

# ST ALOYSIUS COLLEGE (AUTONOMOUS) MANGALURU

Re-accredited by NAAC "A" Grade

Course structure and syllabus of

OF

# M.A. ECONOMICS

CHOICE BASED CREDIT SYSTEM (CBCS)

(2021 -22BATCH ONWARDS)

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# ST ALOYSIUS COLLEGE (Autonomous)

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# Re-accredited by NAAC with 'A' Grade - CGPA 3.62 Recognised by UGC as "College with Potential for Excellence" College with 'STAR STATUS' conferred by DBT, Government of India 3<sup>rd</sup> Rank in "Swacch Campus" Scheme, by MHRD, Govt of India

Date: 12-08-2021

# **NOTIFICATION**

Sub: Syllabus of M.A. ECONOMICS under Choice Based Credit Scheme.

Ref: 1. Decision of the Academic Council meeting held on 19-06-2021.

Pursuant to the above, the Syllabus of **M.A. Economics** under Choice Based Credit Scheme which was approved by the Academic Council at its meeting held on 19-06-2021 hereby notified for implementation with effect from the academic year **2021-22**.

# PRINCIPAL REGISTRAR

To:

- 1. The Chairman/Dean/HOD.
- 2. The Registrar Office
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BOARD OF STUDIES IN MA ECONOMICS						
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No						
a)	Chairman/Chairpersons	Dr Priya. S. Shetty				
b)	Members of the Department	Dr P. P. Sajimon				
		Ms Aswini T				
c)	Subject expert	Dr. Vilas M. Kadrolkar,				
		Professor				
		Department of Studies & Research in Economics,				
		Tumkur University, Tumkur.				
		9449112908, 8050933499				
		kmvilas@gmail.com				
		Dr. K P Vipin Chandran,				
		Assistant Professor, Department of Economics,				
		KMM Government Women's College, Pallikunnu				
		(P.O), Kannur-670004				
		Email:kpvipinchandran@gmail.com,				
		Mobile: 9447650112.				
d)	Vice-Chancellor's Nominee	Dr Jayavantha Nayak				
-,	(14-08-2019)	Associate Professor				
	,	Department of Economics				
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		jayavantha_nayak@yahoo.com				
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e)	Representative from Industry /	MrRonald D'Souza				
	Corporate Sector / Allied Area	Senior Manager-Compliance				
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f)	Meritorious Alumnus	Mr Anto C N, Department of Economics,				
		NavaJyothi College, Kannikalam, Kannur.				
		Mob: 9447794678				
g)	Special Member	Professor David Howden, Department of				
		Business and Economics, Saint Louis University,				
		Madrid, Spain.				
		david.howden@slu.edu				
h)	Student Representative	Mr Nagesh M				
		Reg No:199808				

# STRUCTURE AND SYLLABUS FOR MA IN ECONOMICS

BOS meeting of Department of Post Graduate Studies and Research in Economics was held on 27 April 2021 at St Aloysius College (Autonomous) Mangaluru.

PROGRAMME OUTCOMES							
PO 1:	Develop an understanding about various concepts and principles in Economics.						
PO 2:	Be able describe the working of the economy both domestic and international.						

- PO 3: Enable the students recognise the practical possibilities of economic theory in real life.
- PO 4: Analyze the various sectors and its performance in the development process.
- PO 5: Create awareness on the inter-linkages between the political system and economic theories.
- PO 6: Assess the impact of various policies on the welfare of the community.
- PO 7: Ensure the application of the economic theories facilitate sustainable human life.
- PO 8: Develop skills have an orientation do fruitful research in the discipline.

# PROGRAMME SPECIFIC OUTCOMES

- PSO 1: To prepare the students with a laborious and broad understanding of the fundamentals of economics with various aspects of consumer behaviour, demand analysis, production theory, costs, theory of traditional markets and equilibrium of the firm. This will enable the students to take decision in the context of market interdependence, complexity, uncertainty and informational asymmetry.
- PSO 2: To cover all major theories and models dealing with the issues pertaining to economic growth and development where the learners will be able to realize the nature of the deficiencies of developing nations, need for sustainable growth, reconstruction & development and to suggest policy measures to rectify them and also to explore new avenues of growth.
- PSO 3: The extremes of poverty and wealth will be adequately addressed through a comprehensive economic analysis of the public sector which empowers the student to understand and analyse public policies and problems with an insightful vision of fiscal institutions which underline budgetary policies in general and Indian experience in particular.
- PSO 4: To provide adequate knowledge of statistical techniques to analyse economic problems through the development of research skills includes, framing testable

hypotheses, selection of precise statistical tests, locate appropriate data for testing hypotheses, reject/accept hypotheses correctly, evaluates results, and write up the research findings.

- PSO 5: Develop a vision to achieve a mission of attaining a sustainable society by applying theoretical and empirical analysis of sources of and solutions to environmental problems, with application to local pollution challenges and global environmental issues such as climate change.
- PSO 6: To make the students aware of the quantitative and the qualitative aspects and characteristics of the population through various demographic techniques, importance of population in economic development, various theories that explains the growth of population and research directions in the field of population studies in a country.
- PSO 7: To train the students on latest theoretical developments in macroeconomics for empirical analysis, integrate method and technique to evaluate policy measures, understanding developments in labour market and gauge the tradeoff in the deployment of resources to alternative ends.
- PSO 8: To prepare the students to understand and respond to economic issues and forces of Globalisation, free flow of trade in goods, governance of services and capital and it's rapidly changing scope and nature in international business and trade.

# STRUCTURE AND SYLLABUS FOR M.A IN ECONOMICS

	I Semester (3 Hard con	e and 2 soft	core	paper)		
	Papers	Duration		Marks		Credits
Code		Duration of Exam	IA	End Semester	Total	
PH 111.1	Micro Economic Analysis	3	30	70	100	5
PH 112.1	Development Economics	3	30	70	100	5
PH 113.1	Statistical Techniques for Economic Analysis	3	30	70	100	5
PS 114.1	<b>Environmental Economics</b>	3	30	70	100	
PS 115.1	Principles of Banking	3	30	70	100	4.4
PS 116.1	Economics of Demography	3	30	70	100	4+4
PS 117.1	Industrial Economics	3	30	70	100	
	Total				500	23
	II Semester (3 Hard core and 2 So	oft core and	open	elective 1 pa	iper)	
PH 111.2	Macro Economic Analysis	3	30	70	100	5
PH 112.2	Mathematical Techniques for Economic Analysis	3	30	70	100	5
PH 113.2	International Economics	3	30	70	100	5
PS 114.2	Financial Institutions and Markets	3	30	70	100	
PS 115.2	Research Methodology and Ethics	3	30	70	100	4+4
PS 116.2	Agricultural Economics	3	30	70	100	1
PS 117.2	Economics of Human Resource Development	3	30	70	100	<u> </u>
PO 118.2	Banking and Finance	3	30	70	100	3
10110.2	Total				500	26
	III Semester (2 Hard core and 2 S	oft core and	open	elective 1 p		•
PH 111.3	Monetary Economics	3	30	70	100	5
PH 112.3	Econometrics	3	30	70	100	5
PS 113.3	Health Economics	3	30	70	100	
PS 114.3	Labour Economics	3	30	70	100	1 , ,
PS 115.3	Development Banking	3	30	70	100	4+4
PS 116.3	Energy Economics	3	30	70	100	
PO 117.3	Contemporary Indian Economy	3	30	70	100	3
	Total				500	21
	IV semester (2 Hard co	re and 2 Sof	core	papers)		
PH 111.4	Public Economics	3	30	70	100	5
PH 112.4	Indian Economy	3	30	70	100	5
PH 113.4	Project				100	4
PS 114.4	<b>Economics of Insurance</b>	3	30	70	100	
PS 115.4	Operations Research for Economic Analysis	3	30	70	100	4+4
PS 116.4	International Finance	3	30	70	100	1
PS 117.4	Rural Banking	3	30	70	100	1
	Total					22
	Grand Total					92

# **QUESTION PAPER PATTERN: END SEMESTER**

# ST ALOYSIUS COLLEGE (AUTONOMOUS)

# **MANGALORE**

# **SEMETSER ---- P.G. Examination**

# M. A. ECONOMICS

ADDII / MAV

	APRIL / MAY	
Paper Code and Title:		
Time: 3 hours		Max Marks: 70
	SECTION- A	
Answer any TWO questions	s of the following : $(2 \times 15 = 30)$	
1.		
2.		
3.		
	SECTION- B	
Answer any FOUR question	as of the following: $(4 \times 6 = 24)$	
4.		
5.		
6.		
7.		
8.		
9.		
	SECTION: C	
Answer any FOUR question	as of the following: $(4 \times 4 = 16)$	
10.		
11.		
12.		
13.		
14.		
15.		

#### I SEMESTER

# PH 111.1: MICRO ECONOMIC ANALYSIS (60 hours)

# **COURSE OBJECTIVES:**

- ➤ To equip the students with a rigorous and comprehensive understanding of the fundamentals of microeconomics.
- ➤ To understand various aspects of consumer behaviour and demand analysis, production theory and behaviour of costs, the theory of traditional markets and equilibrium of firm
- ➤ The course aims to acquaint the students in decision making in the context of market interdependence, complexity, uncertainty and informational asymmetry.

# **COURSE OUTCOME**

- CO 1: The student gets equipped with the knowledge and skill in effective decision making under uncertain market situations.
- CO 2: Understand the theories related to different market forms.
- CO 3: Able to understand the functioning of the varied markets.
- CO 4: The student acquires skills in allocating scarce resources among alternative uses.
- CO 5: Able to make decisions in varied economic situations.
- CO 6: Able to critical evaluate the functioning of the market.

# **MODULE I: CONSUMER BEHAVIOUR (15 hours)**

Measurement of Utility - Preference Ordering: Axioms and Utility Violation of the premises of the indifference curves analysis: Recent Developments in the Theory of Market Demand: Marshallian Demand Function and Hicksian Demand Function –Dynamic version of demand function. Revealed Preference Theory - Measurement of Consumer's Welfare - Compensating Variation and Equivalent Variation Techniques.

# **MODULE II: THEORY OF COST AND REVENUE (10 hours)**

Traditional theory of Costs – Short Run and Long Run Cost Curves- Modern theory of Costs - Empirical Evidences. Derivation of Cost Functions from Production Functions, Revenue curves under perfect and imperfect competition - Equilibrium of the firm.

# **MODULE III: THEORY OF FIRM (10 hours)**

Production Function: Isoquant, Ridge Line, Isocostline, Producer's equilibrium, Concepts of Elasticity of Production - Elasticity of Substitution -CES, VES -, Translog production function-Cobb Douglas production function. Recent theories in firm's behaviour.

# **MODULE IV: THEORY OF MARKET** (10 hours)

Theory of Perfect Competition – short run and long run. Supply curve. Monopoly- short run and long run price discrimination. Monopolistic Competition - short run and long run, excess capacity.

Collusive and Non- Collusive Models: Kinked demand curve, Cournot's and Bertrand model, Price Leadership and Cartels.

# MODULE V: UNCERTAINTY AND BEHAVIOURAL ECONOMICS (15 hours)

Individual behaviour towards risk, expected utility and uncertainty equivalence approaches, N-M utility index - Prospect theory- Risk and risk aversion – sensitivity analysis, gambling and insurance, cost and risk, risk pooling and risk spreading - Asymmetric information: Market for Lemons, Moral Hazard and Adverse Selection, Signaling and screening - Spence's labour market signaling model -the efficient market hypothesis. Role of time and emotions in economic decisions: role of constraints and information, satisficing and bounded rationality.

- 1. Ahuja H L (2018). Advanced Economic Theory, S Chand Publications, New Delhi
- 2. AustanGoolsbee, Steven Levitt, et al. (2019). Microeconomics, Third edition Worth Publishers.
- 3. Baumol, W.J. (2015). Economic Theory and Operations Analysis, Pearson, New Delhi.
- 4. Borch, K.H. (1992). The Economics of Uncertainty, Princeton University Press, Princeton.
- 5. Campbell McConnell, Stanley Brue, Sean Flynn. (2018). Microeconomics: Principles, Problems, &Policies, McGraw-Hill Series in Economics, 20th Edition.
- 6. Deaton, A. and Muelbauer, J. (1980). Economics and Consumer Behaviour, Cambridge University Press.
- 7. Diamond and Rothschild (1978). Uncertainty in Economics, Academic Press, New York.
- 8. Edgar K. Browning & Mark A. Zupan. (2014). Microeconomics: Theory and Applications, Wiley; 12 edition, NewYork.
- 9. Friedman, J.F. (1977). Oligopoly and the Theory of Games, North-Holland, Amsterdam.
- 10. Gravelle, H. and Rees, R. (2007). Microeconomics, Longman, London.
- 11. Green, H.A.J. (1978). Consumer Theory, MacMillan, London.
- 12. Henderson, J. and Quandtt, R.A. (1984). Microeconomic Theory, McGrawhill, Tokyo.
- 13. Koutsoyiannis, A. (2003). Modern Microeconomics, MacMillan, New York.
- 14. Kreps, David M. (1992). A Course in Microeconomic Theory, Princeton University Press New Jersey.
- 15. Lancaster, K. (1972). Consumer Demand: A New Approach, Columbia University Press, New York.
- 16. Mankiw, Gregory (2019). Principles of Microeconomics, Cengage Learning Limited, New Delhi.
- 17. Paul Krugman & Robin Wells (2018), Microeconomics 4th Edition, Macmillan.
- 18. Robert Pindyck & Daniel Rubinfeld (2017). Microeconomics (8th Edition), Pearson Series, New Delhi.
- 19. Russell, R.R. and M.Wilkinson. (1979). Microeconomics: A synthesis on Modern and Neoclassical Theory, John Wiley ,New York.

- 20. Varian, H. (2014). Intermediate Microeconomics with Calculus: A Modern Approach 1st Edn. W. W. Norton & Company.
- 21. Walter Nicholson and Christopher Snyder. (2017). Microeconomic Theory: Basic Principles and Extensions, Cengage Publications, New Delhi.

# PH 112.1 DEVELOPMENT ECONOMICS (60 hours)

# **COURSE OBJECTIVES:**

- ➤ This course is structured to cover all major theories and models dealing with the issues pertaining to both growth and development.
- ➤ This will help the learners to realize the nature of the deficiencies of developing nations and to suggest policy measures to rectify them and also to explore new avenues of growth.

