :Single factor Designs , Two or more factors designs; Randomised Block Design, Latin Square design, Quasi-experimental Designs;Validity&Reliability</p>	<p>designs, as well as Quasi-experimental designs</p>
<p>UNIT-4 (iv-a) Analysis of Variance for Experimental Data:Single factor Randomised Block Design, Latin square Design, and 2x2 factorial design (iv-b) Thesis writing:Principles; Format of Research reports; Briefing, Rules for Word processing</p>	<p>iv-a has the objective of describing and explaining the problem-solving of experimental data in different experimental settings under ANOVA iv-b Aims at giving the knowledge to students about basics of research report writing</p>

Research Methodology
DSE : IN-ECO-604

Practical
Presentation (written/oral)
External marks:40
Internal marks:10
Total marks:50
Credits:2
Time:3 hours

Measurement scales; ANOVA Problem-solving on Randomised Block design, Latin Square Designs, and 2x2 factorial Design; Writing a research report/Synopsis
Data analysis using MS Excel, SPSS and E views.

OVERVIEW OF OUTCOMES (IN-ECO-603&IN-ECO-604)
DS ELECTIVE- RESEARCH METHODOLOGY

After the successful completion of the course, the students will be able to
Course Objective #

- Ecx.603&4.1 Have knowledge about the research problem and research design
Ecx.603&4.2 Have understanding of sample design and data collection and data editing
Ecx.603&4.3 Have knowledge about experimental and Quasi-experimental research
Ecx603&4.4 Have understanding about ANOVA and thesis writing

DS-COURSE- RESEARCH METHODOLOGY

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ecx603&4.1	3	3	1	2	1	2	1	3	2	2	1
Ecx603&4.2	3	3	2	2	1	1	1	3	2	2	2
Ecx603&4.3	3	3	1	3	2	1	2	3	2	2	2
Ecx603&4.4	3	3	1	2	2	1	1	3	2	2	2
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	1.75

Suggested Reading List

- Alexis Leon and Mathews Leon: Introduction to Computers with Ms-Office, TMH.
- Asthana and Brij Bhushan: Statistics for Social Sciences (with SPSS applications), PHI.
- Feeber, R and Verdoorn, P.J.: Research Methodology in Economics and Business

- Foercese, D.P. and Richer, S., Social Research Methods
- Ghosh. B.N., Scientific Methods and Social Research
- Kerns: Essentials of Microsoft Windows, Word and Excel, PHI
- KN Krishnaswamy, Appa I Sivakumar, M Mathirajan, Management Research Methodology, Pearson education, Dorling Kindersley(India)pvt ltd.
- Kothari, CR (1995) *Research Methodology: Methods and Techniques*, Wishwa Prakashan (Wiley Eatern Ltd), New Delhi.
- Kurien, C.T. (ed.), A Guide to Research in Economics
- Raja Raman.V.: Fundamentals of Computers, PHI, New Delhi.
- Ranjeet Kumar. Research Methodology: Sage Publication Ltd
- Sabine, Landau, Brian S. Everitt: A handbook of statistical analyses using SPSS, Chapman & Hall/CRC Press LLC
- Sadhu, A.N. and Singh, Research Methodology in Social Sciences
- Sharma, B.A.U. et. Al., Research Methodology in Social Sciences
- Sinha, P.K.: Computer Fundamentals, BPB Publications, New Delhi
- Spiegel, M.R., Theory and Problems of Statistics (Schaum's outlines Series), Thesis and Assignment Writing
- Wilkinson, T.S.and Bhandarker, P.L. , Methodology and Techniques of Social Research
- Yamane, T., Statistics: An Introduction Analysis.

