Learning Outcomes – based Curriculum Framework (LOCF) and Syllabus
for
Post-Graduate Programme

in

ECONOMICS

Programme

Post-Graduation in Economics
(*Syllabus effective from 2021-22 Admission batch*)

SCHOOL OF ECONOMICS
GANGADHAR MEHER UNIVERSITY
SAMBALPUR, ODISHA-768004
2021

VISION

- To develop outstanding Economics and policy oriented programs with faculty that are recognized for excellence in teaching and research and earn recognition as Center of Excellence at national and international level.

MISSION

As a department, we are committed to:

- Enable our students to develop analytical as well as critical thinking skills.
- Promote inter-disciplinary research among the faculties and the students to create state of art research facilities.
- Adopt experiential learning, including cooperative education, as a means to introduce students to the world of professional life, reinforce classroom teaching.
- Assist students in the development and advancement of career goals.
- Enable our learners to become policy literate and thus be more informed as citizens and more productive as human resource.
- Develop an environment conducive to promoting high-quality applied research so that it can contribute to policy at the global, national or local level, or that is useful in the conduct of business or the administration of government or non-profit organizations.
- Achieve academic excellence in Economics through innovative teaching and learning processes.

Programme Outcomes (POs) for Post-Graduation in Economics

- **PO-1: Disciplinary Knowledge: Acquaint with the deeper and multi-disciplinary knowledge, aware about recent innovations in the academic field**
- **PO-2: Critical Thinking: Able to critically analyze, synthesis and evaluate the theories, their development and application context.**
- **PO-3: To develop problem solving innovative thinking with robust communication and academic writing skills**
- **PO-4: Research Aptitude: Scientific and research thought and abilities not only to carry out independent research but also disseminate**
- **PO-5: Individual and Team work: Acquire the competency to work responsibly as an individual or as a member or leader of the group in multi-disciplinary environments**
- **PO-6: Life-Long Learning: Aptitude to apply knowledge and skills that are necessary for participating in learning activities throughout life.**
- **PO-7: Ethics: Capability to identify and apply ethical issues related to one's work, avoid unethical behaviour such as fabrication of data, committing plagiarism and unbiased truthful actions in all aspects of work.**
- **PO-8: Investigation of Problems: Ability of critical thinking, analytical reasoning and research based knowledge including design of experiments, analysis and interpretation of data to provide conclusions.**

Programme Specific Outcomes (PSOs) for Post-Graduation in Economics

School of Economics, G.M U, Sambalpur (Programme: PG in Economics)

PSO No	Programme Specific Outcomes (PSOs) Upon completion of this programme the student will be able:
PSO1	To acquire advanced knowledge of Economics & Development issues of Indian Economy in general and Economy of Odisha in particular.
PSO2	To conduct economic analysis using mathematical and statistical techniques especially by developing questionnaire, collecting primary data through field surveys.
PSO3	To forecast the future course of changes and development through their knowledge of policies and programmes of government and development agencies in the larger issues of epistemology in social sciences.
PSO4	To visualize the real world situation and enhance entrepreneurial skills for their self-employment, to improve the general attitudes and living conditions of the masses.
PSO5	To apply economic theory for critically analyzing the real national and international problems for a thorough evaluation of economic events and makes them responsible citizens.

Programme Structure of Post-Graduation in Economics, (GMU, Sambalpur)

SEM No.	Course Code	Name of the Course	Credits
I	ECO-101	Micro Economic Theory-I	4
	ECO-102	Macro Economic Theory-I	4
	ECO-103	Economics of Social	4
	ECO-104	Infrastructure-I	4
	ECO-105	Quantitative Techniques & computer applications-I Development Economics-I	4
II	ECO-201	Micro Economic Theory-II	4
	ECO-202	Macro Economic Theory-II	4
	ECO-203	Economics of Social	4
	ECO-204	Infrastructure-II	4
	ECO-205	Quantitative Techniques & computer applications-II Development Economics-II	4
	Electives		
	ECO-206-A		4
	ECO-206-B	New Institutional Economics	4
	ECO-206-C	Mathematical Economics New Frontiers in Economics	4
III	ECO-301	Public Economics- I	4
	ECO-302	International economics-I	4
	ECO-303	Environment & Resources	4
	ECO-304	Economics-I Advanced Econometrics-I	4
	ECO-305	Behavioural Economics	4
	Electives		
	ECO-306-A		4
	ECO-306-B	Indian Economy	4
	ECO-306-C	Regional Economics Indian Financial System	4
IV	ECO-401	Public Economics- II	4
	ECO-402	International economics-II	4
	ECO-403	Environment & Resources	4
	ECO-404	Economics-II Advanced Econometrics-II	4
	ECO-405	Project/Dissertation	4

The colours indicate as follows:- Red: Employability, Green: Entrepreneurship, Blue: Skill Development

⇨ **Syllabus for Post-Graduation in Economics**

SEM-1- 1/5: ECO-101 (Micro Economic Theory-I)

PG Semester – I (Course Outcomes:COs)		
Title of the Course & Course Code	**Micro Economic Theory – I (ECO-101)**	Number of Credits - 4
Pre-requisites for the Course: Students must have basic knowledge of elementary microeconomics with mathematics.		
Course Objective: To develop a theoretical understanding of strategic behaviour of economic agents and decision making.		
On completion of the course, the students will be able to:		
CO1	Analyze and evaluate consumer behavior at advanced level.	
CO2	Articulate the producer's optimizing behavior.	
CO3	Derive and evaluate firm and industry behavior under competitive and monopoly market	
CO4	Evaluate oligopoly firm behavior under differential firm objectives.	

Units	Course content
U-1	Theories of demand- utility, indifference curve (income and substitution effects: Slutsky theorem, compensated demand curve) and their applications: Revealed Preference Theory: Revision of demand theory by Hicks: Characteristics of goods approach: consumers choice involving risk.
U-2	Theory of Production and Costs: Production function- short period and long period; law of variable proportions and returns to scale, Isoquants Least Cost combination of inputs: Returns to factors; Economies of scale; Elasticity of substitution; Euler's Theorem; Traditional and modern theories of Costs-Empirical evidence, Derivation of Cost functions from production functions.
U-3	: Price and Output Determination: Perfect competition- short run and long run equilibrium of the firm and industry, price and output determination, supply curve; Monopoly- short run and long run equilibrium, price determination, welfare aspects, monopoly control and regulation, Price discrimination of first, second and third degree, Multiplant monopolist firm, Bilateral monopoly.
U-4	Monopolistic competition- general and Chamberlin approaches to equilibrium, equilibrium of the firm and the group with product differentiation and selling costs, excess capacity under monopolistic and imperfect competition, criticism of monopolistic competition ; Oligopoly- Non –collusive (Cournot, Betrand, Edgeworth, Chamberlin, Kinked demand curve and Stackelberg's solution) and collusive (Cartels and mergers,Price leadership and basing point price system) models ; Price and output determination under monopsony and bilateral monopoly.
	Recommended Books: *1. Kreps, David M. (1990) A Course in Microeconomic Theory, Princeton University Press, Princeton. 2. Koutsoyiannis, A (1979), Modern Micro Economics, Mac Millan Press, London 3. Layard, P.R.G. and A.W. Walters (1978), Mircoeconomic Theory, Mc Graw Hill, New York. 4. Varian, H (2000) Microeconomic Analysis, W.W. Norton, New York. 5. Baumol, W.J. (1982) Economic theory and Operation analysis, Prentice Hall of India, New Delhi. 6. Gree, H.A.G (1971) Consumer Theory, Penguin, Harmondsworth. 7. Hirshleifer J. and A. Glazer, (1997) Price Theory and Applications, Prentice Hall of India, New Delhi. 8. Da Costa, G.C (1980) Production, Prices and Distribution, Tata Mc Graw Hill, New Delhi.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3		1		1	2	3	1	3	2	2	3
CO2	3	3		1		1	2	3	1	3	2	1	3
CO3	3	3		1		1	3	3	1	2	3	1	3
CO4	3	3		1		1	2	2	1	3	2	1	3
	3	3		1		1	2	3	1	3	2	1	3

SEM-1- 2/5 ECO-102 (Macro Economic Theory – I)

PG Semester – I (Course Outcomes:COs)		
Title of the Course & Course Code	**Macro Economic Theory – I (ECO-102)**	Number of Credits - 4
Pre-requisites for the Course: Basic of concepts of Consumption and Production		
Course Objective: To understand the macroeconomic concepts like National Income, Employment, Consumption, Investment with their inter-relationships and the role of effective demand in determining employment, output and interest rates.		
On completion of the course, the students will be able to:		
CO1	Develop an understanding of elementary theoretical foundation of key issues and policies on national income accounting, inflation and interest rates.	
CO2	Possess deeper understanding of the concepts like multiplier, monetarism, the natural level of unemployment, and fiscal policy.	
CO3	Apply the art of abstracting and building small models related to the macroeconomics.	
CO4	Analyze the importance of regulating the financial system, and draws attention to the limitations to policymaking in an open economy.	

Units	Course content
U-1	National Income and Accounts- Circular Flow of Income with government and Open Economy, Three and Four sector economy; different forms of national income accounting- social accounting, input output accounting, flow of funds accounting and balance of payments accounting. National Income and Welfare.
U-2	Consumption function- Keynes's psychological law of consumption- implications of the law ; short run and long run consumption function, Empirical evidence on consumption function ; Income – consumption relationship- absolute income, relative income, life cycle and permanent income hypotheses.
U-3	Supply of Money- Financial intermediation- a mechanistic model of bank deposit determination ; A behavioral model of money supply determination, a demand determined money supply process; RBI approach to money supply ; High powered money and money multiplier ; budget deficits and money supply ; control of money supply.
U-4	Neo-Classical and Keynesian synthesis- Neo-classical and Keynesian views on interest; The IS-LM model ; Extension of IS-LM model with Government sector ; Relative effectiveness of monetary and fiscal policies; Extension of IS- LM models with labour market and flexible prices.
	***Recommended Books**: 1. Branson W.A. (1989), Macroeconomic Theory and Policy, Harper and Row, New York. 2. Dornbusch, R and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc. New York. 3. Hall, R.E and J.B Taylor (1986), Macroeconomics, W.W. Norton, New York. 4. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd. New Delhi. 5. Levacic, R. and Rebmann, A. (1982), Macro Economics- An introduction to Keynesian –Neoclassical controversies, Macmillan, London. 6. Mankiw, N. G. (2010), Macroeconomics, Worth Publishers, 7th edition. 7. Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd. New York. 8. Shapiro E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2		1			2	2	1	2	2	2	1
CO2	3	3		1			1	2	2	2	1	2	2
CO3	3	2		1			2	2	3	3	2	3	2
CO4	2	2		1			2	1	3	2	3	2	2
	3	3		1			2	2	2	2	2	2	1

SEM-1- 3/5 ECO-103 (Economics of Social Infrastructure-I)

PG Semester – I (Course Outcomes: COs)		
Title of the Course & Course Code	**Economics of Social Infrastructure-I (ECO-103)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of social sciences		
Course Objective: To acquaint the learners with different approaches to social infrastructure with externalities. Understanding the social sector policies in India can make aware the future citizens on policy issues and human capital formation.		
On completion of the course, the students will be able to:		
CO1	Identify and understand the concept of social infrastructure.	
CO2	Interpret the idea of human development and Examine the difference between human capital and human development.	
CO3	Analyze the importance of nutrition both in human development and human resource development.	
CO4	Assess and review social sector policies in India.	