# **COURSE OUTCOME**

- CO 1: Students will be able to understand the use of economic analysis in addressing important issues of developing countries.
- CO 2: To understand how the presence of externalities could influence the growth process let us focus on learning by doing externality. There are a number of firms in the economy and each uses the same production technology with diminishing returns.
- CO 3: Understand the role of agriculture, industry, and trade in the development process of the less developed countries.
- CO 4: Understand the extent to which economic theories may be helpful in the design of development policies in the less developed countries.
- CO 5: Learners should understand the need for sustainable growth, reconstruction and development. As the inequalities of the past and present especially the extremes of poverty and wealth cannot be adequately addressed by conventional socio-economic policies alone, other innovations can also be explored.
- CO 6: Use theories (models) to analyse real and hypothetical economic circumstances and to derive policy solutions to the problems posed in these circumstances.

# **MODULE I: GROWTH AND INEQUALITY (15 hours)**

Economic growth and development  $\downarrow$  Concepts and approaches, Characteristics of underdevelopment, Constraints of economic development- Kuznet's concept of economic growth. Concept of inequality-economic inequality-inequality and income- inverted-U-shape hypothesis. Measurement of economic growth and development  $\downarrow$  Income, welfare and social indicators (PQLI and HDI). Human resource development; Population growth and subsistence: The Malthusian hypothesis. Population, poverty and environment.

# **MODULE II: GROWTH MODELS** (15 hours)

Harrod-Domar model ↓Solow's model of long-run growth, Joan Robinson's Model of capital accumulation - Neutral and non-neutral technical change ↓ Hicks and Harrod, Embodied and disembodied technical progress. Production function approach to economic growth, Growth models of Kaldor, Feldman.

# MODULE-III: THEORIES OF DEVELOPMENT

(10 hours)

Rostow's Stages of Economic Growth - Dualism  $\downarrow$  Social, technical and financial dualism, Lewis model of economic development, Ranis and Fei model, Jorgenson's model.Balanced and unbalanced growth, Linkage effect – Big-Push theory.

## MODULE IV: SECTORAL ASPECTS OF DEVELOPMENT

(10 hours)

Role of agriculture in economic development; Efficiency and productivity in agriculture, New technology and sustainable agriculture; Globalisation and agricultural growth; Rationale and pattern of industrialisation in developing countries; The choice of techniques and appropriate technology and employment; Terms of trade between agriculture and non agricultural sectors.

# MODULE V: STRUCTURAL APPROACH OF DEVELOPMENT

(10 hours)

Structural changes – Service sector and its importance. Composition of rural and urban economy –formal and informal sectors –Rural-Urban migration –Todaro's model. Labour markets and their functioning in developing countries. Infrastructure and its importance. Economic development and institutions — markets and market failure, state and state failure, issues of good governance.

- 1. Ahuja H L (2018). Development Economics book A Critical Study of Economic Growth, Development and Environment, S Chand & Co Ltd.
- 2. Aksan, Anna-Maria and ShankhaChakraborty (2013). Twin Transitions, mimeo, University of Oregon.
- 3. Baldwin, Richard (2016). The Great Convergence, Harvard University Press.
- 4. Banerjee & Duflo (2007). Economics Lives of the Poor, JEP vol 21 (1)
- 5. Basu, Kaushik: (2001). Less Developed Economy: A Critique, OUF, New Delhi
- 6. Chenery, H. and T.N. Srinivasan (Eds.) (1989). Handbook of Development Economics, Vols. 1 & 2, Elsevier, Amsterdam.
- 7. Deepak Nayyar (2019). Asian Transformations: An Inquiry In to the Development of Nations, Oxford University Press.
- 8. Ghosh R N and Siddique M A B (2015). Corruption, Good Governance and Economic Development, World Sientifi Publishers.
- 9. MachikoNissanke, José Antonio Ocampo (2019). The Palgrave Handbook of Development Economics: Critical Reflections on Globalisation and Development, Palgrav Macmillan.
- 10. Mier, Gerald M and Joseph E. Stiglitz (2001). Frontiers of Development Economics, Oxford University Press, New York

- 11. Mukherjee Aparajita, ChakrabartiSaumya (2016). Development Economics: A Critical Perspective, PHI Learning Pvt Ltd.
- 12. Ray, Debraj (2008). Development Economics, The New Palgrave Dictionary of Economics, edited by L. Blume and S. Durlauf.
- 13. Thirwall, A.P (2011). Growth and Development, (9th Edition). Macmillan, U.K.
- 14. Todaro, M.P (2017). Economic Development, (12th Edition). The Pearson Series in Economics, Trans-Atlantic Publication.

# PH 113.1 STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS (60 hours)

### **COURSE OBJECTIVES:**

- > To provide students with adequate knowledge of Statistical techniques an operations to analyze economic problems.
- > To initiate students into various economic concepts which are amenable to statistical treatment.

### **COURSE OUTCOME:**

- C0 1: The students will be able to describe and discuss the key terminology, concepts used in statistical techniques for economic analysis.
- CO 2: The students can understand the methods used for analysis and the uses and limitations of statistical analysis including a discussion of advantages, disadvantages, and necessary assumptions.
- CO 3: To derive the results of the statistical techniques and economic interpretation of those results.
- CO 4: To understand and critically discuss the issues surrounding sampling and significance
- CO 5:It helps to develop research skills including frame testable hypotheses , select correct statistical tests, locate appropriate data for testing hypotheses, reject/accept hypotheses correctly, analyzes results, and It also contributes to making appropriate decisions in the light of the researcher's findings.
- CO 6: To measure the effect of change and discover techniques to improve decision-making process

# **MODULE 1: INTRODUCTION TO STATISTICS (12 hours)**

Introduction to Statistics; Basic concepts of Statistics, Sources of Data – Primary and Secondary; Sampling -Simple Random, Stratified and Systematic Random Sampling Methods, Importance and limitation of statistics. Measures of Central Tendency; Mean, Median, Mode, Geometric Mean and Harmonic Mean.

# **MODULE II: DISPERSION AND SKEWNESS (12 hours)**

Dispersion – Mean Deviation - Quartile Deviation, Standard Deviation, Coefficient of Variation, Lorenz Curve. Skewness - Karl Pearson's Coefficient.

# **MODULE III: CORRELATION AND REGRESSION (12 hours)**

Simple Correlation Analysis; Pearson's Product Moment Formula and Spearman's Rank Correlation, Partial and Multiple Correlation, Coefficient of determination. Regression Analysis; Concept of Least Squares and Lines of Regression; Standard Error of estimate, Association of attribute—meaning, scope. Time series-components of time series- methods of estimation-Index Numbers -Cost of living index, Fisher's Ideal Index.

# **MODULE IV: PROBABILITY THEORY (12 hours)**

Different Concepts and Approaches- Laws and Axioms of Probability- Conditional Probability and Concept of Interdependence- Baye's Theorem and Its Application- Concept of Random Variables - Probability Distribution Functions: Binomial, Poisson and Normal.

# MODULE V: THEORY OF ESTIMATION AND HYPOTHESIS TESTING (12 hours)

Concept of an estimator and Its Sampling Distributions- Properties of a Good Estimator-Formulation of Statistical Hypotheses- Null and Alternative - Goodness of Fit, Confidence Interval And Level of Significance- Hypothesis Testing Based Z, T, F And Chi-Square Tests- Errors of Types II And I.

Introduction to Statistical Packages.

- 1. Chou Y. (1975). Statistical Analysis, Holt, Reinhart, Winston, New York.
- 2. Croxton, Crowden and Klein (1971). Applied General Statistics, Prentice Hall of India, New Delhi.
- 3. Douglas, A Lind, William G. Marchal, and Samuel A. Wathen (2006). Statistical Techniques in Business and Economics, 12th Ed TMH, NewDelhi.
- 4. Goon, A. M., M. K. Gupta and B. Dasgupta (2013). Fundamentals of Statistics Vol. I, The World Press, Calcutta.
- 5. Gupta, S.C. (2014). Fundamentals of Mathematical Statistics, Sultan Chand and Sons, New Delhi.
- 6. Gupta, S.P. (2017). Statistical Methods, Sultan Chand and Sons, New Delhi.
- 7. Johnson, R.A. and D.W. Wichern (2013). Applied Multivariate Statistical Analysis, Pearson New International edition, New Delhi.
- 8. Mc Clave James T, P.George Benson and Terry Sincich, (2017). Statistics for Business and Economics, Pearson, 13 edition.
- 9. Miller, J. (1996). Statistics for Advance Level, Cambridge University press, Cambridge.

- 10. Nagar, A.L. and R.K. Das (1997). Basic Statistics, Oxford University Press, New Delhi.
- 11. Rao, C.R. (1973). Linear Statistical Inference and Applications, Wiley and Sons.
- 12. Veerachamy., R.(2010): Quantitative methods for Economists, New Age International Publications. New Delhi.

# PS 114.1 ENVIRONMENTAL ECONOMICS (50 hours)

# **COURSE OBJECTIVES:**

- > To present theoretical orientation to the environmental concerns of the economy. The course intends to develop a vision to achieve a mission of attaining a sustainable society by studying the subject of environmental economics.
- > Theoretical and empirical analysis of sources of and solutions to environmental problems, with application to local pollution challenges and global environmental issues such as climate change.

# **COURSE OUTCOME:**

- CO 1: To understand the relationship between environment and economic growth; how economic growth affects environment; how environment development programmes affect economic growth; the tradeoff.
- CO 2: To create basic ideas of the cost of environmental growth and sustainable policy approach to prevent environmental degradation, green accounting, methods of environmental valuation, Environmental concerns, environmental education, environmental awareness, environmental laws, environmental hazards and economics of recycling.
- CO 3: To enable the student to focus on economic effects of environmental policies around the world. It is a science emphasis on natural resources and its efficient allocation, management with alternatives, and environmental indemnities like air, water soil pollution, solid waste management, and global warming etc.
- CO 4: Explain how something can be both "environmentally destructive" and "economically optimal"; and how something can be environmentally beneficial and economically suboptimal.
- CO 5: Helps to examine the relationship between the economy and the environment in the context many activities started by environmental economists, activists and nature lovers. CO 6: Identify factors to find solutions to environment problems that are relevant to protect the welfare of the people.

# **MODULE I: INTRODUCTION (10 hours)**

Meaning- Definition and Scope of Environmental Economics- Economy- Environment – Ecology Interlinkages – Economic Functions of the Environment – Market Failure – Economics of Pollution- Types of Environmental Problems- Globalization and Environment.

# MODULE II: ENVIRONMENT ACCOUNTING AND SUSTAINABLE DEVELOPMENT (15 hours)

Economics of Natural Resources: Resource Taxonomy; Natural Resources-uses and Types - Managing Exhaustible and Renewable Resources, Theories of Optimal use of Exhaustible and Renewable Resources. The Theory of Collective Choices: Hardin's Thesis of the Tragedy of Commons; Prisoner's Dilemma Game - Integrated Environmental and Economic Accounting and the Measurement of Environmentally Corrected GDP - Concept of Sustainable Development-Indicators, Measurement and Strategies for Sustainable Development.

# MODULE III: ECONOMICS OF NATURAL RESOURCE ANDMEASUREMENT OF ENVIRONMENTAL VALUES (15 hours)

Resource Scarcity-Optimum Use-Criteria. Use Values; Option Values and Non-Use Values; Valuation Methods —Hedonic Property Values, Travel Cost Method and Household Production Models. Methods Based on Response to Hypothetical Markets, Contingent Valuation Methods.

# MODULE IV: ENVIRONMENTAL PROBLEMS AND POLICY MEASURES (10 hours)

Global Environmental Externalities and Climatic Change - Pigouvian Taxes, Coase's Bargaining Solution and Collective Action. Environmental Institutions and Grass Root Movements - Tradable Pollution Permits and International Carbon Tax. Environment Regulation in India; Environmental Laws and their Implementation; Policy Instruments for Controlling Water and air Pollution and Forestry Policy; People's Participation, Social forestry — Rationale and Benefits.

- 1. Alfred Endres Volker Radke (2018). Economics for Environmental Studies. A strategic Guide to Micro and Macro Economics.
- 2. Barry C & Martha K (2017). Environmental Economics An Introduction. The McGraw-Hill Company, New York.
- 3. Bhattacharya, R.N. (Ed.) (2001). Environmental Economics : An Indian Perspective, Oxford University Press, New Delhi.
- 4. Chopra, K. and S.C. Gulati (2000). Migration and the Management of Common Property Resources: A Study in Western India, Sage, New Delhi.
- 5. Chopra, K., G.K. Kadekodi and M.N. Murty (1990). Participatory Development: An Approach to the Management of Common Property Resources, SAGE, New Delhi.
- 6. Dasgupta, P.S. and K.G. Maler (Ed.) (1997). Environment and Emerging Development Issues, Cambridge University Press, Cambridge, Mass.

- 7. Devidas G Rathod (2016). Environmental and Global Warming (Issues and Challenges). Current Publication Agra.
- 8. Edwin Woerdman (2004). The institutional Economics of Market Based Climate Policy. University of Groningen, The Netherlands.
- 9. Eloi Laurent (2020). The New Environmental Economics: Sustainability and Justice, Wiley.
- 10. Kolstad, C.D. (2020). Environmental Economics, Oxford University Press, New Delhi.
- 11. Lynne Lewis, Thomas H. Tietenberg (2019). Environmental Economics: The Essentials, Routledge.
- 12. Marta Villar Ezcurra, Janet E. Milne, Hope Ashiabor, Mikael Skou Andersen (2019). Environmental Fiscal Challenges for Cities and Transport, Edward Elgar Publishing.
- 13. Mehta, S., S. Mundle and U. Sankar (1995). Controlling Pollution: Incentives and Regulation, SAGE, New Delhi.
- 14. Perman, R. Ma and J. McGilvary (2003). Natural Resource and Environmental Economics, Longman, London.
- 15. Roger Fouquet (2019). Handbook on Green Growth, Edward Elgar Publishing.
- 16. Sengupta, R.P. (2001). Ecology and Economics: An Approach to Sustainable Development, Oxford University Press, New Delhi.

# PS 115.1 PRINCIPLES OF BANKING (50 hours)

# **COURSE OBJECTIVES:**

- > To provide a detailed analysis of the banking sector and its latest developments in term of both theory and practice.
- > To develop skills in students in understanding the functioning of various banking activities and touch with banking terminologies.

#### **COURSE OUTCOME:**

- CO 1: The students 'will get the knowledge of the structure and role of banking in an economy.
- CO 2: To develop skills in students in understanding the functioning of various banking activities
- CO 3: To gain the up-to-date knowledge regarding the banking terminologies.
- CO 4: To categorize and analyze banker customer relationship
- CO 5: Able to understand the payment and collection procedure of negotiable instruments
- CO 6: Able to understand the facilities available and utilization of the same at different circumstances.