Master of Science Economics(Honors)5-year integrated
Semester-VI
Energy Economics
DSE3-IN-ECX-605

External marks:80
Internal Marks:20
Total marks:100
Credits:4
Time: 3 hours

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 10 and 6 marks respectively All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (16 marks each)

Content	Learning objectives
UNIT-I (i-a) Some Basic Concepts: Definition of Energy, Measuring Energy; Energy Conversion and Efficiency, law of Thermodynamics (i-b) Emergence of Energy Economics: Its nature and scope; Energy indicators: Energy & Economics relationship.	(i-a) Aims at introducing to the students basic concepts related to Energy, and energy conversion process. (i-b) aims at making the students understand the energy indicators and energy-economics relationship
UNIT-2 (ii-a) Natural Resources: Types and classification (Conventional & Non- Conventional); Energy Resources: Renewable- Water Energy, Solar Energy, Wind Energy and Non- Renewable (ii-b) Thermal Energy, Thermal Energy and its Environmental Impact Assessment	(ii-a) Has the objective of giving exposure to students about the nature and types of energy resources (ii-b) Aims at introducing to students about thermal energy and its EIA
UNIT-3 (iii-a) Energy Crisis - causes, consequences - Remedial measures; Environmental Crisis - causes, consequences, remedial measures	iii-a aims at developing understanding of energy crisis and environmental crisis; and measures iii-b has the objective of acquainting students with role of international institutions in energy

<p>(iii-b) Role of International Institutions in Energy and Economic Development-OPEC, OAPEC, IEA and World Bank</p>	<p>development</p>
<p>UNIT-4</p> <p>(iv-a)Energy Planning and Energy Conservation: Meaning, objectives and importance - Energy Management - Meaning, Objectives and Importance .</p> <p>(iv-b) Recent Developments - Energy Auditing - Energy Accounting - Energy Pricing and Taxes - Role of Economists in Promoting Sustainable Energy Management.</p>	<p>iv-a has the objective of introducing to the students about Energy planning and energy management</p> <p>iv-b Aims at giving the knowledge to students about recent energy policy issues in India and sustainable energy use.</p>

ENERGY ECONOMICS
DS IN-ECO-606

Practical
Presentation (written/oral)
External marks:40
Internal marks:10
Total marks:50
Credits:2
Time: 3hours

Presentation (written/oral)

Law of thermodynamics, Energy conversion process and efficiency, Energy audit, Energy pricing, Environment Impact Assessment, Sustainable Energy use

OVERVIEW OF OUTCOMES (IN-ECO-605&IN-ECO-606)
DS COURSE- ENERGY ECONOMICS

After the successful completion of the course, the students will be able to
Course Objective #

- Ecx.605&6.1 Have basic knowledge about the energy economics, Thermodynamics and energy conversion
- Ecx.605&6.2 Have understanding of basics of energy resources and Environment Impact Assessment of Thermal energy
- Ecx.605&6.3 Have knowledge about energy crisis and role of international Institutions for crisis resolution
- Ecx605&6.4 Have understanding about energy pricing, energy audit and sustainable energy use

DS-COURSE- ENERGY ECONOMICS

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ecx605&6.1	3	3	1	2	1	2	1	3	2	2	1
Ecx605&6.2	3	3	2	2	1	1	1	3	2	2	2
Ecx605&6.3	3	3	1	3	2	2	2	3	2	2	1
Ecx605&6.4	3	3	1	2	2	2	1	3	2	2	2
Average	3	3	1.25	2.25	1.5	1.75	1.25	3	2	2	1.5

Suggested Reading List

- 3 I Network (2004): India Infrastructure Report 2004, Delhi, OUP, 2004.
- 3 I Network (2010): India Infrastructure Report 2004, Delhi, OUP, 2010
- 4. Boyle, G. 1996. Renewable Energy: Power for a Sustainable Future. Oxford: Oxford University Press.
- Button, K.J. (2003) Transport economics, Edward Elgar, Aldershot, England.
- Carol Dahl, (2004). International Energy Markets: Understanding Pricing, Policies, and Profit, Pennwell Press,

- Cooper, J. 2003. Price elasticity of demand for crude oil: estimates for 23 countries. *OPEC Review: Energy Economics & Related Issues* 27, 1, 1–8. 6.
- Cropper, M. and Oates, W. 1992. Environmental economics: a survey. *Journal of Economic Literature* 30, 675–740.
- Dahl, C.A. (2004) *International energy Markets: Understanding Pricing, Policies and Profits*, Penn Well.
- *Energy and Communications in Transition*, MSU Public Utility Papers, 1981
- Ferdinand Banks, Kluwer Academic, (2000) *Energy Economics: A Modern Introduction*.
- James M. Griffin and Henry B.Steele, (1986), *Energy Economics and Policy*, 2nd ed., by Academic Press.
- Jon Strand(2011): *Low-Level Versus High level Equilibrium in Public Utility services*, Policy Research Paper 5723
- Michael A. Crew and Paul R. Kleindorfer(1986): *The Economics of Public Utility Regulation*, MIT Press 1986.
- Steven Stoft, Wiley (2002)*Power System Economics: Designing Markets for Electricity* .
- W. Fulmer, Robert L. Bradley Jrand Richard (2004), *.Energy:The Master Resource*.
- William Spangar Peirce, Praeger, (1996).*Economics of the Energy Industries*, 2nd ed.
- World Bank (1994) : *Infrastructure for Development*, World Development Report, Washington D.C.