Units	Course content
U-1	Approaches to Social Infrastructure Human Resource Development and Human Development: Differences and Linkages, Measurement of Human Development – Special Characteristics of Education, Health, Nutrition and Environment – Externalities and Role of the State -Social Infrastructure and Economic Growth
U-2	Human Capital – Theory of Human Capital, Consumption and Investment Aspects – Education, Productivity and Employment-Rates of Return and their Measurement – Issues and Limitations – Endogenous Growth Theories: Romer and Lucas -Concept of Social Capital: Role and Policy Implications
U-3	Approaches to Nutrition- Concepts of under nutrition and malnutrition- Characterization and measurement of under nutrition-Linkages with Morbidity, Mortality, Implications for Human capital formation-Implications for Economic analysis and policy.
U-4	Social Sector Policies in India: Policy Framework in Five-Year Plans – Economic Reforms and Social Sectors - Typology of Economic Growth and Human Development in Indian States – Trends and Disparities in Social Infrastructure Development – Role of Public and Private Sectors – Financing of Social Sectors - Pricing of Social Sectors – Social Attainment – Limitations of Policy – Social Security – Special Policy Issues.
	***Recommended Books**: 1. Berman, P. (ed), Health Sector Reforms in Developing Countries: Making Health Development sustainable. Harvard Series on Population and International Health, Boston (1995). 2. Blaug, M., Introduction to economics of Education, Penguin, London (1972). 3. Klarman, H. E., The Economics of Health, Colombia University Press, New York (1965). 4. Schultz, T.W., Investment in Human Capital, Free Press, New York (1971).*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	2	2	1	1	1	1	2	1	2	1	1
CO2	2	1	2	2	1	1	1	1	2	1	2	1	2
CO3	3	2	1	1	1	1	1	1	1	1	2	2	1
CO4	1	2	2	2	1	2	1	1	2	1	2	1	1
	2	1	2	2	1	1	1	1	2	1	2	1	1

SEM-1—4/5 ECO-104: (Quantitative Techniques & Computer Applications – I)

PG Semester – I (Course Outcomes: COs)		
Title of the Course & Course Code	**Quantitative Techniques & Computer Applications-I (ECO-104)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of mathematics and computer fundamentals will be an advantage.		
Course Objective: To familiarize the students to use the techniques of mathematical analysis which are commonly applied to understand and analyze economic concepts. Economics being based on empirical evidence, computer applications have emerged as the key instruments of economic analysis, research and forecasting.		
On completion of the course, the students will be able to:		
CO1	Understand the use of calculus in choice behaviour of economic agents.	
CO2	Illustrate matrix operation, minors, cofactors, use cofactor method to find inverse of a matrix, use Cramer's rule to solve systems of equations.	
CO3	Demonstrate knowledge of dynamic optimization and time-varying choice problems of economic agent.	
CO4	Identify, critically evaluate and synthesize the substantive theories and create models for understanding economic behavior with computer applications.	

Units	Course content
U-1	Mathematical methods-I : Calculus : Concepts of function, Limit, Continuity and derivative ; Rules of differentiation ; Rules of partial differentiation and interpretation of partial derivatives ; Problems of Maxima and minima in single and multivariable functions ; Concept of integration ; simple rules of integration. Application of derivatives and integration in Economics.
U-2	Mathematical methods-II : Matrix algebra : Determinants and their basic properties ; Solution of Simultaneous equations through Cramers rule , concept of Matrix- their types, simple operations on matrices, matrix inversion and rank of a matrix, Concept of vector- its properties ; Matrices and vectors, Concept of Quadratic forms- Eigen roots and Eigen vectors ;
U-3	Difference equations & Differential equations- Solution of first order and second order difference equations. Economic applications of Difference and Differential equations.
U-4	Computer Application in Economics : Basic applications of Microsoft Office- Excel, MS Word and Power Point, Application in Tabulation, Frequency Distribution, Correlation & Regression Analysis.
	***Recommended Books**: 1. Chiang A.C. (1986), Fundamental methods of Mathematical Economics, McGraw Hill, New York. 2. Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press and ELBS London. 3. Yamane, Taro (1975), Mathematics for Economists, Prentice Hall of India, New Delhi. 4. K. Sydsaeter and P. Hammond (2002), Mathematics for Economic Analysis, Pearson Educational Asia: Delhi. 5. Gupta, S. P. (1978), Statistical Methods, Sultan Chand and Sons. 6. Gupta, S. C. and V. K. Kapur (1970), Mathematical Statistics, Sultan Chand and Sons. 7. Murray R. Spiegel (1992), Theory and Problem of Statistics, Schaum's Outline Series, Metric edition 8. Gupta, S. C. (1981), Fundamentals of Statistics, Himalaya Publishing House*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	2	2	1	2	1	3	1	3	1	1	3
CO2	2	1	2	2	2	2	1	3	1	3	2	1	2
CO3	3	1	2	2	2	2	1	2	1	2	1	1	3
CO4	3	1	2	2	1	2	1	3	1	3	2	1	3
	3	1	2	2	1	2	1	3	1	3	2	1	3

SEM-1-5/5 ECO-105: (Development Economics – I)

PG Semester – I (Course Outcomes:COs)		
Title of the Course & Course Code	**Development Economics-I (ECO-105)**	Number of Credits - 4
Pre-requisites for the Course: Preliminary idea of approaches to economic development and basic mathematics.		
Course Objective: Make the students acquaint with models of development and development strategies. Understand decision making regarding choice of technology and choice of scale and various criteria for investment.		
On completion of the course, the students will be able to:		
CO1	Learn the models of economic development and critically analyze growth and development strategies.	
CO2	Examine about choices of technology with scale and investment criteria.	
CO3	Synthesize the different aspects of economic development and can use these things in their future research as well as in qualifying the various national level tests.	
CO4	Understand and acquaint with the evolution and measures of development.	

Units	Course content
U-1	Economic Growth-I : Economic growth and development- factors affecting economic growth, ; capital, labour and technology ; Growth models- Harrod and Domar, instability of equilibrium ; Neo-classical growth models- Solow Swan model, Cambridge criticism of Neo-classical analysis of growth, Kaldor's growth model.
U-2	Economic Growth-II : Technological progress- embodied and disembodies technical progress, Hicks, Harrod, Exogenous and endogenous technical progress, Learning by doing, AK Model of growth
U-3	Social and Institutional Aspects of development- Development and underdevelopment- Perpetuation of underdevelopment, Measuring development and development gap- Per capita income, inequality of income, Human development index, Multi-dimensional Poverty Index ; Human resource development ; Economic development and institutions- markets and market failure, state and state failure, issues of good governance.
U-4	Theories of development- Classical theory of development, Ricardo, Malthus, Karl Marx and development of capitalistic economy- theory of social change, surplus value and profit, Partial theories of growth and development- vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis, low income equilibrium trap; Dualism- technical, behavioural and social ; Ranis and Fei model.
	Recommended Books: *1. Ghatak, S (1986) An Introduction to development Economics, Allen and Unwin, London 2. Higgins,B. (1959) Economic Development, WW Norton, New York. 3. Meier G.M.(1986) Leading Issues in Economic Development, Oxford University Press, New York 4. Basu, Kaushik (2000) Analytical Development Economics: The less developed Economy Revisited, Oxford University Press, India. 5. Ray Debraj (2000) Development Economics, Oxford University Press, India. 6. Chenery H and T.N. Srinivasan (Eds) (1989) Handbook of Development Economics, Vols. 1&2, Elsevier, Amsterdem. 7. Todaro, M.P (1996) Economic Development, Longman, London 8. Thirlwal, A.P (1999) Growth and Development, Macmillan, UK. 9. Hayami, Y. (1997) Development Economics, Oxford University Press, New York 10. Sen, A.K. (Ed) (1990) Growth Economics, Penguin, Harmondsworth.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	1			1	1	2	3	1	2	1	2
CO2	3	2	1			1	2	3	3	1	1	1	2
CO3	2	3	1			3	2	2	2	1	3	1	3
CO4	3	2	1			2	2	2	3	1	2	2	2
	3	2	1			2	2	2	3	1	2	1	2

SEM-2-1/8 ECO-201: (Micro Economic Theory – II)

PG Semester – II (Course Outcomes:COs)		
Title of the Course & Course Code	**Micro Economic Theory-II (ECO-201)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of factor pricing, Distribution and Welfare Economics will be an added advantage.		
Course Objective: To expose the students to factor pricing, Distribution and Welfare Economics, share of each factor of production in National Income, calculation of remuneration for the factors of the production.		
On completion of the course, the students will be able to:		
CO1	Understand and compare modern developments in theory of firm's behavior	
CO2	Explain and demonstrate factor pricing under different market conditions.	
CO3	Evaluate the conditions of general equilibrium and modern development in market failure	
CO4	Compare the various criteria for evaluating social welfare and arriving at a social choice.	