#### MODULE 1: NATURE OF COMMERCIAL BANKS

(15 hours)

Pattern of Ownership-Functions of commercial banks- agency services-general utility services-credit creation and limitations of credit creation –structure of assets and liabilities of commercial

bank- investment policy - unit and branch banking-universal banking - growth of retail banking - growth of interest and non interest income sources.

#### MODULE II: BANKER- CUSTOMER RELATIONS AND ACCOUNTS WITH THE BANKER

(10 hours)

Practice of banking-banker-customer relationship-special relationship-law of limitation-banker as a trustee and an agent-appropriation of payment-right of lien and setoff-obligation to maintain secrecy-garnishee order. Types of deposit accounts-risks in opening accounts without proper introduction-NRI accounts, Pass book: legal aspects of entries in the pass book, - Special types of banker's customers, Minor-women-illiterate persons-trustees-executors and administrators-customer's attorney-joint account-joint Hindu family-partnership firm –joint stock companies-clubs, societies and charitable institutions

#### MODULE III: NEW AGE BANKING

(15 hours)

Nature - Electronic Fund Transfer system-FINTECH and Financial Inclusion-electronic wallets-SWIFT-CHIPS-CHAPS-FEDWIRE- RTGS-Facets of electronic banking-bank to bank-E-banking-Electronic Core banking - E- banking transactions-Internet banking-security considerations.

# MODULE IV: LENDING and NPAs.

(10 hours)

Style of credit-factors limiting bank advances-secured and unsecured advances-modes of creating charge-types of securities – Non- fund base business – Asset – Liability Management Introduction-Identification of NPAs- effect of NPA on profitability-assessment systems for existing and likely NPA's –rehabilitation of sick NP units-recovery of NPAs- Bank mergers. compromise and negotiated settlements-securitization of debts-credit derivatives-credit portfolio management (concentration risks).

- 1. Bhole, L.M. and JintendraMahakud, (2009). Financial Institutions and Markets: Structure, Growth and Innovations, 5th Ed. Tata McGraw Hill, New Delhi.
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- 13. Mithani. (2017). Money, Banking, Trade and Finance, 29th Ed, Himalaya Publishing House, New Delhi.
- 14. Varshney, P.N. (2017). Banking Law & Practice, Sultan Chand & Sons, New Delhi.

# PS 116.1 ECONOMICS OF DEMOGRAPHY (50 hours)

# **COURSE OBJECTIVES**

- ➤ To make the students aware of the importance of population in economic development and the various theories that explains the growth of population in a country.
- > To analyse the quantitative and the qualitative aspects and characteristics of the population through various demographic techniques.
- ➤ To acquire a basic literacy of the leading ideas and research directions in the field of population studies.
- To familiarise with basic concepts and sources of data in Demography and also will be able to comprehend the processes and events in Demography and their interactions.

# **COURSE OUTCOME**

- CO 1: Students are able to explore population changes over time; elements of demography; child survival and mortality; family and households and demographic change.
- CO 2: Understand the demography of social and economic inequality, role of women, urbanization, migration and fertility.
- CO 3: Examine world demographic patterns, synthesizing the data and issues surrounding the importance of population to public health.
- CO 4: Able to critically evaluate the issues related to demography.

- CO 5: Comprehend the basic concepts and definitions in demography and identify the various sources of data in demography.
- CO 6: Prepare the students for variety of challenging careers through innovation in teaching and research.

# **MODULE I: POPULATION AND DEVELOPMENT (10 hours)**

Demography: Origin, meaning and scope-Definitions. Demography and other sciences – Mathematics, Economics, Sociology, Anthropology, Psychology, Public health and Biological Sciences.Population growth: components and their interdependence.

## **MODULE II: SOURCES OF DEMOGRAPHIC DATA (15 hours)**

Sources of Demographic Data: Censuses, Vital Statistics, and Surveys. Population composition-Age and Sex structure trends, determinants and effects. Problems of Coverage, Errors, and Uncertainty in Demographic Data. Population growth: causes and effects. Primitive Society, Pre-Industrial Society, Developing and Developed Societies, World Population. Population Scenario of India-Theories of Population: Malthus; Optimum theory of population; theory of demographic transition.

## **MODULE III: FERTILITY AND MORTALITY (10 hours)**

Socio-economic factors of fertility: economic status, health, education, nutrition, caste, religion, and region.Bio-social Models of Fertility.Causes and consequences of change. Mortality: mortality at birth and infant mortality - Factors for declining in mortality. Health and Mortality Patterns in Developing Countries.

#### **MODULE IV: EMERGING ISSUES IN DEMOGRAPHY(15 hours)**

Marriage and Family – Concepts and definitions, changes in household size, trends and differentials in age at marriage. Marriage and Family Change in Industrial Societies. The Impact of Family Planning and Public Policy on Fertility. Aging: individual and population aging. Migration and Urbanisation – Types of migration, factors affecting migration, causes and consequences of urbanisation.

- 1. Agarwal, M.K and A.N Agarwal. (2019). Indian Economy: Problems of Development and Planning, 40<sup>th</sup> Ed. WishwaPrakashan, New Delhi.
- 2. Agnihotri S.B. (2001). Sex Ratio in Indian Population: A Fresh Exploration, Sage Publication, New Delhi
- 3. Chaubey P.K. (2000). Population Policy in India, Kanishka Publications, New Delhi.
- 4. Chaurasia, AalokRanjan. (2019). Population and Sustainable Development in India, Springer.
- 5. Datt, Gaurav and AshwaniMahajan (2019). Indian Economy, S. Chand & Co., New Delhi.

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- 7. Giridhar, G & K. M. Sathyanarayana. (2014). Population Ageing in India, Cambridge.
- 8. Kapila , Uma: (2019). Indian Economy: Performance and Policies, 16<sup>th</sup> Ed, Academic Foundation, New Delhi.
- 9. Lundquist et al. (2015). Demography: The Study of Human Population 4th Edition, Waveland Press Ic, Illinois.
- 10. Mahajan, Ashwani and GauravDutt. (2019). Indian Economy, 71st Ed. S. Chand & Company Ltd, New Delhi.
- 11. Mary Waters (2002). The Social Construction Of Race And Ethnicity: Some Examples From Demography in Nancy Denton and Stewart Tolnay. eds. American Diversity: A Demographic Challenge for the Twenty-First Century, pp. 25-49. Albany: State University of New York Press.
- 12. Paul Demeny (2004). Population Futures for the Next Three Hundred Years: Soft Landing or Surprises to Come? Population and Development Review 30, 3.
- 13. Puri, V. K. and S. K. Mishra (2019). Indian Economy, Himalaya Publishing House, Mumbai.
- 14. Sharma, Rajendra Kumar. (2020). Demography and Population Problems, Atlantic Publishers.
- 15. Srinivasan, Krishnamurthy. (2017). Population Concerns in India: Shifting Trends, Policies and Programs, Sage Publications, Delhi.

# PS 117.1 INDUSTRIAL ECONOMICS (50 hours)

# **Course Objectives:**

- > To provide a thorough knowledge about the economics of industry in a cogent and analytical manner, particularly in the Indian context.
- > To familiarize the students with the process of entrepreneurship.

# **COURSE OUTCOME**

- CO 1: The student gets the skill of efficient and economic use of scarce resources.
- CO 2: Understand the various theories related to wages, labour, firm etc.
- CO 3: The student gets equipped with the knowledge and skill in effective decision making under uncertain market situations.
- CO 4: Understand the role of unions and its bargaining powers.
- CO 5: Critically evaluate the issues related to labour and firms.
- CO 6: The student acquires skills in allocating scarce resources among alternative uses.

# MODULE 1: INTRODUCTION AND FIRM'S BEHAVIOUR (10 hours)

Introduction and scope of Industrial Economics, Types and choice of organizational firm – ownership and control. Passive and active behaviour of firm. The firm and its objectives - Non profit maximizing models, Cost theory and optimum size of a firm.

#### MODULE II: MARKET AND INDUSTRIAL EFFICIENCY

(15 hours)

Market structure and market conduct, Product differentiation and Advertisement Market concentration, its measurement and effects on market Performance, Diversification, Integration and Merger, Industrial Efficiency: concept, determinants, measurement and decision making process. Investment decisions: Time profile and project evaluation, Social cost benefit analysis, balancing private and social returns,

# MODULE III: PRICING DECISIONS AND LOCATION (15 hours)

Industrial finance and accounting: owned, external and other components of funds, financial statements – Balance sheet; Profit & Loss Account, Analysis of financial ratios and their relationships: assessment of financial soundness. Determinants of profitability and pricing decisions- Product pricing, Research & Development and Innovation, Theories of growth of firm: Constrained on growth. , Industrial location Analysis: determinants of Industrial location, Theories of Industrial location factors affecting location.

# MODULE IV: ENTREPRENEUR AND ENTREPRENEURSHIP (10 hours)

Concept of Entrepreneurship – Definitions – Kinds of Entrepreneur, types, qualities, and functions of Entrepreneurs.Entrepreneur v/s manager.Nature and importance of Entrepreneurship – Theories of Entrepreneurship – Problem of Rural Entrepreneurship, Entrepreneurial Development Programmes in India.

- 1. Agarwal et al. (2020). Accelerators of India's Growth—Industry, Trade and Employment, Springer.
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- 9. Desai, Vasant. (2019). Entrepreneurship Development, Himalaya Publishing House, Delhi.
- 10. Don E. Waldman and Elizabeth J. Jensen (2019). Industrial Organization: Theory and Practice, Routledge Publications, New York.
- 11. Eschenbach et al. (2015). Economic Analysis of Industrial Projects, Oxford University Press.
- 12. Garg., M C. (2013). Entrepreneurial Development, Himalaya Publishing House, Delhi.
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- 15. Hisrich, Robert D et al. (2018): Entrepreneurship, McGraw Hill Pvt Ltd, India.
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- 21. Paul, Justin. (2018). Business Environment, 4/e, McGraw Hill Pvt Ltd, India.
- 22. Seth, Ranjana (2010): Industrial Economics, Ane Books Pvt Ltd, New Delhi.
- 23. Singh, A. and A.N. Sadhu (1988). Industrial Economics, Himalaya Publishing House, Bombay.

#### **II SEMESTER**

# PH 111.2: MACRO ECONOMIC ANALYSIS (60 hours)

# **COURSE OBJECTIVES:**

- > To equip the students to understand systematic facts and latest theoretical developments for empirical analysis.
- > Demonstrate a good understanding of macroeconomic principles, concepts, and theories.
- Examine the modern developments in labour market.

#### **COURSE OUTCOME**

- CO 1: Explain the functioning of various sectors of the economy.
- CO 2: Develop an understanding of the various theories related to macro variables.

- CO 3: Demonstrate an understanding of the macroeconomic implications of decisions made by diverse economic entities.
- CO 4: Able to comprehend the link of various sectors in an economy.
- CO 5: Integrate theoretical knowledge to evaluate policy measures
- CO 6: Analyse trade-off in the deployment of resources to alternative ends.

#### MODULE I: NATIONAL INCOME AND EMPLOYMENT

(15 hours)

National income concepts and accounting methods; Circular flow models – two sector, three sector and four sector; GDP deflator- Determination of the equilibrium level of income and employment- Demand and supply of labour – classical view and Keynesian view- 45 degree cross.

#### MODULE II: THEORIES OF CONSUMPTION

(10 hours)

The Absolute income hypothesis- Kuznet's Consumption Puzzle –Drift hypothesis of Smithies-Relative income hypothesis;-Permanent income hypothesis- Life cycle hypothesis -FRB-MIT (Federal Reserve Bank and Massachusetts Institute of Technology) model - Modern approach of consumption and uncertainty.

#### **MODULE III: INVESTMENT DECISION AND THEORIES**

(15 hours)

Criteria of investment decisions - present value, internal rate of return, payback period; Keynesian formulation - long and short-run relationships; Neo-classical approach to fixed investment; Kalecki's theory- The reinterpretation of Keynes by Clower and Leijionhufvud - Dual Decision Hypothesis by Clower- Accelerator theory-Capital Stock Adjustment Principles - Financial theory of investment-Tobin's q-ratio.

## MODULE IV: NEW CLASSICAL MACROECONOMICS

(10 hours)

Main propositions of New Classical macroeconomics – Continuous market clearing- Monetarist surprise model by Lucas – Rational Expectations theory –New classical economics and the business cylces- Ineffectiveness of government intervention- BarroRicardian equivalence theorem-The real business cycle theory - Supply side economics – Laffer curve.

#### MODULE V: NEW KEYNESIAN MACRO ECONOMICS AND POLICIES (15 hours)

Features of New Keynesian Economics–Small Menu Cost Model – Efficiency Wages Theory – Implicit Contract Model - Insider – Outsider Model - Hysteresis – Search and match models. Models that combine elements of New Classical and New Keynesian Macroeconomics: Dynamic Stochastic General Equilibrium (DSGE). A consistency framework for analysing policy issues: Some key identities – Sectoral and economy wide budget constraints. Monetary policy -Fiscal policy - effectiveness and lags.

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- 3. Barro, Robert, J. (2008). Macroeconomics, MIT Press (Mass).
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- 17. Kalecki (1969). Selected Essays on the Dynamics of the Capitalist Economy, Augustus M. Kelley, New York.
- 18. Keynes, J.M. (1936). The General Theory of Employment, Interest and Money, Macmillan, London.
- 19. Keynes, J.M. (2009): Essays in Persuasion, Classic House Book, U.S.A.
- 20. Mankiw, Gregory (2020), Brief Principles of Macroeconomics, Cengage Learning Limited.
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- 22. Patinkin, D. (1965). Money, Interest and Prices, Harper and Row, New York.
- 23. Paul Krugman & Robin Wells. (2015): "Macroeconomics: Principles and Policy" 4th Edition, Worth Publishers
- 24. Shapiro, E. (2012). Macroeconomic Analysis, Galgotia Publications, New Delhi.
- 25. Stiglitz, Joseph., and Walsh, Carl E. (2002). Principles of Macroeconomics, WW Norton and Company (New York).
- 26. Weintraub, Sidney (1972). Classical Keynesianism: Monetary Theory and the Price Level, Green Wood Press, Connecticut.

# PH 112.2 MATHEMATICAL TECHNIQUES FOR ECONOMIC ANALYSIS (60 hours)

#### **COURSE OBJECTIVES:**

- > To train the students to use the techniques of mathematical analysis, which are commonly applied to understand and analyze economic problems.
- > To develop economic research skills, to locate and retrieve economic data and information and to critically interpret and evaluate this information.