**Master of Science Economics(Honors)5-year integrated
Semester-VI
Industrial Economics
DSE4-IN-ECX-607**

**External marks:80
Internal Marks:20
Total marks:100
Credits:4
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 10 and 6 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (16 marks each)

Content	Learning objectives
UNIT-I (i-a) Nature and scope of Industrial Economics; Concept and Organization of a firm – ownership, control and objectives of the firm (i-b) Growth of the firm – Size and growth of a firm, Diversification & growth, growth and profitability, constraints on growth	(i-a) Aims at introducing to the students about industrial economics and organization and objectives of a firm (i-b) aims at making the students understand the determinants of size and growth of the firm
UNIT-2 (ii-a) Theories of industrial location – Weber and Sargent theories, Factors affecting location (ii-b) Industrial localization and remedial measures; Sellers’ concentration	(ii-a) Has the objective of giving exposure to students about theories of location and limiting factors (ii-b) Aims at introducing to students about factors leading to localization of industries and sellers’ concentration
UNIT-3 (iii-a) Economies of Scale and scope; Market structure and profitability (iii-b) Market structure and innovation; Product pricing – theories and evidence	iii-a aims at developing understanding of role of economies of scale and scope, market structure and profits of a firm iii-b has the objective of acquainting students with product innovation and product pricing practices
UNIT-4 (iv-a) Regional Industrial growth in India;	iv-a has the objective of introducing to the students about Industrial growth through mergers and

<p>Industrial growth through mergers & acquisitions, and diversification;</p> <p>(iv-b)</p> <p>Industrial Finance; Sources of short term and long term finance; Structure of Industrial labour; Employment dimensions of Indian Industry</p>	<p>acquisitions, and product diversification</p> <p>iv-b</p> <p>Aims at giving the knowledge to students about Industrial finance, and employment potential of Indian industry</p>
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INDUSTRIAL ECONOMICS
DS ELECTIVE IN-ECO-608

Practical
Presentation (written/oral)
External marks:40
Internal marks:10
Total marks:50
Credits:2

Presentation (written/oral)

Industrial location theories of Sargent and Weber; Market structure; Mergers and Acquisitions, Economies of scale and scope; Pricing practices, Sources of Industrial Finance

OVERVIEW OF OUTCOMES (IN-ECO-607&IN-ECO-608)
DS ELECTIVE- INDUSTRIAL ECONOMICS

After the successful completion of the course, the students will be able to
Course Objective #

Ex.607&8.1 Have basic knowledge about the Industrial Economics and organization of a firm

Ex.607&8.2 Have understanding of basics of location theories, and localization of industries

Ex.607&8.3 Have knowledge about Scale and scope economies, market structure and pricing practices

Ex.607&8.4 Have understanding about Industrial growth through Mergers and acquisitions, and sources of industrial finance

DS-COURSE- INDUSTRIAL ECONOMICS

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.607&8.1	3	3	1	2	1	2	1	3	2	2	1
Ex.607&8.2	3	3	2	2	1	1	2	3	2	2	1
Ex.607&8.3	3	3	1	3	2	1	2	3	2	2	1
Ex.607&8.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	1