Units	Course content
U-1	Alternative Theories of the Firm : Critical evaluation of marginal analysis ;Baumol's sales revenue maximization model ; Williamson's model of management discretion. Marris model of managerial enterprises ; Full cost pricing rule ; Bain's limit pricing theory and its recent developments including Sylos-Labinis model, Behavioural model of the firm ; game theoretic models.
U-2	Distribution- Neo-classical approach- Marginal productivity theory ;Product exhaustion theorem ; Theory of distribution in imperfect product andfactor markets ; determination of rent, wages, interest and profit ; macrotheories of distribution- Ricradian, Marxian, kalecki and kaldor's..
U-3	General Equilibrium - Partial and general equilibrium, Walrasian excess demand. The economics of information, Elementary Game Theory
U-4	Welfare Economics- Pigovian welfare economics ; Pareto optimal conditions, Value judgement ; Social welfare function ; Compensation principle; Inability to obtain optimum welfare- Imperfections, market failure, decreasing costs ;Theory of Second Best.
	Recommended Books:*1. Kreps, David M. (1990) A Course in Microeconomic Theory, Princeton University Press, Princeton. 2. Koutsoyiannis, A (1979), Modern Micro Economics, Mac Millan Press, London 3. Layard, P.R.G. and A.W. Walters (1978), Mircoeconomic Theory, Mc Graw Hill, New York. 4. Varian, H (2000) Microeconomic Analysis, W.W. Norton, New York. 5. Baumol, W.J. (1982) Economic theory and Operation analysis, Prentice Hall of India, New Delhi. 6. Gree, H.A.G (1971) Consumer Theory, Penguin, Harmondsworth. 7. Hirshleifer J. and A. Glazer, (1997) Price Theory and Applications, Prentice Hall of India, New Delhi. 8. Da Costa, G.C (1980) Production, Prices and Distribution, Tata Mc Graw Hill, New Delhi.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3		1		1	2	3	1	3	2	2	3
CO2	3	3		1		1	2	3	1	3	2	1	3
CO3	3	3		1		1	3	3	1	2	3	1	3
CO4	3	3		1		1	2	2	1	3	2	1	3
	3	3		1		1	2	3	1	3	2	1	3

SEM-2-2/8 ECO-202: (Macro Economic Theory- II)

PG Semester – II (Course Outcomes:COs)		
Title of the Course & Course Code	**Macro Economic Theory-II (ECO-202)**	Number of Credits - 4
Pre-requisites for the Course: Prior knowledge on Price, Income and Employment.		
Course Objective: Students will be acquainted with latest development in post-Keynesian analysis.		
On completion of the course, the students will be able to:		
CO1	Know the basic approaches involved in the Post-Keynesian demand for money.	
CO2	Examine the interrelationships involved among inflation and unemployment through Phillips curve.	
CO3	Examine expectations formation by using the business cycles.	
CO4	Analyze the movement of income, output and employment and develop a critical understanding of new classical macroeconomics.	

Units	Course content
U-1	Post-Keynesian Demand for Money- Post Keynesian approaches to demand for money- Patinkin and the ral Balance effect, Approaches of Baumol and Tobin ; Friedman and the Modern quantity theory ; Crisis in Keynesian economics and the revival of monetarism. Macroeconomics in an open economy- Income determination in an open economy. Foreign trade multiplier, Internal and external equilibrium- Mundell-Fleming model.
U-2	Theory of Inflation- Keynesian and Monetarist approaches to inflation ;Structuralist theory of inflation ; Phillips curve analysis- Short run and long run Phillips curve, Samuelson and Solow- the Natural rate of unemployment hypothesis, Tobin's modified Phillip's curve ; Adaptive expectations and rational expectations, Policies to control inflation.
U-3	Business Cucles- Theories of Schumptere, kaldor, Samuelson and Hicks.Goodwins model ; Control of business cycles- relative efficiency of monetary and fiscal policies.
U-4	New Classical Macroeconomics- The New classical critique of micro foundations, the new classical approach, Policy implications of new classical approach- empirical evidence. New Keynesian Macro Economics, Efficiency wage Hypothesis, Gift Exchange Model, insider Outsider Model, Menu Cost Theory, Labour Contract Model, Policy implications of the new Keynesian model.
	Recommended Books:*1. Branson W.A. (1989), Macroeconomic Theory and Policy, Harper and Row, New York. 2. Dornbusch, R and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc. New York. 3. Hall, R.E and J.B Taylor (1986), Macroeconomics, W.W. Norton, New York. 4. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd. New Delhi. 5. Levacic, R. and Rebmann, A. (1982), Macro Economics- An introduction to Keynesian –Neoclassical controversies, Macmillan, London. 6. Mankiw, N. G. (2010), Macroeconomics, Worth Publishers, 7th edition. 7. Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd. New York. 8. Shapiro E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2		1			2	2	1	2	2	2	1
CO2	3	3		1			1	2	2	2	1	2	2
CO3	3	2		1			2	2	3	3	2	3	2
CO4	2	2		1			2	1	3	2	3	2	2
	3	3		1			2	2	2	2	2	2	1

SEM-2-3/8 ECO-203: (Economics of Social Infrastructure –II)

PG Semester – II (Course Outcomes: COs)		
Title of the Course & Course Code	**Economics of Social Infrastructure-II (ECO-203)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of social sciences.		
Course Objective: To acquaint the learners with different approaches to social infrastructure with externalities. Understanding the social sector policies in India can make aware the future citizens on policy issues and human capital formation.		
On completion of the course, the students will be able to:		
CO1	Identify the difference between health and health care and describe the features of health as an economic commodity.	
CO2	Interpret the demand and supply aspects of health care, education and articulate the different market forms in health care output. Analyze the problems of health care finance and prospects of medical insurance especially in developing countries.	
CO3	Assess the production function approach in education and judge the importance of investment in education as a matter of social choice.	
CO4	Synthesize the problem of market failure in health care due to asymmetric information and externalities in education and propose suitable policy measures.	

Units	Course content
U-1	Economics of Health : Distinction between health and health care, Health as an economic commodity, Health Care -need and want. Demand and supply: Consumption of health & health care, investment in health care, Asymmetric information & supplier induced demand, Aggregate demand for health care, Healthcare output, Technical efficiency, Production frontier, Multi product firm- Returns to scale, additively, allocative efficiency. Returns to scale, Short run cost functions and economies of scope, Markets in health care: Perfect competition, Monopoly- market concentration, contestable markets. Monopolistically competitive market- product life cycle, long run equilibrium, Oligopoly. Goals other than profit maximization- growth maximization, behavioral theories- utility maximization of net income per physician, market failure & role of Government
U-2	Financing health care, delivery of health care: Uncertainty &health insurance attitude to risk, demand & supply of health insurance, health insurance market & problems, Health care financial-options, Health care finance- approaches adopted by governments of different countries, Financial health care schemes, decentralization & the role of private public mix. Equity in healthcare Finance Health sector reforms in developing countries like India.
U-3	Economics of Education: Productions function in Education- Concept of inputs & output. Valuing input, valuing output Valuing research, Measuring productivity, Education as screening device- benefits of screening, investment in screening or education, Signaling in the job market, informational output from educational institutions. Investment in education - a social choice approach.
U-4	Market Failure: Education as a public good-The neo classical approach, Externality aspect of education, Categorization of higher education as a good. Primary education as a merit good, education as a global private good/ bad, Market & market failure in higher education, asymmetric information, adverse selection & moral hazard. Interaction between state & higher education. Indian education system - challenges and policy initiatives.
	***Recommended Books**: 1. Berman, P. (ed), Health Sector Reforms in Developing Countries: Making Health Development sustainable. Harvard Series on Population and International Health, Boston (1995). 2. Blaug, M., Introduction to economics of Education, Penguin, London (1972). 3. Klarman, H. E., The Economics of Health, Colombia University Press, New York (1965). 4. Schultz, T.W., Investment in Human Capital, Free Press, New York (1971).*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	2	2	1	1	1	1	2	1	2	1	1
CO2	2	1	2	2	1	1	1	1	2	1	2	1	2
CO3	3	2	1	1	1	1	1	1	1	1	2	2	1
CO4	1	2	2	2	1	2	1	1	2	1	2	1	1
	2	1	2	2	1	1	1	1	2	1	2	1	1

SEM-2-4/8 ECO-204: (Quantitative Techniques & Computer Applications-II)

PG Semester – II (Course Outcomes: COs)		
Title of the Course & Course Code	**Quantitative Techniques & computer applications-II (ECO-204)**	Number of Credits - 4
Pre-requisites for the Course: Basic of Statistics and Computer applications will be an advantage.		
Course Objective: To familiarize the students with basic statistical techniques and train students about use of Computer applications for attaining a higher degree of precision in forecasting.		
On completion of the course, the students will be able to:		
CO1	Analyze the estimates of multiple regressions and inferential statistics with the help of software and interpret it.	
CO2	Validate the estimates of weights, distributive tables, regression and any other relevant techniques by using economic variables.	
CO3	Attain the basic knowledge on computer for testing economic hypotheses and forecasting.	
CO4	Develop the idea on uses of statistical software for better understanding of the subject matter.	

Units	Course content
U-1	Meaning, assumptions and limitations of simple correlation and regression analysis ; Spearman's rank correlation coefficients and their properties; Concept of the least squares and the lines of regression ; Standard error of estimate ; partial and multiple correlation and regression
U-2	Methods of estimation of non-linear equations – parabolic, exponential, geometric, modified exponential, Gompertz and Logistic relationships.
U-3	Various types of events- classical and empirical definitions of probability; Laws of addition and multiplication ; Conditional probability and concept of interdependence ; Bayes theorem and its implications ; Expectations, Properties of Binomial, Poisson and Normal distributions. Concept of an estimator and its sampling distribution ; desirable properties of an estimator ; Formulation of statistical hypotheses- Null and alternative ; Goodness of fit ; Confidence intervals and levels of significance ; Hypothesis testing based on Z, t, Chi-square
U-4	Basic concept of sampling- random and non-random sampling ; Simple random, stratified random and PPS sampling; Computer Applications: Use of statistical packages (S.P.S.S. & E View) in frequency distribution, correlation and regression analysis, ANOVA, TimeSeries Tests.
	***Recommended Books**: 1. Chiang A.C. (1986), Fundamental methods of Mathematical Economics, McGraw Hill, New York. 2. Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press and ELBS London. 3. Yamane, Taro (1975), Mathematics for Economists, Prentice Hall of India, New Delhi. 4. K. Sydaester and P. Hammond (2002), Mathematics for Economic Analysis, Pearson Educational Asia: Delhi. 5. Gupta, S. P. (1978), Statistical Methods, Sultan Chand and Sons. 6. Gupta, S. C. and V. K. Kapur (1970), Mathematical Statistics, Sultan Chand and Sons. 7. Murray R. Spiegel (1992), Theory and Problem of Statistics, Schaum's Outline Series, Metric edition 8. Gupta, S. C. (1981), Fundamentals of Statistics, Himalaya Publishing House.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	2	2	1	2	1	3	1	3	1	1	3
CO2	2	1	2	2	2	2	1	3	1	3	2	1	2
CO3	3	1	2	2	2	2	1	2	1	2	1	1	3
CO4	3	1	2	2	1	2	1	3	1	3	2	1	3
	3	1	2	2	1	2	1	3	1	3	2	1	3

SEM-2-5/8 ECO-205: (Development Economics – II)

PG Semester – II (Course Outcomes: COs)		
Title of the Course & Course Code	**Development Economics-II (ECO-205)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of growth and development theories with economic planning.		
Course Objective: To familiarize students with sectoral growth, approaches to development in developing countries with economic planning in global perspective.		
CO1	Understand the significance of sectoral growth and development approaches in developing countries.	
CO2	Interpret the implications of international trade theories for developing countries.	
CO3	Review how the macroeconomic policies impact the internal growth prospects and external balance of developing economies.	
CO4	Propose suitable policy changes in regional and micro planning in the context of the Indian economy.	