# **COURSE OUTCOME:**

CO1: To familiarize the students with the mathematical economics terminologies

CO2: Able to build models by expressing words in symbols, numbers and equations

CO3: Able to apply economic theory and methods to selected real world economic problems.

CO4: Able to demonstrate analytical and critical thinking skills and to apply and interpret quantitative, qualitative and graphical information in a problem-solving context.

CO5: To equip students with the flexibility and skills necessary to succeed in a constantly changing environment.

CO6: A new dimension of scientific, logical and critical thinking, which will assist the mind to solve personal, professional and social problems and guide the students to take wise decisions.

## MODULE I: NATURE AND SCOPE OF MATHEMATICAL ECONOMICS (12 hours)

Introduction to Mathematical Economics- Advantages and Disadvantages of Mathematical Economics - Variables- Constants - Parameters - Functions - Mathematical Models

# MODULE II: LINEAR FUNCTIONS AND THEIR APPLICATION IN ECONOMIC ANALYSIS. (12 hours)

Linear Functions - Demand Function - Supply Function - Market Equilibrium - Taxation - Subsidy - Break-even Analysis - National Income Determination.

# MODULE III: NON- LINEAR FUNCTIONS AND THEIR APPLICATION IN ECONOMIC ANALYSIS. (12 hours)

Quadratic Function - Market Equilibrium - Production Possibility Curves - Power Function - Pareto's Distribution of Income -Logarithm and Anti- Logarithms- Exponential Function - Interest Compounding Discounting - Depreciation.

# MODULE IV: DIFFERENTIAL AND INTEGRAL CALCULUS (12 hours)

Rules of Differentiation – Limits – Continuity – Derivative - Higher Order Derivatives – Partial Differentiation - Optimisation – Minimisation and Maximisation - Application of Derivatives in Economics – Cost – Average and Marginal Costs – Revenue – Average and Marginal Revenues – Average and Marginal Product - Equilibrium of the Firm Under Perfect Competition, Monopoly, Price Discrimination – Integral Calculus – Indefinite and Definite Integration – Application to Economics –Consumers Surplus – Producers Surplus.

# MODULE V: MATRICES AND LINEAR PROGRAMMING: OPERATIONS AND APPLICATIONS (12 hours)

Elementary Mathematical Operation with Matrices – Meaning, Types of Matrix - the Algebra of Matrices –Vectors- Transpose and Inverse- Basic Properties of Determinants- Solution of Simultaneous Equations, Cramer's Rule. Basic Concept; Formulation of a LP problem; Nature of

feasible, basic and optimal solutions; Solution of a LP problem through Graphical Method, Application to Economic Analysis.

#### **REFERENCES**

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- 9. Simon, Carl P. and Lawrence Blume, (2010). Mathematics for Economics, Viva Books Pvt Ltd, New Delhi.
- 10. Veerachamy R, (2008). Quantitative Methods for Economists, New Age International Publications, New Delhi.
- 11. Weber, Jean E, (1982). Mathematical Analysis, Harper International.
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- 13. Vali, Shapoor (2015). Principles of Mathematical Economics II, Volume 3, Atlantic Press, Paris, France.

# PH 113.2 INTERNATIONAL ECONOMICS (60 hours)

# **COURSE OBJECTIVES:**

➤ Globalisation is rapidly changing the scope and nature of international business and trade. Organizational success is highly dependent on the ability to understand and respond to economic issues and forces.

> To prepare the students to evaluate the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital — both short-term and long-term —at national and international levels.

#### **COURSE OUTCOME:**

- CO 1: Identify and analyse different theoretical models of international economics in light of 'real world' situations.
- CO 2: Understand major issues in international finance, be able to deal with them analytically, and identify possible resolutions for those issues.
- CO 3: Analyse the determinants, patterns and effects of international trade within a general equilibrium framework, where the interrelationships amongst product and factor markets in an economy are explicitly taken into consideration.
- CO 4: Distinguish between the efficiency implications and distributional consequences of trade and trade policy.
- CO 5: Discuss and explain specific policy issues such as 'environmentalism as protectionism'; international dumping; the choice of exchange rate regime; the desirability of free capital flows.
- CO 6: This course advances understanding of economics across business and the public sector with critical skills and competencies.

#### **MODULE 1: PURE THEORY OF INTERNATIONAL TRADE (15 hours)**

Important issues in international trade. Factor Endowment theory of Heckscher-Ohlin. Empirical testing of Hecksher-Ohlin model- The Leontief Paradox, The Rybzynski Theorem, Stolper - Samuelson Theorem, Linder's demand hypothesis - Factor Intensity Reversal. Factor Price equalization theorem. Border trade, Periodic trade, Entrepot trade.

### **MODULE II: INTRA INDUSTRY TRADE THEORIES (10 hours)**

Imperfect competition and international trade – Intra-industry trade – The Neo-Heckscher-Ohlin model, Neo-Chamberlinian models , Neo-Hotelling models, Oligopolistic models -Reciprocal-dumping model – Models of international trade based on technological change - Imitation-gap theories of trade, Product cycle hypothesis.

## MODULE III: TRADE, GROWTH AND FACTOR MOBILITY (10 hours)

Offer curves- Concepts of terms of trade –Prebisch-Singer hypothesis. Immizerizing growth, Metzler Paradox. Trade and Technical Progress - Neutral, Capital-saving, and Labour-saving Technical Progress. The effect of Growth on Trade - Growth and Nation's terms of trade and welfare.

#### MODULE IV: THE BALANCE OF PAYMENTS AND THE EXCHANGE RATE (10 hours)

The Balance of Payments Account - Disequilibrium in Balance of Payment - Adjustment Mechanism in the Balance of Payments. Foreign Exchange Market - Purchasing Power Parity Theory. Determination of the equilibrium national income in an open economy. Foreign trade multiplier - The import function.

## **MODULE V: THE TRADE INTERVENTIONS (15 hours)**

Instruments of trade policy – Tariffs and quantitative trade restrictions; Tariffs and Non-Tariff Barriers, Tariffs and export promotion – Tariff structure and effective rate of protection, Effect of tariff under partial and general equilibrium- the optimum tariff. Quotas and Quantitative Restrictions. Types of Economic Integration. Theory of Customs Unions- EU, EFTA, NAFTA, SAFTA, SAARC, ASEAN, OPEC, APEC, G-8, G-20- WTO.

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# PS 114.2 FINANCIAL INSTITUTIONS AND MARKETS (50 hours)

#### **COURSE OBIECTIVES:**

- This course aims at providing students with an understanding of the structure, organisation and working of financial markets and institutions in India.
- > To demonstrate an awareness of variety of financial institutions.

#### **COURSE OUTCOME:**

CO1: To outline the basics of Indian financial systems and its components

CO2: To provide students with an introduction to the theory and practice of financial instruments.

CO3: Explain financial institutions and how firms obtain funds in the financial markets.

CO4: To analyze and evaluate financial markets, how securities are traded, mutual funds, investment companies, and investor behavior.

CO5: To explain how the financial services component industries (insurance, banking, securities, real estate and financial planning) interact.

CO6: Understand the importance of the financial sector in directing the use of scarce capital and able to analyze the various financial sector reforms in India.

# **MODULE I: NATURE AND ROLE OF FINANCIAL SYSTEM (12 hours)**

Nature and role of financial system- Financial system and markets-The structure of the financial system-functions of the financial sector-financial intermediation and financial intermediaries-Levels of interest rates-long period and short period rates-spread between lending and deposit rates- equilibrium in financial markets-financial system and economic development

# **MODULE II: FINANCIAL INSTRUMENTS (12 hours)**

Instruments with their features including treasury bills, commercial bills, commercial papers, certificate of deposits and gild edged securities. Money market mutual funds, bills discounting, factoring, forfaiting, consumer finance, credit cards, vehicle financing and consumer durable financing

#### **MODULE III: SECONDARY MARKET (14 hours)**

Capital market- primary and secondary markets, depository system, Government securities market, Role of SEBI, recent developments. - Role, importance, organisation of stock exchanges. Listing of securities in stock exchanges – Trading mechanism – screen based trading- insider trading- Take overs- Internet based trading.- BSE – NSE –Their role, organisation- Listing rules and procedures – Share price Indices – compiling of index numbers and interpretation.

#### **MODULE IV: FINANCIAL SECTOR REFORMS (12 hours)**

Nature, organisation and participants - Exchange rates devaluation, and depreciation - Working of Floating exchange rates since 1973 - Narasimham Committee Report – reforms in international monetary system-convertibility in current account - Concept of capital account convertibility-Indian preparedness to full convertibility - Bank mergers and consolidation-Basel norms and Indian banks.

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- 10. Prasad, K N. (2010). Development of India's Financial System, Sarup and Sons, New Delhi.
- 11. Verma, J.C. (2012). Merchant Banking-Bharat Publications.

# PS 115.2 RESEARCH METHODOLOGY AND ETHICS (50 hours)

# **COURSE OBJECTIVES:**

- Generate the capacity of critical thinking and engage the students in the process of research itself.
- ➤ Enable the students to conceptualize a research problem and develop a number of complementary designs, measurement, and data collection approaches to bring evidence to bear on the problem.
- ➤ Capacitate the student to prepare a research proposal, and evaluate the quality of evidence in published research.
- > To understand the ethical issues and practices in research with an awareness of rights and obligations of research participants.
- Understand the process of Intellectual property Rights and its different forms and implications

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#### **COURSE OUTCOME**

- CO 1: Students can develop testable hypotheses, differentiate research design and/or statistics, evaluate aptness of research conclusions, and generalize them appropriately.
- CO 2: Students can design and conduct quantitative or qualitative research studies in laboratory or field settings. Students use research data to formulate or evaluate new research questions, using reason and persuasion in a logical argument.

Students can summarize and evaluate a body of research including primary literature, and CO 3: can compare psychology's methods with other disciplines' methods.

- CO 4: Demonstrate a logical argument, analyse and interpret data and evaluate alternative perspectives on the basis of objective reasoning. Communicate and present complex arguments in oral and written form with clarity and succinctness.
- CO 5: More awareness on Intellectual property Rights and Patents.
- CO 6: Able to write original research articles following ethical guidelines and practices in conducting the research and publication of papers.

# **MODULE I: INTRODUCTION (10 hours)**

The Meaning, Definition, Nature and Need of 'Research' –Types of Research-Objectives-Research in Social Sciences and Natural Sciences – Objectivity in Research – Research Philosophy-Deductive and Inductive Reasoning - Scientific method - Basic Categories in Scientific Method – Facts – Concepts – Construct - Theory. Research Process and Strategies.

# **MODULE II: RESEARCH PROCESS (15 hours)**

Formulation of Research Design - Research problem and Formulation - Role of Review of Literature - Hypothesis; Concept, Definition, Formulation, Concepts in testing of Hypothesis.Sampling - Various Sampling Methods - Importance of Proper Sampling Design. Primary Data Collection - Tools - Observation, Interview, Schedule and Questionnaire - Questionnaire - Design, Structure, Types of questions - Reliability and validity of data. Secondary Data- Sources of Secondary Data- Collection of Secondary Data. - Qualitative Research - Methods - Case Study.

# MODULE III: INTERPRETATION AND REPORT WRITING (10 hours)

Processing and Analysis of Data.Interpretation – Meaning, Importance and Techniques.Reporting Writing – Structure and General Format – Style – Use of Footnotes – Citations – Presentation of Tables, Diagrams, Charts and Maps – Bibliography.Introduction to hypothesis testing statistical packages.

# MODULE IV: RESEARCH ETHICS, IPR AND PUBLICATION (15hours)

Ethics – meaning and definition- Ethics with respect to science and research, intellectual honesty and research integrity. Scientific misconduct – falsification, fabrication and

plagiarism.Publication ethics, misconduct – Violation of public ethics.Predatory publishers and journals. IPR – concept, nature and characteristics, origin and development, forms. IPR issues in Social Sciences. Publication of scholarly/research article – meaning and features of scholarly article. Data base and Research – Data bases – indexing data base, citation data base, Web of science, Scopus etc, Research Metrics – Impact Factor of Journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score; Metrics – h-index, g-index, i10 index, Altmetric.

- 1. Anderson, R., &Braud, W. (2011). Transforming self and others through research: Transpersonal research methods and skills for the human sciences and humanities. Albany, NY: State University of New York Press.
- 2. Barbara H Stanley J Joan E Sieber, Gary B Melton. Research Ethics: A Psychological Approach. University of Nebraska Press
- 3. Booth, A., Papaioannou, D., & Sutton, A. (2012). Systematic approaches to a successful literature review. Los Angeles, CA: Sage.
- 4. C R Kothari, <u>GauravGarg</u> (2019). Research Methodology: Methods and Techniques, New Age International.
- 5. David I Bainbridge (2012), Intellectual Property Rights. Long man Publication
- 6. Deepak C & Neena S (2018). Research Methodology, Concepts and Cases, Vikas Publishing House, New Delhi.
- 7. Goode, W.J. (1981). Methods in Social Research. New and Hatt, P.K.York McGraw-Hill Company.
- 8. Howard Lune, Bruce L. Berg (2016). Qualitative Research Methods for the Social Sciences, Pearson; 9<sup>th</sup> edition.
- 9. Indian National Science Academy (INSA). (2019). Ethics in Science Education, Research & Governance
- 10. Ivankova N. V. (2015). Mixed methods applications in action research: From methods to community action. Thousand Oaks, CA: Sage.
- 11. JayashreeWatal. (2013): Intellectual Property Rights in the WTO and Developing Countries. Oxford University Press
- 12. Krishnaswamy O. R. (1993), Methodology of Research in Social Sciences, Himalaya Publishing, Mumbai.
- 13. Leedy P D. (2015): Practical Research: Planning & Design. Washington: McMillan Publishing Co., INC
- 14. McMillan, V.E. (2012). Writing papers in the biological sciences (5th ed.). Boston.

- 15. O'Leary Z. (2014). The Essential Guide to Doing Your Research Project, Los Angeles, CA: Sage.
- 16. Pan, M. L. & Lopez, M. (2013). Preparing literature reviews: Qualitative and quantitative approaches (4th ed.), Glendale, CA: Pyrczak Pub.
- 17. Ranjit Kumar (2014). Research Methodology: A step by step Guide for Beginners, 4t h Edition, Sage Publications.
- 18. Ranjit Kumar (2014). Research Methodology: A step by step Guide for Beginners, 4t h Edition, Sage Publications.
- 19. Singh. A K. (2017): Tests, Measurements and Research Methods in Behavioral Sciences. BharathiBhawan Publishers & Distributors, New Delhi
- 20. Valsiner, J, Molenaar, P.C.M.; Lyra, M.C.D.P.; Chaudhary, (2014). Dynamic Process Methodology in the Social and Developmental Sciences, Springer-Verlag New York Inc.
- 21. Wallinman N. (2005):Your Research Project: A Step by Step Guide for the first time Researcher. Sage Publications, London

#### PS 116.2 AGRICULTURAL ECONOMICS (50 hours)

# **COURSE OBJECTIVES**

- > To expose the students to the concept, significance and uses of agricultural economics.
- ➤ To impart adequate knowledge and analytical skills in the field of agricultural marketing issues, and enhance expertise in improving the performance of the marketing institutions and the players in marketing of agricultural commodities.