Suggested Reading List

- Ahluwalia, I.J. (1985), *Industrial Growth in India*, Oxford University Press, New Delhi.
- Bagchi, A. and M. Banerjee (Eds.) (1979), *Change and Choice in Indian Industry*, Bagchi Publications, Calcutta.
- Bains, J.S. (1996), *Industrial Organization*, Cheltenham, U.K.
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- Kuchhal, S.C. (1980), *Industrial Economy of India* (5th Edition), Chaitanya Publishing House, Allahbad.
- Mamoria and Mamoria (2000), *Dynamics of Industrial Relations in India* (15th Edition), Himalaya Publishing House, Mumbai.
- Reserve Bank of India, *Report on Currency and Finance* (Annual)
- Sen, R. and B. Chatterjee (2001), *Indian Economy: Agenda for the 21st Century* (Essays in honour of Professor P.R. Brahmananda), Deep and Deep Publications Pvt. Ltd., New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-VI
Agriculture Economics
DSE4-IN-ECX-609**

**External marks:80
Internal Marks:20
Total marks:100
Credits:4
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 10 and 6 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (16 marks each)

Content	Learning objectives
UNIT-I (i-a) Nature and scope of agricultural and rural economics; Production functions in Agriculture-Input-output, and product-product relationship (i-b) Interdependence between agriculture and industry-intersectoral likages (backward & forward)	(i-a) Aims at introducing to the students about agri and rural economics and nature of production process in agriculture (i-b) aims at making the students understand the interdependence and linkages between agriculture and industry
UNIT-2 (ii-a) Models of Agricultural development- Fei-Rennis model, Schultze model; Irrigation, HYV seeds, mechanisation, distribution mechanism of output (ii-b) New agricultural strategy; and its impact on Income distribution& Employment	(ii-a) Has the objective of giving exposure to students about modles of agri-development, nature and role of agri- inputs (ii-b) Aims at introducing to students about factors leading to Green revolution, and later technical innovations
UNIT-3 (iii-a) Co-operative farming, its evaluation with regard to productivity, employment, and Income distribution; (iii-b) New trends in agriculture: Organic farming,	----- iii-a aims at developing understanding of role of co-operative farming, and its impact iii-b has the objective of acquainting students with agri-product innovation and agri- practices

<p>Zero-tillage, Genetic Engineering in agriculture</p>	
<p>UNIT-4</p> <p>(iv-a) Agricultural markets and marketing, Nature of demand & supply of Agri-products; Regulated markets; Warehousing, crop insurance</p> <p>(iv-b) Terms of trade between agricultural and non-agricultural sectors; Objectives of agricultural price policy- Instruments and evaluation; Food security in India and Public distribution system and Agri-reforms in India</p>	<p>iv-a has the objective of introducing to the students about nature of agri-markets, and need for agri-infrastructure of storage and crop insurance</p> <p>iv-b Aims at giving the knowledge to students about terms of trade between agriculture and industry; food security and agri-reforms in India</p>

AGRICULTURE ECONOMICS
DSE IN-ECO-610

Practical
Presentation (written/oral)
External marks:40
Internal marks:10

Interdependence between agriculture and industry- some empirical evidence, Farm-size & labour productivity Terms of trade between agricultural and non-agricultural sectors; Objectives of agricultural price policy- Instruments and evaluation; Food security in India

OVERVIEW OF OUTCOMES (IN-ECO-609&IN-ECO-610)
DS COURSE- AGRICULTURE ECONOMICS

After the successful completion of the course, the students will be able to
Course Objective #

Ex.609&10.1 Have basic knowledge about the Nature and scope of agriculture economics, and linkages between agriculture and industry

Ex.609&10.2 Have understanding of basics of models of agri-development, and new agricultural strategy and its impact

Ex.609&10.3 Have knowledge about co-operative farming, and new Innovative agri-practices in India

Ex.609&10.4 Have understanding about Agri-marketing , food security and agri-reforms in India

DS-COURSE- AGRICULTURE ECONOMICS

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex.609&10.1	3	3	1	2	1	2	1	3	2	2	1
Ex.609&10.2	3	3	2	2	1	1	2	3	2	2	1
Ex.609&10.3	3	3	1	3	2	1	2	3	2	2	1
Ex.609&10.4	3	3	1	2	2	1	1	3	2	2	1
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	1

Suggested Reading List

- • Bilgrami, S.A.R. (1996), Agricultural Economics, Himalaya Publishing House, Delhi.
- • Dantwala, M.L. et. al (1991), Indian Agricultural Development Since Independence, Oxford & IBH, New Delhi.
- • Gulati, A. and T. Kelly (1999), Trade Liberalisation and Indian Agriculture, Oxford University Press, New Delhi.