Units	Course content
U-1	Sectoral aspects of development- Role of agriculture in economic development; Efficiency and productivity in agriculture, New technology and sustainable agriculture ; Globalisation and agricultural growth, rationale and pattern of industrialization in developing countries ; The choice of techniques and appropriate technology and employment ; Efficiency of small-scale vs. large-scale production ; terms of trade between agriculture and industry ; Infrastructure and its importance ; Labour market and their functioning in developing countries.
U-2	Trade and economic development- International trade as engine of growth ; Static and dynamic gains from trade, Prebisch, Singer and Myrdal thesis vs. Free trade ; Export-led growth ; Dual gap analysis ; balance of payments ; tariffs and effective protection ; Post-GATT international economic order ; WTO and developing countries.
U-3	Macro-economic policies and Development- Role of monetary and fiscal policies in developing countries-price savings, inflation and growth- Empirical evidence ; external resources- FDI, aid vs. trade, technology inflow ; MNC activity in developing countries ; Borrowings- domestic and external ; Burden of borrowing- IMF and World bank policies in developing countries.
U-4	Allocation of resources- Need for investment criteria in developing countriespresent vs future, Alternative investment criteria ; Cost-benefit analysis; Shadow prices, project evaluation and UNIDO guidelines. Planning and development- Need for planning-democratic, decentralized and indicative planning, micro-planning, review of Indian plan models and planning.
	***Recommended Books**: 1. Ghatak, S (1986) An Introduction to development Economics, Allen and Unwin, London 2. Higgins,B. (1959) Economic Development, WW Norton, New York. 3. Meier G.M.(1986) Leading Issues in Economic Development, Oxford University Press, New York 4. Basu, Kaushik (2000) Analytical Development Economics: The less developed Economy Revisited, Oxford University Press, India. 5. Ray Debraj (2000) Development Economics, Oxford University Press, India. 6. Chenery H and T.N. Srinivasan (Eds) (1989) Handbook of Development Economics, Vols. 1&2, Elsevier, Amsterdem. 7. Todaro, M.P (1996) Economic Development, Longman, London 8. Thirlwal, A.P (1999) Growth and Development, Macmillan, UK. 9. Hayami, Y. (1997) Development Economics, Oxford University Press, New York 10. Sen, A.K. (Ed) (1990) Growth Economics, Penguin, Harmondsworth*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	1			1	1	2	3	1	2	1	2
CO2	3	2	1			1	2	3	3	1	1	1	2
CO3	2	3	1			3	2	2	2	1	3	1	3
CO4	3	2	1			2	2	2	3	1	2	2	2
	3	2	1			2	2	2	3	1	2	1	2

SEM-2-6/8 ECO-206-A: New Institutional Economics

PG Semester – II (Course Outcomes: COs)		
Title of the Course & Course Code	**New Institutional Economics (Elective) (ECO-206-A)**	Number of Credits - 4
Pre-requisites for the Course: Fundamental idea on the concept of "institution".		
Course Objective: To acquaint the students on the evolution, functions and structure of institutions. Understand the role of transaction costs and property rights in the context of economic institutions.		
CO1	Understand the theories of old institutional economics.	
CO2	Outline the institutional structure of a society and the limits. Demonstrate the inter dependence of social, political and economic institutions.	
CO3	Assess the implications of transaction costs and property rights for economic institutions.	
CO4	Develop a suitable synthesis of best practices in the present scenario using property right institutions.	

Units	Course content
U-1	Preliminaries of the Old Institutional Economics: The concept of Institutions in the old institutional economics; Adam Smith's "The Theory of the MoralSentiments"; The pragmatic philosophy of William James, Charles Peirce, John Dewey and Clarence Ayers;formation of habits, the rule of thumb, development of customs traditions and mores as regulators of social conduct; development of legal institutions. TB Veblen: The Theory of the Leisure Class – informalinstitutions/habits and traditions, government as part of the established, institutional system (vested interests),proposal of a system of industrial planning by technical experts, Jungian Archetypes and social psychology; R Commons and JK Galbraith - formal (legalized) institutions, Scientific investigation methods; WC Mitchell- Establishment of Institutions, National Bureau of Economic Research (NBER), Statistical basis for study of institutions, New School for Social Research, origins of agent-based theory; G Myrdal –interdependence of social, political, economic and institutional phenomena, modernization ideals. Religion as an institution: Max Weber's The Protestant Ethic and the Spirit of Capitalism. Kenneth Boulding: Grants Economics; The three-fold taxonomy of social organization
U-2	Introduction to Institutional Analysis: The concept of institution in the New Institutional Economics: Institutions and organizations. Functions of social and economic institutions; Interaction situations and the types of norms: prisoners' dilemma-type situation; co-ordination situation; inequality situation; Enforcement characteristics; Institutional structure of a society; Formal and informal institutions; Sanctions for disobeying norms (self-enforcing sanctions, guilt, shame, informational sanctions, bilateral costly sanctions, multilateral costly sanctions); Conditions of norms' effectiveness. Interaction of formal and informal institutions; The limits of imitations of institutions from best-performing countries; The problems of their enforceability; A Comparative view of the Old Institutional Economics and the New Institutional Economics and modern institutionalism.
U-3	Transaction Costs: The concept of transaction; Market and intra-firm transactions; Transaction costs as friction in the economy;Transaction costs and transformation costs; Interdependency between transaction costs and transformation costs; Types of market transaction costs and means of transaction costs minimization (search and information costs; measurement costs; bargaining and decision costs; supervision and enforcement costs); Comparative advantages and shortcomings of the legal enforcement mechanism; Reputation as a contract enforcement device; Ideal model of "perfect reputation"; Shortcomings of the reputation as a contract enforcement mechanism. Reputation and the "free rider problem"; Reputations aided by institutions. Transaction costs, the main types of economic exchange and their institutional structure; Coexistence of the main types of economic exchange in the modern society; Transaction cost measurement.
U-4	Economic Theory of Property Rights: The definition of property rights; Property rights in different Laws/traditions; The property rights approach: some basic concepts. Specification of property rights, the bundle of rights, partitioning of property rights, attenuation of property rights; Assigning of property rights: the internalization of externalities; The Coase Theorem; Critic of Coase (dynamic effects of alternative legal rules, wealth effect, distributional effects,strategic behavior and the problem of holding-out, endowment effect, sociological critic, unrealistic assumption about zero transaction costs); Alternative

	property rights regimes; Common property (open access) and the tragedy of the commons; Exclusive property rights and the conditions for their emergence; The first economic revolution. Communal property; Optimal group size; Private property; Moral and economic aspects of private property; Public property; The emergence of property rights; The optimistic theory of the emergence of property rights (naive model); The interest-group theory of property rights; The costs of collective action; The theory of rent-seeking; Interest-groups and rent-seeking behavior in an economy.
	***Recommended Books**: 1. Smith Adam "An enquiry into the nature and causes of wealth of nations", (1776) 2. Galbraith J.K "American Capitalism: the concept of countervailing power", Routledge Pub. (2017) 3. Acemoglu D., Robinson J A, "Why nations fail", Profile Books Ltd. 4. Williamson Oliver E., Winter Sidney G., Oxford University Press, "The Nature of the firm", (1993). 5. Coase Ronald H "The Problem of Social Cost", Palgrave McMillan Publications (1960).6. Coase Ronald H "The firm, The Market and the Law", University of Chicago Press, (1988). 7. Vatiero Massimiliano "The theory of transaction in institutional economics: a history", Routledge Pub. (2020).*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	1	1	1	1	1	1	1	1	1	1	2
CO2	2	1	1	2	1	1	2	2	1	1	2	1	2
CO3	2	2	1	1	1		2	2	2	1	1	1	2
CO4	3	1	1	1	1	1	3	2	1	1	2	2	1
	2	2	1	1	1	1	2	2	1	1	1	1	2

SEM-2-7/8 ECO-206-B: (Mathematical Economics)

PG Semester – II (Course Outcomes: COs)		
Title of the Course & Course Code	**Mathematical Economics (Elective) (ECO-206-B)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of calculus.		
Course Objective: to strengthen the theoretical understanding of the student by adopting mathematical approach for analyzing economic theories.		
On completion of the course, the students will be able to:		
CO1	Understand the consumers equilibrium more objectively with the help of different forms of utility forms.	
CO2	Examine the theory of firm's equilibrium and familiarise the students with various forms of production functions having practical relevance.	
CO3	Experiment the idea of different types of market and equilibrium in the respective market mathematically.	
CO4	Develop solutions to Economic problems from programming and game theoretic approach. Appraise the Operations Research model like Input-Output model and Linear Programming model for obtaining and optimum solution under complex economic situations.	

Units	Course content
U-1	Theory of Consumer Behaviour- Cardinal and ordinal utility maximization ; Slutsky equation, compensated demand functions, income, substitution and price effects ; Concept of elasticities-generalizations to n variable case; separate and additive utility functions; homogeneous and homothetic utility functions ; constant elasticity of substitution (CES) and transcendental logarithmic utility functions ; duality theorem ; consumers surplus ; Theory of revealed preference and index numbers ; Linear expenditure systems.
U-2	Theory of production- Production function- homogeneous and nonhomogeneous, Properties of production function ; CES, VEX and trans-log production function. Simple derivation of short run and long run cost functions ; Modern approach to theory of costs ; Cost function, constrained optimization of a producer ; Generalisation to n variable case ; Input demand functions ; Adding up theorem, Technical progress through production function.
U-3	Price determination in various markets- price determination in perfect competition, monopoly, monopolistic competition, duopoly, oligopoly, and monopsony ; Pricing of factors of production ; Bilateral monopolyMarket equilibrium- Marshallian and walrasian equilibrium conditions
U-4	Game theory- Liner programming and Input-Output analysis : Concept of game- Two person zero-sum game, Payoff matrix, pure and mixed strategies. Maximin and Minmax solutions ; Saddle point solution ; Non- constant sum game ; Prisoners dilemma ; Linear programming- Primal and dual problem ; Simplex method ; transport and storage problems and other applications of linear programming in economics ; Input-output analysis- Open and closed systems ; Hawkins-Simon conditions ; Leontief's dynamic system .
	***Recommended Books**: 1. Allen RGD (1974) Mathematical Analysis for Economists, Macmillan Press and ELBS, London. 2. Chiang, A.C (1986), Fundamental Methods of Mathematical Economics, Mac Graw Hill, New York. 3. Henderson &Quandt, Micro Economic Theory, A mathematical approach, Mac Gaw Hill, New Delhi. 4. Allen, RHD, (1976) Mathematical Economics, Macmillan, London 5. Arrow K.J., and M. Intrilligator, (Eds) (1982), handbook of Mathematical Economics, Volumes, I, II, III, North Holland, Amsterdam. 6. Hadley, G (1962) Linear Programming, Addison Wesley Publishing Co., Massachusetts*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	2	2		2	1	2	1	3	1	1	2
CO2	2	1	3	3		2	1	3	2	3	2	1	2
CO3	2	2	2	3		2	2	3	2	3	1	1	2
CO4	3	1	3	2		3	1	3	2	3	1	1	1
	2	1	3	3		2	1	3	2	3	1	1	2