# **COURSE OUTCOME**

- CO 1: Able to understand the theories of agricultural economics.
- CO 2: Gain knowledge in the importance of the primary sector in Indian economy.
- Write texts in various forms, with an identified purpose, that respond to specific audience CO 3: needs, incorporate research or existing knowledge, and use applicable documentation and appropriate conventions of format and structure.
- CO 4: Capable of using mathematical, computational, statistical or formal reasoning (including reasoning based on principles of logic) to solve problems, draw inferences and determine reasonableness.
- CO 5: Students will be able to identify an appropriate theoretical framework, a suitable analytical method, and undertake an informed empirical analysis.

CO 6: Students will have a good general understanding of agricultural production functions, cost and profit functions, math programming models, and non-optimizing simulation models.

# **MODULE I: AGRICULTURAL DEVELOPMENT AND POLICIES (15 hours)**

Role of agriculture in economic development - determinants of agricultural growth and their measurements. Characterizing agricultural growth -capital formation, agricultural information system. Agricultural policy analysis and reforms - energy, water, fertilizer, land, seed, labour, technology, rural infrastructure, marketing, pricing, trade etc. Concepts of food security - production oriented policies, food price policies, food subsidies, food safety net and food quality.

# **MODULE II: ECONOMICS OF FARM BUSINESS MANAGEMENT (10 hours)**

Basic principles of farm management - marginal returns, opportunity cost, cost substitution, equimarginal returns, time comparison and comparative advantage. Cost concepts and analysis - measurement and management of risk and uncertainty in agriculture (including livestock, horticulture, fisheries, forestry, etc.).

# MODULE III: ECONOMIC APPLICATIONS IN AGRICULTURE ECONOMICS (15 hours)

Forms and applications of production functions - linear quadratic, square root, spillman, cubic, semi-log, Cobb-Douglas, constant elasticity of substitution, variable elasticity of substitution. Dualities between production, cost and profit functions - derivation of supply and factor demand functions from production and profit functions - resource-use efficiency and returns to scale - frontier production function - total factor productivity - rainbow (green, white, yellow, blue, etc.) revolution.

# MODULE IV: AGRICULTURAL MARKETING AND PRICE ANALYSIS (10 hours)

Marketing in a developing economy; marketing functions; problems in marketing agricultural produce; government interventions including regulated markets, procurement, buffer stock operations, co-operative marketing etc.; demand and supply models- formulation, estimation and projections; marketed surplus models: market integration.

- 1. Bilgram S. A. R. (2017). Agricultural Economics, Himalaya Publishing House, Delhi.
- 2. Choudhary S N (2012). Handbook of Agriculture Economics.OXFORD.
- 3. Dorfman J.H. (2014). Economics and Management of the Food Industry. Routledge, New York NY.
- 4. FAO (2013) Global agriculture towards 2050. Rome, FAO.
- 5. Gardner BL &Rausser GC. (2001). Handbook of Agricultural Economics. Vol. I.Agricultural Production.
- 6. Gilles Allaire& Benoit (2018). Ecology, Capitalism and the New Agricultural Economy. The Second Great Transformation, 1st Edition, Routledge.
- 7. Henderson JM &Quandt RE. (2000). Microeconomic Theory A Mathematical Approach. McGraw-Hill.

- 8. Johan F. M. Swinnen (2018). The Political Economy of Agricultural and Food Policies, Palgrave Macmillan US.
- 9. MadhusudanGhosh et.al (2014). Diversification of Agriculture in Eastern India, Springer.
- 10. Nirmal Ravi Kumar. K. (2019). Objective Agricultural Economics 3rd Revised Edition for JRF, SRF, ARS, NET, SLET, Civil Services & Other Competitive Examinations.
- 11. Norwood, F.B. & J.L. Lusk. (2008). Agricultural Marketing and Price Analysis. Pearson Prentice Hall, Upper Saddle River NJ.
- 12. OECD/FAO (2013). OECD-FAO Agricultural Outlook 2013–2022, OECD Publishing and FAO.
- 13. PrabhuPingaliet. al. (2019). Transforming Food Systems for a Rising India, Palgrave Macmillan.
- 14. Reddy S et al. (2019): Agricultural Economics 2Ed. Oxford.
- 15. Silberberg E &Suen W. (2001). The Structure of Economics–A Mathematical Analysis. McGraw-Hill.
- 16. Thomas W. Hertel (2011). The Global Supply and Demand for Agricultural Land in 2050. American Journal of Agricultural Economics.
- 17. Tilman D, Balzer C, Hill J, Befort BL (2011). Global food demand and the sustainable intensification of agriculture. ProcNatlAcadSci USA 108: 20260–20264.
- 18. Venn J A (2015). The Foundations of Agricultural Economics: Together with an Economic History of British Agriculture during and after the Great War. Cambridge University Press.
- 19. Vercammen, J. (2011). Agricultural Marketing: Structural Models for Price Analysis. Routledge, New York NY.

# PS 117.2 ECONOMICS OF HUMAN RESOURCE DEVELOPMENT (50 hours) COURSE OBJECTIVES:

- > To facilitate an understanding of the concepts, methods and strategies for HRD.
- > This course aims to improve students understanding of human behavior in organization and the ability to lead people to achieve more effectively toward increased organizational performance.
- ➤ To familiarize students with the basic concepts of HRM.
- > To understand the process of OD and nature of planned change.

# **COURSE OUTCOME**

- CO 1: Knowledge of Industrial Organizational Behavior, Development, & Change Strategies: Given an organization's target for development or change, analyze organizational and work behavior in relation to the target, evaluate the need for and influences of change on the organization and organizational members, and apply appropriate models, theories, and principles to facilitate healthy change and development.
- CO 2: Competency in Diversity as it Applies to Industrial Organizational Practices: Analyze and evaluate how diversity influences industrial organizational issues, and develop change strategies that demonstrate an appreciation of how diversity influences individuals and groups within the organization.

- CO 3: Students may obtain frameworks and tools to effectively analyze and approach various organizational situations.
- CO 4: Develop an organisational culture in which superior-subordinate relationships, teamwork and association among sub-units are solid and contribute to the proficient wellbeing, motivation and pride of employees.
- CO 5: Obtain or refine competences essential to achieve numerous roles connected with students current or anticipated impending roles.
- CO 6: The study of human resource development emphasis on efficiency of individuals as productivity in itself is an important organisational and personal goal.

## **MODULE I: HUMAN RESOURCE DEVELOPMENT AND PLANNING (15 hours)**

Human Resource Management - Meaning - Objectives, Nature and Scope - Role of HRM - Qualities of HR Manger - Concept Human Resource Development - Need for HRD - Functions of HRD Department - HRD Mechanisms - Need and Process of HR Planning - Factors Affecting HR Planning - Benefits of HR Planning - Job Analysis - Job Evaluation- Job Evaluation Methods - Job Description-- Job Enrichment - Career Planning - Meaning and Need - Career Development Cycle.

# MODULE II: INDIVIDUAL AND GROUP BEHAVIOUR (10 hours)

Personality – Definition- Factors – Attitude – Concept – Formation – Measurement - Perception – Meaning – Perpetual Process and Factors – Power – Characteristics and Sources - Groups – Meaning ,types and formation of groups – Group Decision Making Techniques .

### **MODULE III: MOTIVATION AND LEADERSHIP (10 hours)**

Motivation- Concept – Mechanism of Motivation – Theories of Motivation – Maslow's, Herzberg's, and McGregor. Nature of Leadership Behaviour - Functions of a Leader - Leadership styles – Theories – Trait Theory – Fielder's Contingency theory – Harsey and Blanchard's Situational Theory – Likert's Four Systems of Leadership – Managerial of Grid Black- Mouton - Leadership issues in the present Century.

# **MODULE IV: LEARNING AND DEVELOPMENT (15 hours)**

Learning- Meaning and Process of Learning – Modification of Learning Behaviour- Need for Training - On the Job Training and Off the Job Training Methods – Quality Work Life Programmes – Quality Circles – Kaizen- TQM -Team Building – Management by Objectives - Talent Management – Knowledge Management . Organisational Change and Organisational Development – Psychological Contract.

- 1. AmitabhaSengupta (2018). Human Resource Management: Concepts, Practices, and New Paradigms, SAGE Publications.
- 2. Bhattacharyya, DipakKuamr (2016): OragnisationalBehaviour, Oxford.
- 3. BiswajeetPatnayak(2018): Human Resource Management, 5th Ed. PHI.

- 4. BiswanathGhosh(2016): Human Resource Development & Management , Vikas Publishing House .
- 5. Bohlander, Snell, Sherman (2004): Managing Human Resources, 13th Ed. Thomson Learning.
- 6. Ghosh A.K. (2019). Human Resource Management, Manas Publications.
- 7. K. Ashwatappa (2017). Human Resource and Personnel Management: Text and Cases, 4<sup>th</sup> Ed. TMH.
- 8. Micheal Armstrong, A(2017): Handbook of Human Resource Management Practice, Kogan Page.
- 9. NimitChowdhary and Bhagwati.P.Sarawat( 2005): Organisation Culture & Human Talent, Macmillan.
- 10. Prasad Kesho (2019). Strategic Human Resource Development, PHI Learning Pvt. Ltd.
- 11. Rao, P Subba (2013). Essentials of Human Resource Management, Himalaya Publishing House, 5<sup>th</sup> Ed.
- 12. Robert N. Lussier, John R. Hendon (2013). Human Resource Management: Functions, Applications, and Skill Development, SAGE publications.
- 13. Singh, Gangaram, Ed(2007): Strategic HRM in a global Economy, Excel Books.
- 14. Tirupati, P.C (2017): Human Resource Development, Sultan Publication.
- 15. UdaiPareek,(2007): Understanding Organizational Behaviour, Second ed. Oxford University Press.
- 16. Uma Jain and UdaiPareak (2004): Developing Leadership for the global Era HRD Perspectives & Initiatives, Macmillan.

# PO 118.2 BANKING AND FINANCE (40 hours)

#### **LEARNING OBJECTIVES:**

- > To equip students with the practical knowledge about the functioning of development banking institutions and financial services in India.
- To enable students to learns the dynamics of capital market, money market.

#### **COURSE OUTCOME:**

- CO1:To understand the Origin and the growth of the Indian Banking System.
- CO2: To elucidate the broad functions of various types of banks
- CO3: To evaluate the performance of the developmental banking institutions
- CO4: Able to demonstrate an awareness of the current structure and regulation of the Indian financial services sector.
- CO5: Discuss the impact of government policy and regulations on the banking sector.

CO6: To understand the working of development financial institutions in the development of rural sector, farmers, industries and financial market.

# **MODULE I: BANKING (10 hours)**

Types of Banks-Concept of Development Banking as distinguished from Commercial Banking – Evolution of Development Banking – Growth and Structure of Development Banking Institutions in India – Role of Development Banks in the achievement of national Objectives – Concept of Universal Banking. NABARD – NHB – EXIM Bank – SIDBI – New Developmental Financial Institutions in India

### MODULE II: LEASING, HIRE PURCHASING AND MERCHANT BANKING (15 hours)

Leasing- meaning and types- Concept and characteristics, hire purchase v/s Lease, condition and warranties in hire purchasing and their implications, tax implications of hire purchasing, evaluation of hire purchasing from hirer and hire's angle. Forfeiting – meaning and characteristics, advantages, Factoring -types and mechanism of factoring, functions of a factor-legal aspects and problems — advantages – Bills discounting- creation of a bill of exchange, types and advantages- Bill market schemes. Merchant banking- Nature of services, structure of merchant banking firms. Mutual Funds- Concepts - advantages-evolution-role-types of mutual funds

#### MODULE III: RURAL BANKING AND FINANCIAL INCLUSION (15 hours)

Rural Indebtedness – Incidence -factors, analysis and implications. Role of Commercial banks in rural credit -Regional Rural Banks –Lead Bank Scheme – Service Area Approach - Problems and Issues in Rural banking - Credit Cooperatives - Financial Inclusion and Deepening – Role of RBI and Other Banks in Promoting Financial Inclusion - Micro Finance - Concept – progress in India-Problems – Self – Help Groups- Formation – Functioning – and Performance .

- 1. Agarwal, O P. (2014). Universal Banking in India and Abroad, Himalaya Publishing House, New Delhi.
- 2. Avadhani. (2009). Fundamentals of Money and Banking, Himalaya Publishing House, New Delhi.
- 3. Bhole, I.M. (2017). Financial Institutions and Markets, McGraw Hill Education, New Delhi.
- 4. Brand, Michael. (2019). Money, Banking, Financial Markets and Institutions, Cengage Learning, New Delhi.
- 5. Deepak B. Phatak, Sameer Cochar and R Chandrashekar (2009). Financial Inclusion, Academic Foundation.

- 6. Desai, Vasant, (2018). Rural Development in India, Himalaya Publishing House, New Delhi.
- 7. Gomez, Clifford. (2011). Financial Markets, Institutions and Services, PHI Learning Pvt Ltd, New Delhi.
- 8. Gordon and Natarajan,.( 2015). Financial Markets and Services, Himalaya Publishing House, New Delhi.
- 9. Gupta, S.L. (2005). Financial Derivatives: Theory, Concepts and Problems, Prentice Hall of India.
- 10. Gurusamy, S. (2010). Financial Markets and Institutions, Tata McGraw Hill, New Delhi.
- 11. Jha, Mithish Kumar. (2012). Microfinance and Rural Development, Concept Publishing House, New Delhi.
- 12. John C. Hull and Sankarshan Bas. (2016). Options, Futures and other Derivatives, Pearson
- 13. Khan, M.Y (2019). Financial Services, Tata McGraw Hill, New Delhi.
- 14. Machiraju, H.R. (2010). Merchant Banking Principles and Practice: Wiley Eastern,
- 15. Machiraju, H.R. (2018). Indian Financial System, Vikas Publishing House, New Delhi.
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- 21. Sameer, Cochar. (2010). Speeding Financial Inclusion, Academic Foundation.
- 22. Shekhar&Shekhar. (2013). Banking Theory and Practice, Vikas Pub House, Delhi.
- 23. Sohani, A.K. (2007). "Financial Inclusion: Perspectives and Country Experiences", ICFAI Press, Hyderbad.
- 24. Somanath, V S. (2009). MicrofinanceRedifining the Future, Excel Books, New Delhi.
- 25. Thingalaya, N.K. (2013). Rural Banking", Sage Publications, New Delhi.
- 26. Yunus, Mohammed ( 2002). Banker to the Poor: Micro Lending and the Battle Against World Poverty, Public Affairs.