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- • Soni, R.N. (1995), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.
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- • Raghvan and L. Sarkar (Eds.) (1996), Poverty and Employment, New Age, New Delhi.
- • Rao, C.H. Hanumantha (1994), Agricultural Growth, Rural Poverty and Environmental Degradation in India, Oxford University Press, New Delhi.

**Master of Science Economics(Honors)5-year integrated
Semester-VI
International Trade-II
GE6-IN-ECX-611**

**External marks:120
Internal Marks:30
Total marks:150
Credits:6
Time: 3 hours**

Note:

- (i) Nine Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory and will consist of PART-A &B, comprising 15 and 9 marks respectively.All Qs of PART-A and 3 Qs out of 6 from part-B are to be attempted
- (iii) For the remaining four questions, students will attempt 1 out of 2 questions from each of the four units (24 marks each)

Content	Learning objectives
<p>UNIT-I (i-a) Balance of payments: - concept, definition and component of Balance of Payment; Disequilibrium in Balance of Payment; Balance of payment problem (basic model)</p> <p>(i-b) Disequilibrium and Adjustment; Balance of Payment adjustment mechanism: Price adjustment mechanism.</p>	<p>(i-a) Aims at introducing to the students about Balance of Payments and disequilibrium.</p> <p>(i-b) aims at making the students understand about adjustment mechanism in balance of payments</p>
<p>UNIT-2 (ii-a) The foreign exchange market: The basis of the foreign exchange market; Exchange rate systems</p> <p>(ii-b) Institutional aspects of foreign exchange markets; The international character of foreign exchange markets; Exchange risk; Forward exchange; Covered interest arbitrage</p>	<p>(ii-a) Has the objective of giving knowledge about the nature and functions of Forex markets</p> <p>(ii-b) Aims at introducing to students about trading and instruments in Forex markets</p>
<p>UNIT-3 (iii-a) Flexible vs Fixed exchange rates, Theory of employment with Flexible exchange rate; IS-LM model with flexible exchange rate</p>	<p>iii-a Aims at developing understanding in students' mind about effects of fixed and flexible exchange rates</p>

<p>(iii-b) Foreign trade multiplier and its repercussion effect, Foreign trade multiplier and its repercussion effect</p>	<p>iii-b Has the objective of detailing about the working of foreign trade multiplier, and transmission of trade repercussions</p>
<p>UNIT-4</p> <p>(iv-a) Theory of custom unions: Trade diversion and trade creation effect</p> <p>(iv-b) International monetary system: Gold standard (1870-1914); The Inward period; The Bretton Woods system (1944-1971); The present system of managed flexibility, Special Drawing Rights by IMF</p>	<p>iv-a Has the objective of describing and explaining the basics of Customs unions</p> <p>iv-b Aims at discussing the exchange rates arrangements in historical perspective, and SDRs by IMF</p>

OVERVIEW OF OUTCOMES

GE COURSE- INTERNATIONAL TRADE-II

After the successful completion of the course, the students will be able to

Course Objective #

- Ex611.1 Have knowledge about the basics of Balance of payments and Its adjustment mechanism
- Ex611.2 Have understanding of organization and working of Forex market and instruments of trading
- Ex611.3 Have knowledge about Fixed and flexible exchange rate systems and working of foreign trade multiplier
- Ex611.4 Have understanding about Customs unions and history of Exchange rate arrangements

GE-COURSE- INTERNATIONAL TRADE-II

CO#	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4
Ex611.1	3	3	1	2	1	2	1	3	2	2	1
Ex611.2	3	3	2	2	1	1	2	3	2	2	1
Ex611.3	3	3	1	3	2	1	2	3	2	2	2
Ex611.4	3	3	1	2	2	1	1	3	2	2	2
Average	3	3	1.25	2.25	1.5	1.25	1.5	3	2	2	1.5

Suggested Reading List

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- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
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- Chacholiades, M. (1990), *International Trade: Theory and Policy*, McGraw Hill, Kogakusha, Japan.
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- Satyanarayan, B. (1986), *India’s Trade with Asia and the Far East Countries*, B.R. Publishing Corp., New Delhi.
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- Vanderbussche, H. and M. Zanardi (2006), “The Global Chilling Effects of Antidumping Proliferation,” *CEPR Discussion paper*. 5597.