SEM-2-8/8 ECO-206-C: New Frontiers in Economics

PG Semester – II (Course Outcomes: COs)		
Title of the Course & Course Code	**New Frontiers in Economics (Elective) (ECO-206-C)**	Number of Credits - 4
Pre-requisites for the Course: Basic concepts of micro and macroeconomics.		
Course Objective: To familiarize the students with new developments in the discipline of Economics.		
On completion of the course, the students will be able to:		
CO1	Outline the nuances of new classical economics and post-Keynesian economics.	
CO2	Enable the students to identify and describe the latest developments in the field of economics.	
CO3	Illustrate different approaches to the concept of welfare from Rawls to Sen and Appraise gender issues and the feminist economic theories.	
CO4	Develop new ideas to deal with troublesome environmental issues	

Units	Course content
U-1	Theoretical Issues: Post Keynesian and Behavioural Economic Theory 1. Post Keynesian critique of neoclassical economics –Distribution theory – Macrodynamics. Bounded rationality, framing and endowment effect,‟ defaults for choice‟ –Prospect theory and heuristics – Behavioral Economics and the financial sector – Behavioral Economics and public finance. 2.Buchanan's Public Choice Approach- Stiglitz Private Use of Public Interest- Neo- Classical: Rational Expectations - Sen.'s Approach to Welfare. Development as expansion of capabilities
U-2	Development Policy Issues..... India in the Emerging World System - Changing Perceptions about the role of the Government - Growth and pattern of International Economic Relations: Aid Investment and Trade Financial sector and economic growth: financial globalization,‟optimum financialization‟.
U-3	Welfare and Gender Economics: Utilitarianism – Rawlsian theory of welfare – Amartya Sen‟s capability theory. Becker‟s theory of family and gender discrimination – Feminist economic theory: methodology and basic principles – capability approach and gender: Nussbaum‟s basic capabilities framework – Women empowerment and economic development.
U-4	Environmental Issues - Sustainable Development - Waste Management - Natural Disaster Management - Environmental Policies.
	Recommended Books: *1. Dornbusch, R, S. Fischer& R. Startz Macro-economics. Tata Mc Grew-Hill, New Delhi (2000).* *2. Dornbusch, Fischer, Stratz. Macroeconomics, Tata McGraw-Hill. New Delhi (2004).* *3. N. Gregory Mankiw, Principles of Macroeconomics, (2014).* *4. Campbell McConnell and Stanley Brue, Macroeconomics: Principles, Problems, & Policies (2014).* *5. Harvey, Rosen, Public Finance. McGraw Hill Education (India) Private Limited (2012). 6. Ayala and A. Palacio-Vera (2014) "The Rational Expectations Hypothesis: An assessment from Popper's Philosophy",http://www.levyinstitute.org/pubs/wp_786.pdf* *7. Muth, J.F. 1961. Rational Expectations and the Theory of Price Movements, Econometrica, 29(3), pp. 315-335. - S. Rebelo (2005) "Real Business Cycles Models: Past, Present and Future"* *8. G. Akerlof, (2001), "Behavioral Macroeconomics and Macroeconomic Behavior", Nobel Prize Lecture.* *9. Buchanan James N, Tullock Gordon (1965), The calculus of consent: Logical foundations of Constitutional Democracy, University of Michigan Press.* *10. Jacobsen Joyce P.(2007, Third Edition), The Economics of Gender, Wiley-Blackwell.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	2	1	3	2	1	1	1	1	2
CO2	2	1	1	3	2	1	2	3	1	2	2	1	2
CO3	2	2	2	3	1	1	3	3	2	1	1	1	2
CO4	3	1	1	2	2	1	2	3	2	1	1	1	1
	2	1	1	3	2	1	3	3	2	1	1	1	2

SEM-3-1/8 ECO-301: (Public Economics – I)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**Public Economics (ECO-301)**	Number of Credits - 4
Pre-requisites for the Course: Basic understanding of the role and functions of the government.		
Course Objective: Role and functions of the Government in an economy have been changing with the passage of time. This paper covers the theoretical aspects of Public Economics and Public Finance.		
On completion of the course, the students will be able to:		
CO1	Understanding of the rationale for the existence of modern governments.	
CO2	Know how there is allocation of resources by public policy and role of voting system.	
CO3	Understand the functions and effectiveness of fiscal policy.	
CO4	Familiar with various tax system in India.	

Units	Course content
U-1	Introduction- Role of Govt. in organized society; changing perspectives government in a mixed economy, public and private sector, co-operation or competition ; Govt. as an agent for economic planning and development ; Government as a tool for operationalising the planning process ; private goods, public goods, market failure- imperfections, decreasing costs, externalities, public goods.
U-2	Public choice- Private and public mechanism for allocating resources, problems for allocating resources, problems of preference revelation and aggregation of preferences, Voting systems, Arrow Impossibility theorem, An economic theory of democracy, Politico-eco-bureaucracy ; rent seeking and directly unproductive profit seeking (DUP) activities. Rationale for public policy : Allocation of resources, provision of public goods, voluntary exchange models, impossibility of decentralized provision of public goods (contributions of Samuelson and Musgrave).
U-3	Fiscal policy- full employment, anti-inflation, economic growth, redistribution of income and wealth, interdependence of fiscal and monetary policies, budgetary deficits and its implications, Fiscal policy for stabilization-automatic vs. discretionary stabilization ; Alternative measures of resource mobilization and their impact on growth, distribution and prices, balanced budget multiplier
U-4	Indian Public Finances- Indian tax system ; Revenues of the Union, States and local bodies ; Major taxes in India, base of taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, reforms in direct and indirect taxes, taxes on services ; Non-tax revenue of centre, States and local bodies ; Analysis of central and state government budgets ; Lack of flexibility incentral and state budgets, shrinking size of development finance throughbudgets ; Trends in public expenditure and public debt ; Fiscal crisis and fiscal sector reforms in India ; Reports of Finance commissions in India.
	***Recommended Books**:1. Atkinson, A.B. and J.E. Siglitz (1980) Lectures on Public Economics, Tata McGraw Hill, New York 2. Auerbach, A.J. and M. Feldstern (Eds) (1985) Handbook of Public Economics, Vol.I, North Holland, Amsterdam. 3. Jha, R (1998) Modern Public Economics, Routledge, London 4. Musgrave, R.A. (1959) The Theory of Public Finance, McGraw Hill, Kogakhusa, Tokyo 5. Shoup, C.S (1970) Public Finance, Aldine, Chicago 6. Peacock . A and G.K. shaw (1976) The Economic Theory of Fiscal Policy, George Allen and Unwin, London. 7. American Economic Association (1955) Readings in Fiscal Policy, George Allen and Unwin, London.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3		1		2	1	2	2	1	2	2	3
CO2	2	2		1		1	2	2	1	2	3	2	2
CO3	2	2		1		2	2	2	2	2	1	3	2
CO4	1	1		1		1	3	3	2	2	3	2	1
	2	2		1		2	2	3	2	2	3	2	2

SEM-3-2/8 ECO-302: (International Economics – I)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**International economics-I (ECO-302)**	Number of Credits - 4
Pre-requisites for the Course: Basic concepts of micro and macroeconomics.		
Course Objective: To provide an understanding of the broad principles of international trade and their welfare implications for the economies.		
On completion of the course, the students will be able to:		
CO1	Understand and compare different theories of international trade	
CO2	Evaluate the importance of international trade as an engine of economic growth.	
CO3	Examine and reflect on the economic policies that include international trade.	
CO4	Deduce policies to attain balance in the economy	

Units	Course content
U-1	Theory of International trade- Theories of absolute advantage of Adam Smith, comparative advantage of David Ricardo, Law of reciprocal demand,Marshal Edgeworth Offer curve analysis, Heberler opportunity cost, modern theory of international trade- Heckscher-Ohlin theorem,factor intensity reversal argument, Leontief paradox, the factor price equalization theorem, Kravis and Linder theory of trade.
U-2	Measurement and gains from trade – Terms of trade; net and gross barter terms of trade, single and double factorial terms of trade, income terms of trade, Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries, hypothesis of secular deterioration of terms of trade, ; Trade as an engine of economic growth, immiserising growth
U-3	Monetary theory of international trade- Balance of payment: meaning and components, autonomous and accommodating transaction,equilibrium Bop, balance of payment adjustment mechanism under flexible prices, interest rates, and income level with fixed exchange rates and flexible exchange rates.
U-4	Absorption approach and monetary approach, internal and external balance: adjustment of BOP through policy instruments- expenditure changing, expenditure switching and exchange control methods Trevor Swan model
	Recommended Books*:1. Salvatore, D (2014) International Economics: Trade and Finance, Wiley Students' Edition, 11th Edition. 2. Soderstein, Bo. And G. Reed,(1994) International Economics, The Palgrave Macmillan, London, 3rd (revised) edition. 3. Cherunilam, Francis (2017), Mc Graw Hill, Education 4. Carbough, R.J. (1999) International Economics, International Thomson Publishing, New York. 5. Chacoliades, M. (1990) International Trade : Theory and Policy, Mc Graw Hill, Kogakusha, Japan 6. Acharya, Rajat (2013) International Economics An Introduction to Theory and Policy,Oxford University Press, New Delhi.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3		2		2	1	3	2	1	2	2	3
CO2	3	2		2		1	2	3	2	3	3	2	2
CO3	2	3		2		2	2	3	3	3	1	3	2
CO4	3	1		2		1	3	3	2	2	3	2	3
	3	3		2		2	2	3	2	3	3	3	3

SEM-3-3/8 ECO-303: (Environment & Resource Economics – I)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**Environment & Resource Economics – I (ECO-303)**	Number of Credits - 4
Pre-requisites for the Course: Preliminary idea about ecology and environmental issues.		
Course Objective: To learn the techniques to integrate environmental concerns with economic development and policy-making to move towards sustainable development.		
On completion of the course, the students will be able to:		
CO1	Define the key issues regarding sustainability, environmental degradation and economic growth.	
CO2	Describe the analytical framework adapted by the discipline of Economics to include the environmental concerns in its analysis.	
CO3	Appraise different techniques of valuation and cost benefit analysis that goes into decision making in environmental Economics.	
CO4	Develop ways in which economic principles can be used for environmental protection and pollution control.	