#### **III SEMESTER**

#### PH 111.3: MONETARY ECONOMICS (60 hours)

#### **COURSE OBJECTIVES:**

- > This course helps students to understand the conceptual framework of monetary economics.
- > The Course seeks to cover various theoretical approaches to the determinants and measures of money supply, demand for money and rates of interest.
- > To generate awareness of the monetary policy formulations, its targets and objectives

# **COURSE OUTCOME**

- CO 1: Develops the skill to know the interdependence and complexity of the economic system.
- CO 2: Skill is developed to understand the monetary policy and its working in the system as a stabiliser.
- CO 3: Able to understand the various theory related to monetary economics.
- CO 4: Recognise the interrelation of the money and product market in the economy.
- CO 5: Understand the working of the monetary policies in the stabilization process.
- CO 6: Critically evaluate the policies related to stabilising the economy.

# **MODULE I: INTRODUCTION (10 hours)**

The existence of money – Money and near money – Value of money - Money in the utility function – Overlapping generations – Money in dynamic general equilibrium models – Bubbles and sunspots, Exogenous and endogenous money.

# MODULE II: SUPPLY OF AND DEMAND FOR MONEY (15 hours)

The supply of money – Measures of money supply – RBI's measure of money supply, High powered money- money multiplier theory - determinants of money supply, money in classical and Keynesian theory. The demand for money – approach of classical -Keynes Liquidity Preference and liquidity trap- Baumol's square root rule - Tobin's portfolio theory, Friedman-monetarist view.

#### MODULE III: MONEY AND THE THEORY OF INTEREST RATES (10 hours)

Real and monetary theories of the interest rate – The term structure and the yield curve – Determination of equilibrium interest rates- Real and nominal interest rate - Wicksell's monetary growth: Inflation, interest and exchange rates - credit transmission mechanism.

# MODULE IV: INFLATION AND MACROECONOMICS OF AN OPEN ECONOMY (10 hours)

Inflation - Nature, Theories and Types; Inflation and Unemployment - Philips Curve Analysis in the short run and long run-Friedman Phelps expectations – augmented Philips curve –Natural rate of unemployment hypothesis- Acceleration hypothesis and NAIRU. Factor and Goods Markets equilibrium- IS-LM Analysis; Mundell - Fleming model – open economy – policy effectiveness.

# MODULE V: CYCLICAL FLUCTUATIONS IN THE ECONOMY (10 hours)

Characteristics of change and movements; The Accelerator and Multiplier Principles and their Interactions - Business Cycle Models; The Samuelson model; the Hicksian model; The Goodwin, Kaldor, Schumpeter and Cob-Web models.

#### REFERENCES

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- 2. Barro, Robert, J. (2002). Macroeconomics, MIT Press, Cambridge.
- 3. Baumol and Blinder. (2015). Macroeconomics, Cengage Learning, New Delhi.
- 4. Blackhouse, R. and A. Salansi (Eds.) (2000). Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
- 5. Blanchard, Oliver, J. (2016). Macroeconomics, Prentice Hall.
- 6. Campbell McConnell, Stanley Brue and Sean Flynn (2014). Macroeconomics: Principles, Problems, & Policies, McGraw-Hill Series in Economics, 20th Edition.
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- 8. Chakraborty, KS (2014). Macroeconomics, Himalaya Publishing House, Delhi.
- 9. Dornbusch, Rudiger, Stanley Fischer, and Richard Startz (2012). Macroeconomics, Tata McGraw-Hill Publishing Company, New Delhi.
- 10. Friedman, M. (1956). Studies in Quantity Theory of Money(Ed), The University of Chicago Press, Chicago.
- 11. Gupta, S.B. (2010). Monetary Economics: Institutions, Theory and Policy, S. Chand and Company, New Delhi.
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- 13. Handa, Jagadigh (2008). Monetary Economics 2<sup>nd</sup> edition, Taylor & Francis Publications.
- 14. Heijdra, B.J. and V.P. Frederick (2001). Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
- 15. Jha, R (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., Delhi.
- 16. Krugman, Paul & Robin Wells. (2015). Macroeconomics: Principles and Policy, 4th Edition, Worth Publishers, New York.
- 17. Levacic, R. and A. Rebman (1982). Macroeconomics, Macmillan, London.
- 18. Mankiw, Gregory (2015), Principles of Macroeconomics, Cengage Learning Limited.
- 19. Mankiw, Gregory, N. (2015), Macroeconomics, Worth Publishers, New York.
- 20. Mishkin,Frederic S.(2018): The Economics of Money, Banking and Financial Markets 12 edition Pearson
- 21. Patinkin, D. (1965). Money, Interest and Prices, Harper and Row, New York.
- 22. Paul, R R. (2011): Monetary Economics, 4thed, Kalyani Publishers, New Delhi.
- 23. Shapiro, E. (2012). Macroeconomic Analysis, Galgotia Publications, New Delhi.
- 24. Stiglitz, Joseph., and Walsh, Carl E. (2002). Principles of Macroeconomics, WW Norton and Company (New York).
- 25. Walsh, Carl, E. (2017). Monetary Theory and Policy, 3<sup>rd</sup> edition, MIT Press, Cambridge.

# PH 112.3 ECONOMETRICS (60 hours)

## **COURSE OBJECTIVES:**

- > To equip the students with basic theory of econometrics and relevant applications of the methods.
- > To facilitate an understanding of the methods in econometrics

### **COURSE OUTCOME**

- CO 1: Able to explain the relation between economic theory and Econometrics.
- CO 2: Develop the capacity to understand the various tools in Econometrics.
- CO 3: Ability to understand the usefulness of econometric tools.
- CO 4: Skills developed to analyse economic problems using econometric tools.
- CO 5: Analyse the problems associated with econometric models.
- CO 6: Formulate econometric models in problem solving.

#### **MODULE I: BASIC ECONOMETRICS**

(15 hours)

Nature, meaning and scope of Econometrics, Relationship between Statistics and Econometrics; Mathematical Economics and Econometrics, Economic theory and Econometrics- Methodology of Econometrics. Simple Linear Regression Model- Assumptions- Estimation through OLS - Significance of the error term - Properties of Estimates- Guass Markov Theorem- Measure of goodness of fit.

# MODULE II: PROBLEMS IN REGRESSION ANALYSIS (15 hours)

Violation of the assumptions of regression model - Problems of heteroscedasticity- Nature, test, consequences and remedial measures, Autocorrelation - Nature, consequences, test, and remedial measures. Meaning of multiple regression model and its assumptions – Multicollinearity - Nature, consequences, test, and remedial measures - errors of measurement.

# MODULE III: REGRESSION WITH QUALITATIVE VARIABLES

(10 hours)

Dummy variable -Dummy variable trap- Regression with dummy independent variables - ANOVA and ANCOVA. Testing structural stability of regression models- Chow test.

### MODULE IV: DYNAMIC ECONOMETRIC MODEL

(10 hours)

Autoregressive and distributed lag models -Koyck's approach, Partial adjustment and Adaptive expectations model, Instrumental variables, Detecting autocorrelation in autoregressive models - Almon approach to distributed-lag models- Introduction to time series analysis.

# **MODULE V: SIMULTANEOUS EQUATION MODELS (10 hours)**

Nature of simultaneous equation- simultaneous equation bias and inconsistencies of OLS estimation – the identification problem - rules of identification - Generalised least square (GLS)-Indirect Least Square Methods(ILS) - Method of Two stage least squares (2SLS).

#### **REFERENCES**

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- 3. Dougherty, Christopher.(2011): Introduction to Econometrics, 4ed, Oxford University Press, New York.
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- 5. Green, W. (2018). Econometrics, Prentice Hall of India, New Delhi.
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- 10. James H. Stock and Mark W. Watson. (2019). Introduction to Econometrics 4Ed, Pearson.
- 11. Johnston, J. (1997). Econometric Methods, 4th ed. McGraw Hill, London.
- 12. Johnston, J. and J. Di Nardo (2007). Econometric Methods, 4ed, McGraw Hill, London.
- 13. Kmenta, J. (1997). Elements of Econometrics, University of Michigan Press, New York.
- 14. Koutsoyannis, A. (2015). Theory of Econometrics, 2nd Ed. The Macmillan Press Ltd., London.
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- 16. Maddala, G.S. (2005). Introduction to Econometrics, John Wiley and SonsPvt Ltd, Singapore.
- 17. Maddala, G.S.&KajalLahiri, (2012). Introduction to Econometrics, John Wiley and SonsPvt Ltd, Singapore.
- 18. Madnani, G.M.K. (2015). Introduction to Econometrics: Principles and Applications
- 19. Peterson, Kerry. (2002). An Introduction to Applied Econometrics, Palgrave Houndmills, New York.
- 20. Ramanathan, Ramu. (2012). Introductory Econometrics with Applications, 5ed,
- 21. Schmidt, Stephen, J. (2019). Econometrics, McGraw Hill, New York.
- 22. Studenmund, A. H. (2017). Using Econometrics A Practical Guide, Pearson, Edinburg, England.
- 23. Theil, H. (1981). Introduction to Econometrics, Prentice Hall of India, New Delhi.

#### PS 113.3 HEALTH ECONOMICS (50 hours)

#### **COURSE OBJECTIVES:**

> To introduce basic issues of health economics. This course will make the students familiar with the demand for and supply of health care and health transition in India.

> To devise feasible policies to solve health care system problems using economic analysis.

#### COURSE OUTCOME

- CO 1: Helps to analyse the importance of health as a major determinant of economic growth.
- CO 2: Gain a deeper understanding of evaluating and creating dynamic and flexible strategies for healthcare delivery.
- CO 3: Have competence to apply economic concepts and models to the fields of demand for health, demand for health services, demand for health insurance, provision of health insurance and provision of health care.
- CO 4: Be able to design public drives in preventive medicine and apply social marketing techniques, both addressing public will and individual behaviors.
- CO 5: Provide useful insights into the delivery of health care, it's economic evaluation that provides the bulk of health economists' work and is of most relevance to managers and practitioners.
- CO 6: The course helps to understand the increasing importance of precision medicine and real-world situation that impacting medical affairs professionals, medical science liaisons, and have to be able to have meaningful conversations with healthcare providers about health economics concepts. Comprehend the structures of marketing management in healthcare organisations, and the steps through which marketing helps an organisation to identify the needs of and focus on its customers.

## **MODULE I: NATURE OF HEALTH ECONOMICS (15 hours)**

Health- Meaning- Nature - Determinants of Health - Factors Affecting Health Status - Nature of Health Economics - Structure of Health Economics - Scope of Health Economics - Economic Issues in the Health Sector - The Relevance of Economics to the Health Sector. Demand for Health Care - Determinants- indifference curve for health and other goods - Supply of Health Care - Managed care. Structure of Markets for Health - perfect competition, Monopoly, Monopolistic and Oligopoly.

## **MODULE II: HEALTH INDICATORS (10 hours)**

Health Status indicators – Birth Rate – Death Rate – Life Expectancy – Density of Population - Mortality – Neonatal, Postnatal, Under Five Mortality – Infant Mortality – Maternal Mortality – Incidence of Morbidity- Chronic Illness and Acute Illness - Fertility- Measurement, Trends, Fertility Transition in India- Urbanization – Trends - Impactof Urbanization on Health - Problem Aging. Nutrition and Productivity - Malnutrition – Causes and Consequences - The Nutritional Challenges to Health and Development. Food Problem of India - Food Security; Accessibility, availability and food use.

# **MODULE III: FINANCING OF HEALTH SERVICES (10 hours)**

Health Related Millennium Development Goals - Health care Financing - Health care Rationale for Public Investment in Health - The Need for a General Health Insurance - Various Health Insurance Schemes - Social insurance - Special Health Insurance Schemes for the Poor, Disabled and the Aged - A Comparative Analysis of Alternative Payment System Such as Health Insurance System, Pre-Payment Scheme - Saving Linked Insurance System, etc.

#### **MODULE IV: HEALTH CARE SYSTEM IN INDIA (15 hours)**

Health Care in India –Emerging Models of Health Care - Urban and Rural Health Care in India. Current Issues of Health and Economic Development. Utilization of Health Care Services in India. Public and Private Roles in Health - Challenges to Public Health in India – Gender Discrimination in Health Care – Increased Cost in Health and Outcomes. Role of Government in the Provision of Health Care - Government Schemes of Public Health – NGO's and Health Care. Reforms in Health Sector in India. Challenges - Impact of Development Policies on Health.

- 1. A. Ashokan (2009). Perspectives of Health Economics, Serial Publications, New Delhi
- 2. AlokBhargava (2008). Food, Economics, and Health, Oxford University Press
- 3. Amutha D (2016). A text book of health economics, Mangalam Publishers & Distributors.
- 4. Anand N. K and ShikhaGoel (2008). Health Economics, A.I.T.B.S. Publishers, New Delhi
- 5. BiswajitChatterjee, Asim K Karmakar(2012). Food Security in India,Raj Publications, New Delhi
- 6. Charles E Phelps (2018). Health Economics, Routledge, New York.
- 7. Handerson, JW (2018). Health Economics and Policy, Thomson Learning
- 8. Himanshu, Sekar Rout and Prashant Kumar Panda (2007). Health Economics in India, Century Publications, New Delhi.
- 9. Karen Gerard, Craig Mitton, Stephen Jan, Virginia Wiseman, Cam Donaldson (2004) Economics of Health Care Financing: The Visible Hand, Palgrave Macmillan
- 10. Kumar R (2008). Challenges of Health Care in India: Economics and Administration, Deep and Deep Publications, New Delhi.
- 11. Osmani S.R. (2000). Nutrition and Poverty, OUP, New Delhi.
- 12. PushpalathaPattnaik (2019). Health Economics, Black Printers India Inc.
- 13. R.E. Santerre and S.P. Neun (S&N),(2010). Health Economics, Theories, Insights and Industry Studies, 5th Edition, South-Western Cengage Learning,
- 14. SudhirAnand, Fabienne Peter, AmartyaSen (Eds.) (2006).Public Health, Ethics, and Equity, Oxford University Press, New Delhi
- 15. V. Ramamurthy (2007). A Premier of Health System Economics, Allied Publishers, New Delhi
- 16. Zweifel, Peter, Breyer, Friedrich, Kifmann, Mathias (2009). Health Economics, Oxford University Press, 1997 2nd ed.

### PS 114.3 LABOUR ECONOMICS (50 hours)

#### **COURSE OBJECTIVES**

- ➤ To have an understanding of important social issues and public policies involving employment, wages, working conditions, and unemployment.
- > To understand the functioning of labour markets and labour market policies.
- > To understand models that describe the labour market and policy effects.
- > To understand empirical microeconomic research on issues related to labour markets.

#### **COURSE OUTCOME**

- CO 1: By the end of this course, students will be able to understand the basic theories of labour markets
- CO 2: Able to understand the labour market policy outcomes.
- CO 3: Able to analyse how theoretical understanding of the labour market and empirical approaches to the labour markets are related.
- CO 4: Able to identify the role of government policies in labour welfare.
- CO 5: Show understanding of commonly used data and methods in applied labour market research.
- CO 6: Demonstrate the ability to acquire and convey content in international scientific literature in the field of research.

# **MODULE-1: INTRODUCTION TO LABOUR ECONOMICS (10 hours)**

Meaning- Concept, Significance and Peculiarities of Labour. Nature, Scope and Importance of Labour Economics-The supply and demand framework - Demand and Unemployment-Capital shortage and Unemployment- Immigration and Unemployment- Labour Supply- Income effects on labour supply.

## **MODULE-II: EMPLOYMENT DECISIONS (15 hours)**

Optimal employment decisions and the role of adjustment costs- irreversibility and the role of fixed and sunk costs- cost reversibility and net present value. Labour supply discrimination - Female Workers - Child Labour -the effects of anti-discrimination policy- Household family models; theory of time allocation. Role of education in labour market. Labour turnover - Trends in Labour turn over in India - Labour welfare measures.

# **MODULE-III: WAGE DETERMINATION (15 hours)**

Bargaining and efficient contracts theory: Marginal Productivity Theory, Theory of Collective Bargaining, Modern Theory of Wages -Wage Determination in – Organised- Unorganised Sector. Minimum wages and Fair wages - employment effects of minimum wages- Wage gaps - Review of monopsony- Union relative wage effects -Evolution and Features of Wage Policy in India.

# **MODULE-IV: LABOUR MARKET POLICY (10 hours)**

Labour Migration - trends & effects of Migration. Absenteeism to Industrial Labour in India, causes, effects and remedies. The Labour Market Assimilation of Immigrants - Subsidising Employment- Active Labour Market Policy: The Effects of Training Programs-Empirical studies of immigration effects.

- 1. Borjas, George J. (2013). Labour Economics, McGraw-Hill, 6th ed., New Delhi.
- 2. Chakraborty, SumanKalyan.(2018). Labour Economics, Himalaya Publishing House, New Delhi.
- 3. Deshpande AA. and S D Geet. (2014). Industrial Relations and Labour Law, NiraliPrakashan, Mumbai
- 4. Dolly Kikon and Bengt G. Karlsson. (2019). Leaving the Land: Indigenous Migration and Affective Labour in India, Cambridge University Press.
- 5. Dutt, G (1996). Bargaining Power, Wages and Employment : An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
- 6. Hajela, P.D.(1998). Labour Restrucing in India: A Critique of the New Economic Policies, Commonwelth Publishers, New Delhi.
- 7. Harasztosi, Péter, Attila Lindner (2014). Who Pays for the Minimum Wage? Mimeo.
- 8. Jhabvala, R.and R.K. Subrahmanya (2000), The Unorganised Sector: Work Security and Social Protection (Eds), Sage Publications, New Delhi.
- 9. Joshi, M. V. (2014). Labour Economics and Labour Problems, Atlantic, France.
- 10. Lal M. K. (2012). Modern Labour Economics, 1 edition, Pragun Publications.
- 11. Lester, R.A. (1964). Economics of Labour, 2nd Ed, Macmillan, New York.
- 12. Lisa Adkins and Maryanne Dever. (2018). Gender and Labour in New Times . Ed. Routledge Publications.
- 13. Lovasz, Anna, Agnes, Szabo-Morvai (2015). Does Subsidized Childcare Matter for Maternal Labour Supply? A Credible Cutoff-Based Estimate at a Policy Relevant Point. Mimeo.
- 14. Mamgain, Rajendra P. (2019). Formal Labour Market in Urban India, Sage Publications, Delhi.
- 15. McConnell, C.R. And S.L. Brue (1986). Contemporary Labour Economics, McGraw-Hill, New York
- 16. Misra, Roli. (2020). Migration, Trafficking and Gender Construction Women in Transition, Sage Publications, Delhi.

- 17. Papola, T.S.P.P. Ghosh and A.N.Sharma (1993). Labour, Employment and Industrial Relations in India, (Eds), B.R.Publishing Corporation, New Delhi.
- 18. Pierre, C.(2015): Labour Economics, PHI, MIT Press.
- 19. PiyaliGhosh and ShefaliNandan. (2017).Industrial Relations and Labour Law, McGraw Hill Education, New Delhi.
- 20. Rosenberg M.R. (1988). Labour Markets in Low Income Countries in CheneryT.N.Srinivasan (Eds) The Handbook of Development Economics North Holland, New York.
- 21. Tyagi, B. P.(2017). Labour Economics and Social Welfare, Jai PrakashNath and Co. Meerut.
- 22. VenkataRatnam, C.S.(2001). Globalization and Labour- Management Relations: Dynamics of Changes, Sage Publications/Response Books, New Delhi.
- 23. Zenou, Yves. (2005). Urban Labor Economics, Cambridge University Press.

## **PS 115.3 DEVELOPMENT BANKING (50 hours)**

# **COURSE OBJECTIVES:**

- > To equip students with the practical knowledge about the functioning of development banking institutions and financial services in India.
- To enable students to learns the dynamics of capital market, money market.

#### **COURSE OUTCOME:**

- CO1: To understand the growth and structure of development banking Institutions in India
- CO2: To analyze the functions of modern banking financial services and its importance
- CO3: To enable the students get familiarized with Mutual Funds
- CO4: To acquaint the students in respect to the investment decisions related to Derivative market
- CO5: To understand the dynamics of capital market, money market and to learn the importance to be updated on the developments of the banking sector and practice the same.
- CO6: Understanding the working of development financial institutions in the development of rural sector, farmers, industries and financial market.

# **MODULE I: DEVELOPMENT BANKING(10 hours)**

Concept of Development Banking as distinguished from Commercial Banking – Evolution of Development Banking – Growth and Structure of Development Banking Institutions in India – Role of Development Banks in the achievement of national Objectives – Concept of Universal Banking. NABARD – NHB – EXIM Bank – SIDBI – New Developmental Financial Institutions in India

#### **MODULE II: FINANCIAL SERVICES (15 hours)**

Leasing- meaning and types, procedure, evaluation. Hire Purchasing – Concept and characteristics, evaluation of hire purchasing from hirer and hire's angle. Forfeiting – meaning

and characteristics, advantages, types and mechanism. Factoring –meaning, advantages – Bills discounting- creation of a bill of exchange, types and advantages- bill market schemes.

# **MODULE III: MERCHANT BANKING (10 hours)**

Nature of services, structure of merchant banking firms-financial markets: capital markets-money market-forex markets-linkages between the markets- Mutual Funds- Concepts - advantages-evolution-role-types of MF – Fund structure and constituents: legal structure-market constituents-registrars-bankers-custodians-depositories-fund mergers and take over – Legal and regulatory environment: role of regulators – SEBI – RBI - MF, stock exchanges, registrars of companies-rights of obligations of the investors.

# **MODULE IV: RURAL BANKING (15 hours)**

Role of Commercial banks in rural credit – Village Adoption – Strategies and Objectives–Priority Sector Lending- Agricultural Development branches - Regional Rural Banks – Lead Bank Scheme – Service Area Approach - Credit Cooperatives - Agricultural and Rural Development Banks-Financial Inclusion and Deepening –Role of RBI and Other Banks in Promoting Financial Inclusion - Micro Finance - Self – Help Groups.

- 1. Agarwal, O P. (2014). Universal Banking in India and Abroad, Himalaya Publishing House, New Delhi.
- 2. Avadhani. (2009). Fundamentals of Money and Banking, Himalaya Publishing House, New Delhi.
- 3. Bhole, I.M. (2017). Financial Institutions and Markets, McGraw Hill Education, New Delhi.
- 4. Brand, Michael. (2019). Money, Banking, Financial Markets and Institutions, Cengage Learning, New Delhi.
- 5. Deepak B. Phatak, Sameer Cochar and R Chandrashekar. ( 2009). Financial Inclusion, Academic Foundation.
- 6. Desai, Vasant, (2015). Development Banking and Financial Intermediaries, Himalaya Publishing House, New Delhi.
- 7. Desai, Vasant, (2018). Rural Development in India, Himalaya Publishing House, New Delhi.
- 8. Gomez, Clifford. (2011). Financial Markets, Institutions and Services, PHI Learning Pvt Ltd, New Delhi.
- 9. Gordon and Natarajan,.( 2015). Financial Markets and Services, Himalaya Publishing House, New Delhi.
- 10. Gurusamy, S. (2010). Financial Markets and Institutions, Tata McGraw Hill, New Delhi.
- 11. ICFAI: Retail Banking

- 12. Jha, Mithish Kumar. (2012). Microfinance and Rural Development, Concept Publishing House, New Delhi.
- 13. John C. Hull and Sankarshan Bas. (2016). Options, Futures and other Derivatives, Pearson
- 14. Khan, M.Y (2019). Financial Services, Tata McGraw Hill, New Delhi.
- 15. Machiraju, H.R. (2018). Indian Financial System, Vikas Publishing House, New Delhi.
- 16. Mithani and Gordan. (2014). Banking and Financial System, Himalaya Publishing House, New Delhi.
- 17. Phatak, Bharati. (2018). Indian Financial System, Pearson Education, India
- 27. Prasad, K. Nirmala. (2018). Banking Theory and Practice, Himalaya Publishing House, Delhi.
- 18. Prasad, K. Nirnmala and J. Chandrahas (2004). Banking and Financial System, Himalaya Publishing House, New Delhi.
- 19. Sohani, A.K. (2007). Financial Inclusion: Perspectives and Country Experiences, ICFAI Press, Hyderbad.
- 20. Somanath, V S. (2009). Microfinance Redifining the Future, Excel Books, New Delhi.
- 21. Thingalaya, N.K. (2013). Rural Banking, Sage Publications, New Delhi.
- 22. Yunus, Mohammed (2002). Banker to the Poor: Micro Lending and the Battle Against World Poverty, Public Affairs.

### PS 116.3 ENERGY ECONOMICS (50 hours)

## **COURSE OBJECTIVES**

- ➤ This course examines environmental and energy issues from an intermediate microeconomics perspective. It discusses aspects of local, national, and global markets for oil, natural gas, coal, electricity, nuclear power, and renewable energy; and examines public policies affecting energy markets
- ➤ Develop and use tools of economic analysis to understand the main contemporary policy issues related to energy.

#### **COURSE OUTCOME**

- CO 1: Understand basic economic concepts that underlay energy production and end use.
- CO 2: Describe the sources of energy and the scarcity associate with it.
- CO 3: Able to identify how local, regional, and global institutions affect energy markets and prices.
- CO 4: Apply the uses of energy resources efficiently in alternative uses.
- CO 5: Become familiar with historical and contemporary public policy issues related to energy globally.
- CO 6: Be able to apply this knowledge to analysis of specific energy industries and policy questions.

# MODULE-I: ENERGY, ECONOMY AND ENVIRONMENT (10 hours)

Introduction and Background-Basic Concepts: Definition of Energy, Measuring Energy, Energy Conversion and Efficiency. Energy end uses, history of energy use, energy intensity of GDP. Energy Consumption & Economic Growth & Human Development. Impact on Environment.

### MODULE-II: DEMAND FOR AND SUPPLY OFENERGY (15 hours)

Energy Demand- Demand and Price Formation in Competitive Markets. Short run and long run price and income elasticities- Introduction to multivariate regression analysis. Review of the Basics of Supply -Energy supply and the economics of depletable resources. Energy efficiency policies -renewable energy policies. Energy sources, cost of production. Discounting, "levelized" costs of renewable resources, depletion of non-renewable resources.

# MODULE- III: REGULATION AND COMPETITION IN ENERGY MARKETS(10 hours)

World oil markets and energy security- Types of Markets: Spot Markets, Futures Markets, Forward Markets -World energy consumption and tradenatural gas price regulation, deregulation, competition and markets. Energy transportation and storage.

# **MODULE - IV: ENERGY EXTERNALITIES, POLLUTION AND POLICIES (15 hours)**

Energy and climate change- electricity – coal- nuclear power- natural gas- oil- pollution. Internalizing environmental externalities with a focus on CO2 emissions cap and trade mechanisms. Energy, resources and economic rent- leasing and taxation of energy resources, government revenues.

- 1. Bhattacharyya, Subhes C. (2019). Energy Economics: Concepts, Issues, Markets and Governance, Springer.
- 2. Dahl, Carol A.(2004). International Energy Markets: Understanding Pricing, Policies, and Profit. Tulsa, Pennwell Press.
- 3. De, Kumar Baron. (2014). Energy Economics, Vrinda Publications Pvt Ltd, Delhi.
- 4. Euston Quah & Suman Kumari Sharma. (2019). Economics Of Natural Disasters :Environmental Energy Economics, World Scientific, New Jersey.
- 5. Fouquet , Roger. (2013). Handbook on Energy and Climate Change, Edward Elgar Publishing Inc, USA.
- 6. Niemeyer, Victor E. (2019). The Effect of Energy Supply on Economic Growth ,Routledge Publications, New York.
- 7. Sathyajith, Mathew. (2014). Wind Energy: Fundamentals, Resource Analysis and Economics, springer.
- 8. Schwarz, Peter M. (2018). Energy Economics, Routledge Publications, New York.

- 9. Sharma, Ashok. (2019). India's Pursuit of Energy Security: Domestic Measures, Foreign Policy and Geopolitics, Sage Publications, New Delhi.
- 10. Skea, Jim et al. (2019). Energy Innovation for the Twenty-First Century, Edward Elgar Publishing Inc, USA.
- 11. Stavins. Robert N.(2003). Experience with Market-Based Environmental Policy Instruments. In Handbook of Environmental Economics, Volume I, eds. Karl-GöranMäler and Jeffrey Vincent, Chapter 9, pp. 355-435. Amsterdam: Elsevier Science.
- 12. Tyner, W.E. (2011). Energy Resources and Economic Development in India, MarinusNijhoff Social Sciences Division, USA.
- 13. Zweifel, Peter et al.(2017). Energy Economics: Theory and Applications 1st ed.Springer.