Units	Course content
U-1	Fundamentals: Environment economy interaction, The circular Economy, Environmental quality as a public good, Public goods and bads, natural resources, trade-off between environmental quality and economic goods, growth and environment-environmental Kuznets curve
U-2	: Market failure, The nature of market failure and problems of externalities associated with environmental problems, Pollution as Externality, Optimal Externality, Property rights, the theory of externalities and Coase theorem, Coase theorem and its implications in environmental regulations,
U-3	Cost-benefit analysis and the valuation of environmental resources, Economic limits of growth-population, resource use and environmental degradation, affluence, technology and environmental degradation, environmental issues in developing countries
U-4	Theories of Optimal use of renewable resources: Growth curves, MSY, Costs and revenue, profit maximization, open access and common property solutions, preservation value, discount rate and price change effects, Theories of optimal use of exhaustible resources, Resource price and backstop technology, Environmental and development trade off and the concept of sustainable development; Integrated environmental and economic accounting and themeasurement of environmentally corrected GDP
	***Recommended Books**:1. Kolstad, C. D (1999) Environmental economics, Oxford University Press, New Delhi 2. Sankar, U (Ed.) (2001) Environmental Economics, Oxford University Press, New Delhi 3. Hanley N (1997) Environmental Economics in Theory and Practice, Macmillan, London. 4. Tietenberg T. (1994) Environmental Economics & Policy, Harper Collins, New York. 5. Bromley D W, (ed.) (1995) Handbook of Environmental Economics, Blackwell, London 6. Bhattacharya, R.N. (2001) Environmental Economics an Indian Perspective, Oxford University Press, New Delhi 7. Hussen, AM (1999) Principles of Environmental Economics, Routledge, London.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	2	1	3	2	1	1	1	1	2
CO2	2	1	1	3	2	1	2	3	1	2	2	1	2
CO3	2	2	2	3	1	1	3	3	2	1	1	1	2
CO4	3	1	1	2	2	1	2	3	2	1	1	1	1
	2	1	1	3	2	1	3	3	2	1	1	1	2

SEM-3-4/8 ECO-304: (Advanced Econometrics – I)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**Advanced Econometrics – I (ECO-304)**	Number of Credits - 4
Pre-requisites for the Course: Students must have basic knowledge of Statistical and Mathematical methods.		
Course Objective: To provide students exposure to econometric theory, model building and data analysis.		
On completion of the course, the students will be able to:		
CO1	State the use of statistical techniques to analyse Economic data and relations.	
CO2	Understand the Linear and Non- Linear regression models. Evaluate statistical significance of results obtained through hypothesis testing.	
CO3	Sketch the problems encountered in hypothesis testing and the remedies.	
CO4	Develop appropriate statistical models for use in economic modelling. Design economic models using simultaneous equations, qualitative data and time series data.	

Units	Course content
U-1	Basic Econometrics- Nature, meaning and scope of econometrics: Simple and general linear regression model- Assumptions, Estimation (through OLS approach) and properties of estimators, Gauss Markov theorem; Concepts and derivation of R2 and Adjusted R2;
U-2	Concept of analysis of variance approach and its application in regression analysis; Generalised Least Squares (GLS) Estimation of non-linear equations- parabolic, exponential, geometric, hyperbolic, modified exponential, Gompertz and logistic functions.
U-3	Problems of regression analysis – Nature, test, consequences and remedial steps of problems of heteroscedasticity; Multicollinearity and autocorrelation; Problems of specification error, Errors of measurement (Errors in variables)
U-4	Regressions with Qualitative Independent variables- Dummy variable technique- Testing structural stability of regression models comparing to regressions, interaction effects, seasonal analysis, piece-wise linear regression, use of dummy variables, regression with dummy dependent variables; The LPM, Logit, Probit models- Applications, estimation under Linear restrictions (Restricted Least Squares).
	***Recommended Books**:1. Jhonston J. (1991), Econometric Methods, McGraw Hill Book Co. London 2. AsteriouDimitrious, (2006), Applied Econometrics, Palgrave Macmillan, New York 3. Gujrati D.N. (1995), Basic Econometrics, (2 nd edition) McGraw Hill, New Delhi 4. Kmenta, J. (1977), Elements of Econometrics, (reprint edition) University of Michigan Press, New York. 5. Koutsoyiannis A. (1977), Theory of Econometrics (2nd ed.) The Macmillan Press Ltd. London. 6. Madalla G.S. (1997), Econometrics, McGraw Hill, New York. 7. Intrilligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall, Englewood Cliffs, New Jersey. 8. Pindyck, Robert S. and Daniel L. Rubinfeld, (1976), Econometric Models and Economic Forecasts, International Student edition, McGraw-Hill.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	3	3	2	1	1	2	1	3	1	2	2
CO2	2	2	3	3	2	2	1	3	2	3	2	2	2
CO3	2	2	2	3	1	2	2	3	2	3	1	3	2
CO4	3	2	3	2	2	3	1	3	2	3	1	3	1
	2	2	3	3	2	2	1	3	2	3	1	3	2

SEM-3-5/8 ECO-305: (Behavioural Economics)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**Behavioural Economics (ECO-305)**	Number of Credits - 4
Pre-requisites for the Course: Good knowledge about neoclassical economics		
Course Objective: To familiarize the students with various anomalies found in neoclassical economic models and adopt behavioural approach to address them.		
On completion of the course, the students will be able to:		
CO1	Understand the basics of behavioural economics and recognize the anomalies of standard economic neoclassical models.	
CO2	Understand and evaluate the decision making under certain situation.	
CO3	To examine behaviour under uncertain situation and develop understanding of modern advancement in the field.	
CO4	Evaluate the strategic interaction & behaviour in dynamic time framework.	

Units	Course content
U-1	INTRODUCTION: History and Evolution of Behavioral Economics, Objectives and Scope, Relationship with other Disciplines, Structure of the subject Matter, Methodology of the Study Theories, Evidence, Consilience, Foundations: The neo classical Model, Axioms, assumptions, Evolutionary Biology of Utility, The Neuroscientific basis of Utility, Types of Utility, Broadening Rationality, policy Implications Applications- Altruism and the Brain, The psychology of super market selling
U-2	Behavioral Alternatives in Decision Making under Certainty; opportunity costs, sunk Costs, Menu Dependence and decoy effect, Loss aversion and the endowment effect, anchoring and adjustment, Violation of rationality of Neoclassical Model- Gambler's fallacy, Conjunction and disjunction fallacies, Base rate fallacy, Conformation bias, Availability Bias, Self- evaluation Bias, Magical Beliefs, Causes of Irrationality, Application- Celebrity contagion and imitative magic
U-3	Decision – making under Risk and Uncertainty: Conventional Approaches to modifying Expected Utility theory, Prospect Theory, reference Points, Loss Aversion, Shape of Utility Function, Decision- weighting, Criticism of Prospect theory, Brief introduction to Recent Theories, Application- The Endowment Effect, Bundling and Mental Accounting, Framing and Editing, Choice Bracketing and dynamics, Application- why you can't find a cab on a rainy day
U-4	Inter Temporal Choice: The Discounted Utility Model- Origin, Features, Methods & Anomalies, Alternative Inter-temporal Choice Models- Time Preference, time Consistent Preferences, Hyperbolic Discounting, Modifying the Instantaneous utility Function, Case Studies- The Saving problem, The Desire for rising consumer profiles.

	Recommended Books*:Philosophical problems of behavioural economics by SteffanHeidel, Routlege, 1996 18 Varieties of modern economic rationality – from Adam Smith to Contemporary Behavioural and evolutionary economists by Michael S Zoubulakis, Routledge, 1997 Behavioural foundations of economics by J.L. Buxter, McMillan Press, Choice, Behavioural economics and addiction, edited by Ruby E Vachinich and Nick Heather, Pergamon Elsevier, 2003, Advance in understanding strategic behaviour-game theory experiments and bounded rationality, edited by Steffan Huck, Palgrave, McMillan, 2004 Loewenstein (1987) "Anticipation and the Valuation of Delayed Consumption". Economic Journal, 97(387): 666— 684. Brunnermeier, Markus, K., and Jonathan A. Parker (2005). "Optimal Expectations." American Economic Review, 95(4): 1092-1118. Kahneman and Tversky (1979) "Prospect Theory: An Analysis of Decision Under Risk", Econometrica, 47(2): 263– 291. List (2003) "Does Market Experience Eliminate Market Anomalies?", Quarterly Journal of Economics, 118(1): 41– 71. Koszegi and Rabin (2006), "A Model of Reference-Dependent Preferences", Quarterly Journal of Economics, 121(4): 1133–1165. Sydnor, Justin. 2010. "(Over)insuring Modest Risks." American Economic Journal: Applied Economics, 2(4): 177-99 Charness and Rabin (2002) "Understanding Social Preferences with Simple Tests" Quarterly Journal of Economics, 117(3): 817–869. Lazear, Edward P., Ulrike Malmendier, and Roberto A. Weber. 2012. "Sorting in Experiments with Application to Social Preferences." American Economic Journal: Applied Economics, 4(1): 136-63. DellaVigna, List, Malmendier. 2012. "Testing for Altruism and Social Pressure in Charitable Giving". Quarterly Journal of Economics, 127(1): 1–56. Rabin (1993) "Incorporating Fairness into Game Theory and Economics", American Economic Review, 83(5): 1281– 1302. Fehr and Gachter, (2000),"Fairness and Retaliation: The Economics of Reciprocity", Journal of Economic Perspectives, 14(3): 159–181. Fehr, E. and Schmidt, K. (1999) "A Theory of Fairness, Competition, and Cooperation" The Quarterly Journal of Economics, 114(3): 817—868. Thaler, Richard H. 1988. "Anomalies: The Ultimatum Game." Journal of Economic Perspectives, 2(4): 195-206.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	2	1	3	2	1	1	1	1	2
CO2	2	1	1	3	2	1	2	3	1	2	2	1	2
CO3	2	2	2	3	1	1	3	3	2	1	1	1	2
CO4	3	1	1	2	2	1	2	3	2	1	1	1	1
	2	1	1	3	2	1	3	3	2	1	1	1	2

SEM-3-6/8 ECO-306-A: (Indian Economy)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**Indian economy (ECO-306-A)**	Number of Credits - 4
Pre-requisites for the Course: Knowledge about theories and models of growth and development.		
Course Objective: Enable the students to appreciate the evolution of Indian economy, its institutional framework, planning policy and the relevance of international trade.		
On completion of the course, the students will be able to:		
CO1	List the basic characteristics of Indian economy and its potential on natural resources.	
CO2	Examine agriculture as the foundation of economic growth and development, analyse the progress and changing nature of agricultural sector and its contribution to the economy as a whole.	
CO3	Not only appraise the status of the economy as a whole, they would understand the basic features of Odisha's economy, sources of revenue, how the state government finance its programmes and projects.	
CO4	Formulate policies of inclusive growth for the Indian economy in general and economy of Odisha in particular.	

Units	Course content
U-1	Indian Economy- Basic features and issues relating to population growth, planning, mobilization of resources, growth, development and employment, Poverty, inequality and Inclusive growth, Sustainable development, Government Budgeting.
U-2	Agriculture- Major crops, cropping patterns in various parts of the country, different types of irrigation and irrigation systems, storage, transport and marketing of agricultural produce and issues and related constraints; technology in the aid of farmers. Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System - objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing. Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management, Land reforms in India.
U-3	Social and Economic Infrastructure: Education, Health, Housing, Energy, Ports, Roads, Airports, Railways etc. Effects of liberalization on the economy, Changes in industrial policy andtheir effects on industrial growth, Indian stock market and SEBI, Issues relating to India's foreign trade, role of foreign capital, FDI, external borrowings, non-resident deposits.
U-4	Odishan Economy- Basic features and issues relating to population growth, planning, mobilization of resources, growth, development and employment, Poverty, inequality and Inclusive growth, Sustainable development, Government Budgeting.
	***Recommended Books**:1. Ahluwalia I.J. and I.M.D Littles (Eds.) (1999) India's Economic Reforms and Development, Oxford University Press, New Delhi 2. Bardhan, P.K. (1999) The Political Economy of Development in Inda, Oxford University Press, New Delhi. 3. Bawa R.S and P.S. Raikhy (Ed.) (1997) Structural Changes in Indian Economy, Guru Nanak Dev University Press, Amritsar. 4. Chakravarty, S. (1987) Development Planning: The Indian Experience, Oxford University Press, New Delhi. 5. Dantwala, M.L. (1996) Dilemmas of Growth: The Indian Experinece, Sage Publications, New Delhi. 6. Jalan, A.K. (1986) Economic Planning in Inda, Ashish Publishing House, New Delhi 7. Jalan, B. (1992) India's Economic Policy- Preparing for the Twenty First Century, Viking New Delhi. 8. Sen R.K. and B. Chatterjee (2001) Indian Economy: Agenda for 21st Century, Deep and Deep Publications, New Delhi. 9. Byres T.J. (Ed.) (1997) The State, Development Planning and Liberalization in India, Oxford University Press, New delhi.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	3	3	2	1	1	2	3	2	1	2	2
CO2	2	2	3	3	2	2	1	3	3	1	2	2	2
CO3	2	2	2	3	1	2	2	3	3	2	1	3	2
CO4	3	2	3	2	2	3	1	3	3	1	1	3	1
	2	2	3	3	2	2	1	3	3	1	1	3	2

SEM-3-7/8 ECO-306-B: (Regional Economics)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**Regional Economics (ECO-306-B)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge about different aspects of Indian Economy.		
Course Objective: To provide a broad understanding of the basics of regional economics, regional economic theories and regional development in India.		
On completion of the course, the students will be able to:		
CO1	Define the key issues relating to regional economic analysis.	
CO2	Demonstrate the theoretical background of development disparities of different regions.	
CO3	Examine the applicability of theories of location, migration, development with different dimensions of regional development.	
CO4	Critique of regional planning and point out the deficiencies in removing regional as well as rural urban disparities of India.	

Units	Course content
U-1	Basics of Regional Economics: Need for study of Regional Economics, Definition of a region, Different types of regions, Differences between region and a nation, Objectives and scope of regional economic analysis - Regional economic problems – Causes - Economics of Geography – Krugman – Endogenous growth (Lucas and Romer).; Indicators of regional development, Social, Economic and Political factors in regional growth.
U-2	Regional Economic Theories – I Theories of Regional Economic Development – Cumulative Causation (Perroux, Myrdal, Hirschman) - Export base theory, Central place theory (Christaller), Sector theory (Colin Kuznets), Stages theory (Rostow).
U-3	Regional Economic Theories – II Theories of Location – Weber's and Florence - Migration and Regional Development – Todaro Model - Three dimensions of Regional Development – Density, Distance and Economic Divisions.
U-4	Regional Development in India: Socio-Economic Regional imbalance in India; Regional planning; Rural urban inequality; Role of Planning commission and finance commission in regional development, Trends in Regional Disparities in Income & Consumption, Sectoral Income and Employment Pattern across regions, Spatial Concentration of Industries in Liberalized Regime, Trends in regional agro production and productivity, Regional Distribution of Infrastructure, Trends in regional disparities in Infrastructure. Key issues in regional development of Odisha with special reference to Western Odisha and the KBK.
	Recommended Books: *1. Nayak Pulin B., Panda Santosh C, Pattanaik Prasanta K, "The Economy of Odisha: A Profile", OUP India (2016), 2.SethySusanta Kumar "Odisha Economy: Its growing dimensions", IBP (2019), 3. PattnaikNihar Ranjan "Economic History of Odisha", (1997), Indus Publishing Company, New Delhi. 4. Ghadei Committee Report 5. Odisha Economic Survey: 2020. 6. WODC: A profile.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	3	3	2	1	1	2	3	2	1	2	2
CO2	2	2	3	3	2	2	1	3	3	1	2	2	2
CO3	2	2	2	3	1	2	2	3	3	2	1	3	2
CO4	3	2	3	2	2	3	1	3	3	1	1	3	1
	2	2	3	3	2	2	1	3	3	1	1	3	2

SEM-3-8/8 ECO-306-C: (Indian Financial System)

PG Semester – III (Course Outcomes: COs)		
Title of the Course & Course Code	**Indian Financial System– (ECO-306-C)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge on Indian Financial System		
Course Objective: To acquaint the students with the theory and practice of different financial institutions, financial assets, markets, government policies and the role of financial sector over time.		
On completion of the course, the students will be able to:		
CO1	List the broad features of Indian financial institutions with the regulating mechanism of NBFCs and promotion of development banking.	
CO2	Describe the trend of savings & liabilities, Mobilization of resources through mutual funds and development banking analysis.	
CO3	Examine the existence and development of non-banking financial institutions, know the important role of Mutual funds, investment companies etc., utilize and effectively participate in the development process.	
CO4	Experiment the conditions of financial markets and its impact in the economy.	

Units	Course content
U-1	Introduction to Indian Financial System Significance and definition, purpose and organization, Liberalization of the financial system, Factors determining savings, Composition of savings, financial liabilities, saving rate trend in India, Financial Intermediation
U-2	Mutual Funds Objectives of Mutual funds, Resource Mobilization, Benefit of Mutual funds, Mutual funds in India, Types of Mutual Funds, Return from Mutual Funds, Mutual Fund holder's Account, SEBI directives for Mutual Funds, Private Mutual Funds, Asset Management Company, Unit Trust of India, Mutual Funds abroad, Evaluation of Performance of Mutual Funds, Money market Mutual Funds, Collective Investment schemes
U-3	Non - Banking Finance Companies Definition, Mutual Benefit Finance Companies, Financial sectors reform, Liberalization measures for NBFCS, Regulations for NBFCS accepting Public Deposits, Limits on acceptance of Deposits, Size of Non-Banking companies, deposits, distribution of deposits, Comparison of Net Owned Funds (NOF) and deposits, Capital issues by Finance Companies
U-4	Development Banking Nature of development banking, Financial appraisal, Liquidity Ratios, BEP, Technical Appraisal, Economical Appraisal and Social Cost – Benefit Analysis ,Promoter's Contribution, Appraising term Loans, Choice of Financial Institutions
	Recommended Books *:1. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011. 2. Prasanna Chandra, Financial Management, Theory and Practice, Tata McGraw Hill, 6th edition, 2006. 3. John C., Hull, Options, Futures and Other Derivatives, Pearson Education, 6th edition, 2005. 4. Dominick Salvatore, International Economics: Trade and Finance, John Wiley International Student Edition, 10th edition, 2011 5. Edminister, R.O, Financial Institutions, markets and Management, Mc Graw Hill, New York.1986. 6. R.I Robonson, and D. Wrightman, Financial Markets, Mc Graw Hill, London.1981.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	3	3	2	1	1	2	3	2	1	2	2
CO2	2	2	3	3	2	2	1	3	3	1	2	2	2
CO3	2	2	2	3	1	2	2	3	3	2	1	3	2
CO4	3	2	3	2	2	3	1	3	3	1	1	3	1
	2	2	3	3	2	2	1	3	3	1	1	3	2

SEM-4-1/5 ECO-401: (Public Economics-II)

PG Semester – IV (Course Outcomes: COs)		
Title of the Course & Course Code	**Public Economics-II (ECO-401)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of Indian Economy.		
Course Objective: To understand the policies, institutions and components of Indian Public Finance.		
On completion of the course, the students will be able to:		
CO1	Understand important theories of public expenditure and reforms in Indian expenditure budgeting.	
CO2	Recognise the fundamental concepts of public economics, public expenditure, public revenue, and public debt with special reference of Indian economy.	
CO3	Interpret various aspects of fiscal federalism in Indian fiscal scenario.	
CO4	Review and assess the recent developments of the different aspects of fiscal federalism.	

Units	Course content
U-1	Public expenditure- Wagner's law of increasing state activities ; Wiseman- Peacock hypothesis ; Pure theory of public expenditure ; Structure and growth of public expenditure ; Criteria of public investment ; Social costbenefit analysis- Project evaluation, Estimation of costs, discount rate ; Reforms in expenditure budgeting : Programme budgeting and zero base Budgeting.
U-2	Taxation- Theory of incidence ; Alternative concepts of incidence- Allocative and equity aspects of individual taxes ; benefit and ability to pay approaches ; Theory of optimal taxation ; Excess burden of taxes ; Tradeoff between equity and efficiency ; Theory of measurement of dead weight losses ; The problem of double taxation.
U-3	Public debt- Classical view of public debt ; Compensatory aspect of debt policy ; Burden of public debt ; Sources of public debt ; Debt through created money ; Public borrowings and price level ; Crowding out of private investment and activity ; Principles of debt management and repayment. Fiscal federalism- Principles of multi-unit finance
U-4	Fiscal federalism in India ; Vertical and horizontal imbalances ; Assignment of function and sources of revenue ; Constitutional provisions ; Finance commission and Planning commission ; Devolution of resources and grants ; Theory of grants ; Resource transfer from union to states- Criteria for transfer of resources ; Centre- state financial relations in India ; Problems state's resources and indebtedness ; Transfer of resources from Union and States to local bodies.
	Recommended Books :1. *Atkinson, A.B. and J.E. Siglitz (1980) Lectures on Public Economics, Tata McGraw Hill, New York 2. Auerbach, A.J. and M. Feldstern (Eds) (1985) Handbook of Public Economics, Vol.I, North Holland, Amsterdam. 3. Jha, R (1998) Modern Public Economics, Routledge, London 4. Musgrave, R.A. (1959) The Theory of Public Finance, McGraw Hill, Kogakhusa, Tokyo 5. Shoup, C.S (1970) Public Finance, Aldine, Chicago 6. Peacock . A and G.K. shaw (1976) The Economic Theory of Fiscal Policy, George Allen and Unwin, London. 7. American Economic Association (1955) Readings in Fiscal Policy, George Allen and Unwin, London.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3		1		2	1	2	2	1	2	2	3
CO2	2	2		1		1	2	2	1	2	3	2	2
CO3	2	2		1		2	2	2	2	2	1	3	2
CO4	1	1		1		1	3	3	2	2	3	2	1
	2	2		1		2	2	3	2	2	3	2	2

SEM-4-2/5 ECO-402: (International Economics – II)

PG Semester – IV (Course Outcomes: COs)		
Title of the Course & Course Code	**International Economics-II (ECO-402)**	Number of Credits - 4
Pre-requisites for the Course: Basic knowledge of micro and macro economics		
Course Objective: To provide an understanding of the broad principles of foreign trade, exchange rate determination and international monetary system.		
On completion of the course, the students will be able to:		
CO1	Deduce the effect of international trade on income and employment.	
CO2	Reflect on the open and restrictive policy of international trade.	
CO3	Corroborate the evolution and existence of International monetary system.	
CO4	Conjecture the possible changes in the role of the international financial institutions such as WTO, World Bank, IMF in the forthcoming periods.	

Units	Course content
U-1	Foreign trade multiplier with and without foreign repercussions and determination of national income and output, Demand and supply of export and import, Foreign exchange market, determination of foreign exchange rates, purchasing power parity, spot exchange rates, forward exchange rates, arbitrage and speculation
U-2	Free trade vs protection, Tariff: meaning and types, partial and general equilibrium andits welfare effects, theory of optimum tariff, effective rate of tariff, customs union- meaning and different types of economic integrations, partial and general equilibrium and its welfare effects
U-3	International Monetary System (past, present and future) gold standard, Brettonwoods system- its evolution and operation. Problems of international liquidity and role of IMF, conditional clauses of IMF, SDRs and developing countries
U-4	International debt and developing countries ; International Financial institutions – UNCTAD, World bank, Asian Development bank, WTO- their functions and objectives.
	Recommended Books:*1. Salvatore, D (2014) International Economics: Trade and Finance, Wiley Students' Edition, 11th Edition. 2. Soderstein, Bo. And G. Reed, (1994) International Economics, The Palgrave Macmillan, London, 3rd (revised) edition. 3. Cherunilam, Francis (2017), Mc Graw Hill, Education 19 4. Carbough, R.J. (1999) International Economics, International Thomson Publishing, New York. 5. Chacoliades, M. (1990) International Trade: Theory and Policy, Mc Graw Hill, Kogakusha, Japan 6. Acharya, Rajat (2013) International Economics An Introduction to Theory and Policy,Oxford University Press, New Delhi.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3		2		2	1	3	2	1	2	2	3
CO2	3	2		2		1	2	3	2	3	3	2	2
CO3	2	3		2		2	2	3	3	3	1	3	2
CO4	3	1		2		1	3	3	2	2	3	2	3
	3	3		2		2	2	3	2	3	3	3	3

SEM-4-3/5 ECO-403: (Environment & Resource Economics- II)

PG Semester – IV (Course Outcomes: COs)		
Title of the Course & Course Code	**Environment & Resource Economics – II (ECO-403)**	Number of Credits - 4
Pre-requisites for the Course: Fundamental knowledge of principles of public finance and concepts of development.		
Course Objective: To provide students an exposure to different debates and approaches in environmental economics.		
On completion of the course, the students will be able to:		
CO1	List the dynamic resource utilisation problems in the context of optimal allocation of resources, the tragedies, regulations and Human Economy.	
CO2	Understand the diverse frameworks of national and global environmental problems, analytical tools, institutional and regulatory mechanisms for ensuring environmental quality and sustainability.	
CO3	Argue that economic objectives are not necessarily in conflict with environmental goals, and that markets mechanisms combined with community participation can be useful to improve environmental quality.	
CO4	Design suitable environment policy tools to address the issues of management of environment and natural resources at regional and national level.	

Units	Course content
U-1	The economic process and assimilative capacity of the environment, Failure of the market to allocate environmental resources optimally, common property resources and the economic problem, The tragedy of the commons, The macro economic effects of environmental regulation,
U-2	The economics of environmental regulation- pollution taxes, Transferrable emission permits, Measuring Environmental damage: Total economic value, Valuation methodologies- WTA, WTP, Hedonic price approach, Contingent valuation, Travel cost approach
U-3	Population and environmental quality, Poverty and its interaction with population and environment, Social and economic equity and environmental sustainability, urbanization and its impact on environment, Trade and environment, Pollution Haven and race to the bottom
U-4	India's environmental policy issues- Environmental regulations in India, People's participation in the management of common and forest lands- the institution of Joint Forest Management, and Joint Protected area Management, Social Forestry- rationale and benefits, Climate change and its economics.
	***Recommended Books**: 1. Kolstad, C. D (1999) Environmental economics, Oxford University Press, New Delhi 2. Sankar, U (Ed.) (2001) Environmental Economics, Oxford University Press, New Delhi 3. Hanley N (1997) Environmental Economics in Theory and Practice, Macmillan, London. 4. Tietenberg T. (1994) Environmental Economics & Policy, Harper Collins, New York. 5. Bromley D W, (ed.) (1995) Handbook of Environmental Economics, Blackwell, London 6. Bhattachary, R.N. (2001) Environmental Economics an Indian Perspctive, Oxford University Press, New Delhi 7. Hussen, A.M. (1999) Principles of Environmental Economics, Routledge, London.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	2	1	3	2	1	1	1	1	2
CO2	2	1	1	3	2	1	2	3	1	2	2	1	2
CO3	2	2	2	3	1	1	3	3	2	1	1	1	2
CO4	3	1	1	2	2	1	2	3	2	1	1	1	1
	2	1	1	3	2	1	3	3	2	1	1	1	2

SEM-4-4/5 ECO-404: Advanced Econometrics – II

PG Semester – IV (Course Outcomes: COs)		
Title of the Course & Course Code	**Advanced Econometrics –II (ECO-404)**	Number of Credits - 4
Pre-requisites for the Course: Students must have basic knowledge of Statistical and Mathematical methods.		
Course Objective: To provide knowledge on Econometric applications of Economic theory.		
On completion of the course, the students will be able to:		
CO1	Develop understanding of the models in respect of simultaneous equations, time series analysis, multivariate analysis and dynamic econometric models.	
CO2	Examine the forecasting technique with a single equation regression model and ARIMA technique with Box-Jenkins methodology.	
CO3	Organize the models in econometrics by adopting PCA, Discriminant analysis, factor analysis and cluster analysis in multivariate problems.	
CO4	Judge the basic concept of Auto regressive distributed lag model (ARDL) developed which will be helpful for future research work with time series data.	

Units	Course content
U-1	Simultaneous Equation models- Introduction and examples; The simultaneous equation bias and inconsistency of OLS estimators ; The identification problem ; Rules of identification- order and rank conditions ; methods of estimating simultaneous equation system ; Recursive methods and OLS ; Indirect least squares (ILS), 2SLS, 3SLS and ML methods- Applications.
U-2	Time series Analysis- Deterministic time series models and stochastic time series model, forecasting techniques, Forecasting with a single equation regression model, forecasting with ARIMA modeling; Box-Jenkins methodology
U-3	Multivariate analysis- principal component analysis (PCA) & Discriminant Analysis, Factor Analysis, Cluster Analysis
U-4	Dynamic econometric model- Autoregressive and distributed lag models- Koyck model, partial adjustment model, adaptive expectations ; Instrumental variables ; Almon approach to distributed lag models, Compound Geometric Lag model.
	Recommended Books*1. Jhonston J. (1991), Econometric Methods , McGraw Hill Book Co. London 2. Asteriou Dimitrious, (2006), Applied Econometrics, Palgrave Macmillan, New York 3. Gujrati D.N. (1995), Basic Econometrics, (2nd edition) McGraw Hill, New Delhi 22 4. Kmenta, J. (1977), Elements of Econometrics, (reprint edition) University of Michigan Press, New York. 5. Koutsoyiannis A. (1977), Theory of Econometrics (2nd ed.) The Macmillan Press Ltd. London. 6. Madalla G.S. (1997), Econometrics, McGraw Hill, New York. 7. Intrilligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall, Englewood Cliffs, New Jersey. 8. Pindyck, Robert S. and Daniel L. Rubinfeld,(1976), Econometric Models and Economic Forecasts, International Student edition, McGraw-Hill.*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	3	3	2	1	1	2	1	3	1	2	2
CO2	2	2	3	3	2	2	1	3	2	3	2	2	2
CO3	2	2	2	3	1	2	2	3	2	3	1	3	2
CO4	3	2	3	2	2	3	1	3	2	3	1	3	1
	2	2	3	3	2	2	1	3	2	3	1	3	2

SEM-4-5/5 ECO- 405: Dissertation/Project

PG Semester – IV (Course Outcomes: COs)		
Title of the Course & Course Code	**Dissertation**	Number of Credits - 4
Pre-requisites for the Course: Students must have basic knowledge of Statistical and Mathematical methods.		
Course Objective: To expose students to the social and real world contexts in which the subjects taught in the classroom have applications.		
On completion of the course, the students will be able to:		
CO1	Identify an economic problem and build a hypothesis to examine	
CO2	Apply the text book knowledge in real world economic scenario	
CO3	Analyse and interpret the results derived from data.	
CO4	Write research papers.	

The Dissertation/project is intended to establish the connection between Economics as confined to the text books and class rooms and Economics at play in the ground. It is expected to give an empirical content to the subject. Economics is defined as the study of mankind in the ordinary business of life. It studies individual as well as group behavior.

Dissertation/Project work at the postgraduate level is an in-depth study on a topic chosen by the student. The objective of the project work for the students at postgraduate level is to expose students to the social and real world contexts in which the subjects taught in the classroom have applications. Therefore, the topic must be related to the field of study the student is enrolled. It is undertaken with the guidance of a faculty supervisor, and involves a prolonged period of investigation and writing. The supervisor is supposed to help the student and mentor him/her throughout, from selection of the topic to submission of the project report.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	2	3	2	2	2	3	2	1	2	2	3
CO2	2	2	2	3	1	2	1	3	3	2	3	3	2
CO3	3	3	3	3	2	1	2	3	3	2	2	3	3
CO4	3	3	2	3	3	2	3	3	2	3	2	2	3
	3	3	2	3	2	2	3	3	3	2	2	3	3