# PO 117.3 CONTEMPORARY INDIAN ECONOMY (40 hours)

### **COURSE OBJECTIVES:**

- ➤ Have a general understanding of the corporate, geo-political, cultural and social factors that define the Indian economic, cultural and technological landscape at the present time.
- > To provide an insight into the past, present and future functioning of the Indian economy and strengthen their analytical capability.

## **COURSE OUTCOME**

- CO 1: Students are able to have a critical understanding of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy
- CO 2: Understand the formulation of economic policies and its analysis.
- CO 3: Able to comprehend the broad contours like the status, issues and policies of the Indian economy at the aggregate as well as sectoral levels.
- CO 4: Describe the experiences in the pre as well as post reform years, keeping the colonial experience at the background.
- CO 5: Have a general understanding of the corporate, geo-political, cultural and social factors that define the Indian economic, cultural and technological landscape at the present time.
- CO 6: Critical understanding of the global policies influencing Indian economy.

# MODULE I: STRUCTURE OF THE ECONOMY AND HUMAN RESOURCES (15 hours)

Changing Structural Characteristics of Indian Economy - Concept of Sustainable Development and Inclusive Growth. Broad features of Indian population; demographic Dividend- Rural-urban migration; Urbanization and civic amenities; National Population Policy, Poverty and Inequality, Trends in Employment and Unemployment in the post-reform period, Recent Employment Guarantee Schemes.

## **MODULE II: AGRICULTURE AND INDUSTRY (15 hours)**

Nature of Indian Agriculture — Land Reforms in India; Technological change in agriculture — Agricultural Pricing Policy, Agricultural Finance and Policy; Agricultural Marketing; Issues in Food Security- Industrial Policy - Problem of Sick Units in India; Privatisation and Disinvestment Debate; MNC's, MSMEs, Labour Unrest and Exit Policy.

# MODULE III: GLOBALISATION OF INDIAN ECONOMY (10 hours)

W.T.O and the Indian Economy– FDI ,Trade Sector Reforms, Finances of Central and State Governments; Parallel Economy; Fiscal Sector Reforms in India – Goods and Services Tax - India's Balance of Payments Problem- Need for and issues in good governance.

- 1. Agarwal, M.K and A.N Agarwal. (2019). Indian Economy: Problems of Development and Planning, 40<sup>th</sup> Ed. WishwaPrakashan, New Delhi.
- 2. Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999). India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, Delhi.
- 3. Bardhan, P.K. (9th Edition) (1999). The Political Economy of Development in India, Oxford University Press, New Delhi.
- 4. Brahmananda, P.R. and V.R. Panchmukhi (2001). Development Experience in the Indian Economy: Inter-State Perspectives, (Eds.) Bookwell, Delhi.
- 5. P.K. Gupta & Man Mohan. (2013). Problems in Operations Research, Sultan Chand & Sons New Delhi.
- 6. Dantwala, M.L. (1996). Dilemmas of Growth: The Indian Experience, Sage Publications, New Delhi.

- 7. Datt, R. (Ed.) (2001). Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- 8. Dhar P.K (2019). Indian Economy Its Growing Dimensions 23rd Ed, New Delhi, Kalyani Publishers,
- 9. Dhingra, I. C. (2019). The Indian Economy: Environment and Policy, Sulthan Chand and Sons, Delhi.
- 10. Goyal, Ashima. (2019). A Concise Handbook of the Indian Economy in the 21st Century, OUP, India.
- 11. Jain, A.K. (1986). Economic Planning in India, Ashish Publishing House, New Delhi.
- 12. Jalan, B. (1996). India's Economic Policy Preparing for the Twenty First Century, Viking, New Delhi.
- 13. Kapila , Uma: (2019). Indian Economy: Performance and Policies, 16<sup>th</sup> Ed, New Delhi, Academic Foundation.
- 14. Kapila, Uma. (2019). Indian Economy Since Independence: A Comprehensive and Critical Analysis of India's Economy, 1947-2019, 30th ed. Academic Foundation.
- 15. Mahajan, Ashwani and GauravDutt. (2019). Indian Economy, New Delhi, 71st Ed. S. Chand & Company Ltd,
- 16. Misra, S.K. and V.K. Puri . (2019). Indian Economy 33rd Ed., New Delhi, Himalaya Publishing House,
- 17. Ramesh Singh (2019). Indian Economy, McGraw Hill Education; Eighth edition, New Delhi.
- 18. Rangarajan, C. (2004). Select Essays on Indian Economy. Vol.1&2. Academic Foundation, New Delhi.

Also RBI Annual Report; Economic Surveys; EX-IM Policy; Important Committee Reports, Journals like Economic and Political Weekly, Yojana, Industrial economics, & business dailies like Business line, Economic Times etc.

# IV SEMESTER PH 111.4 PUBLIC ECONOMICS (60 hours)

#### **COURSE OBJECTIVES:**

- > This course contains a comprehensive economic analysis of the public sector which enables the student to understand and analyse public policies and problems.
- > This course will provide a perceptive vision of fiscal institutions with a careful study of the issues which underline budgetary policies in general and Indian experience in particular.

#### **COURSE OUTCOME**

- CO 1: Perform economic policy analysis by applying microeconomic principles and theories
- CO 2: Theoretical and practical expertise on a selected field of Public Economics and competence in applying advanced economic theory and methods in investigating issues concerning Public Economics.

CO 3: Use models to describe economic phenomena; analyze and make predictions about the impact of government intervention and changing market conditions on consumer and producer behavior and well-being.

CO 4: Employ economic theory, broadly defined, to provide an original analysis of current or historical events, to analyze social problems, and evaluate alternative public policy choices.

CO 5: Be aware of the complex nature of public finance reform – the political dimension, change management, capacity development, the constraining dimension of functional linkage. Be able to question the nature of relevance of some popularly promoted public finance reforms – such as performance budgeting, budgeting by objectives, activity-based budgeting.

CO 6: Understand the idea of sequencing in public finance reform and improvement, and that any sequencing must be adapted to the situation in any country; identify why sequencing is important because "things" take time and "things" should take time.

#### **MODULE I: INTRODUCTION**

(15 hours)

Role of Government in Organised Society-Behavioural analysis and the growth of government-Efficiency and social justice- the choice between efficiency and equity. Allocation function, distribution function and stabilization function -Wiseman-Peacock hypothesis - An Efficient Economy with Private and Public Goods - Local Public Goods, Voting Models of Public Goods: Black Theorem- Down's Theory- Arrows Theorem- Logrolling.

# MODULE II: MARKET POSSIBILITIES AND EVALUATION OF PUBLIC ECONOMIC POLICIES (10 hours)

Models for Public Sector Analysis: General Equilibrium Model, Pareto Optimality and Perfect Competition, Second Best Theory and Public Goods. Market Failures, Externalities and Public Policies: Market Failures, Externalities and Efficiency, Public Policies to Internalize the Externalities. Global Externalities and International Agreements.

### **MODULE III: CHOICE OF TAXATION (10 hours)**

Theories of Taxation: Tax Neutrality, Direct versus Indirect Taxes and Equity, Buoyancy and Elasticity Estimates of Taxation, Tax Efforts. Theory of Optimal Taxation -The Ramsey Rule – LafferCurve.Taxable Capacity.Shifting and Incidence of Taxation-Musgrave's Approach-Measure of Incidence-Dynamic Incidence.Tax Cascading – Multiplicity of Taxes -GST in India-Requirements of a Good Tax System.

# MODULE IV: FISCAL POLICIES AND INCOME DISTRIBUTION (10 hours)

Budgeting Policies - Zero-Based Budgeting, Program Budgeting. Theory of Fiscal Policy: Fiscal Policy with Special Reference to Under-developed Countries, Federal-Fiscal Relation in India. The Welfare Gains from Multiple Fiscal Units; the Decentralization Theorem. Income (re) Distribution: Overview of Income Distribution, Redistributive Impact of the Budget, Fiscal Measures and the 'less well off', Limits to redistribution. Sustainability of Intergenerational Equilibrium.

#### MODULE V: EVALUATION OF PUBLIC INVESTMENT PROJECTS (15 HOURS)

Project Evaluation – Criteria for Choice of Public Investment Projects - Cost-Benefit Analysis, Measuring Costs, Measuring Benefits, Market Price, Shadow Prices, Social Discounting and Cost of Capital. Cost benefit analysis and externalities- Real versus pecuniary impact. Marginal Cost of Public Funds and Policy Decisions.

#### **REFERENCES**

- 1. Ali Abbas S, Alex Pienkowski, Kenneth Rogoff (2019), Sovereign Debt: A Guide for Economists and Practitioners, Oxford University Press,
- 2. Ankit Mittal (2020). GST and Indian Economy. Literature House, Mansarovar, Jaipur.
- 3. Babu Ram Shrestha, (2012). Financial Accountability in Public Expenditure, Lambert Academic Publishing.
- 4. Cullis John & Jones Philip (2010). Public Finance & Public Choice Analytical Perspectives, Oxford University Press, New York.
- 5. Daniel Wakefield, (2015). Public Expenditure Apart from Taxation: Or Remarks on the Inadequate and Excessive Pay of Public Servants, Forgotten Books, United States.
- 6. Diane Coyle (2020). Markets, State, and People: Economics for Public Policy, Princeton University Press.
- 7. Eugenie L. Birch and Susan M. Wachter, (2011). Global Urbanization. University of Pennsylvania Press.
- 8. GayithriKarnam (2018). Public Budgeting in India: Principles and Practices, Springer.
- 9. Gene Park, (2011). Spending without Taxation: FILP and the Politics of Public Finance in Japan, Stanford University Press, Stanford, CA.
- 10. Girard Miller (2019). Enlightened Public Finance: Fiscal Literacy for Democrats, Independents, Millennials and Collegians, Book Baby.
- 11. Hillman L Arye (2019). Public Finance and Public Policy A Political Economy Perspective on the Responsibilities and Limitations of Government, Cambridge University Press, New York.
- 12. Jha, Raghbendra (1987). Moden Theory of Public Finance, Wiley Eastern Limited, Delhi.
- 13. John E Anderson, (2011). Public Finance, Cengage Learning, Inc, Florence, KY, United States.
- 14. Lekhi R K & Joginder Singh (2016). Public Finance, Kalyani Publishers, New Delhi.
- 15. Louis Kaplow (2010). The Theory of Taxation and Public Economics, Princeton University Press.
- 16. Musgrave, Richard A. (1959). The Theory of Public Finance, Tata McGraw Hill, N.Y.
- 17. Narayana R. Kocherlakota, (2010). The New Dynamic Public Finance, Princeton University Press.
- 18. Reddy Y.V., Reddy G.R. (2018). Indian Fiscal Federalism, Oxford University Press.
- 19. Samuel Bowles, Steven N. Durlauf, Karla Hoff (2011). Poverty Traps, Princeton University Press.
- 20. Srivastav, D.K. (ed.) (2000). Fiscal Federalism in India, Har-Anand Publications Ltd., New Delhi.
- 21. Stiglitz, J.E. (1986). Economic of Public Sector, Norton, New York.
- 22. Yescombe. E R and Edward Farquharson (2018). Public-Private Partnerships for Infrastructure: Principles of Policy and Finance, Butterworth-Heinemann.

# PH 112.4: INDIAN ECONOMY (60 hours)

#### **COURSE OBJECTIVES:**

- > To acquaint the students with the performance of different sectors of the Indian economy and the policy framework governing them.
- > To provide them an insight into the past, present and future functioning of the Indian economy and strengthen their analytical capability.
- ➤ To familiarize the students on Indian Economics as it is a compulsory paper / section in most of the competitive and entrance examinations.

#### **COURSE OUTCOME**

CO 1: Students are able to have a critical understanding of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy

- CO 2: Understand the formulation of economic policies and its analysis.
- CO 3: Able to comprehend the broad contours like the status, issues and policies of the Indian economy at the aggregate as well as sectoral levels.
- CO 4: Describe the experiences in the pre as well as post reform years, keeping the colonial experience at the background.
- CO 5: Have a general understanding of the corporate, geo-political, cultural and social factors that define the Indian economic, cultural and technological landscape at the present time.
- CO 6: Critical understanding of the global policies influencing Indian economy.

#### **MODULE I: STRUCTURE OF THE ECONOMY (10 hours)**

Changing Structural Characteristics of Indian Economy - Measurement of growth of National Income and per capita income. Broad features of Indian population - National Population Policy. Poverty and Inequality, Trends in Employment in the post-reform period, recent Employment Guarantee Schemes and programmes to enhance employment.

# **MODULE II: INDIAN AGRICULTURE AND INDUSTRY (15 hours)**

Nature of Indian Agriculture — Land Reforms in India; Technological change in agriculture — Agricultural Pricing Policy, Agricultural Finance and Policy; Agricultural Marketing; Agrarian crisis- Issues in Food Security- Second Green Revolution. Industrial Policy - Public Sector Enterprises and their Performance; Problem of Sick Units in India; Privatisation and Disinvestment; MSMEs, Labour Unrest and Exit Policy.

#### **MODULE III: BANKING AND FINANCIAL INCLUSION (10 hours)**

Role of RBI and other banks in promoting financial inclusion- Priority sector lending- Regional Rural Banks- Credit Cooperatives. Microfinance: concept, progress and problem. Micro finance institutions and their regulations- Self help groups: formation, functioning and performance.

#### **MODULE IV: TRADE AND PUBLIC FINANCE (15 hours)**

India's Balance of Payments – FDI ,Trade Sector Reforms, GST, Finances of Central and State Governments; Parallel Economy; Fiscal Sector Reforms in India.

#### MODULE V: PLANNING AND INSTITUTIONAL REFORMS (10 hours)

Planning in India : An Overview- , NITI AYOG. Need for and Issues in Good Governance - Globalisation of Indian economy; SEZs - W.T.O and the Indian Economy.

- 1. Agarwal, M.K and A.N Agarwal. (2019). Indian Economy: Problems of Development and Planning, 40<sup>th</sup> Ed. WishwaPrakashan, New Delhi.
- 2. Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999). India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, Delhi.
- 3. Bardhan, P.K. (9th Edition) (1999). The Political Economy of Development in India, Oxford University Press, New Delhi.

- 4. Brahmananda, P.R. and V.R. Panchmukhi (2001). Development Experience in the Indian Economy: Inter-State Perspectives, (Eds.) Bookwell, Delhi.
- 5. P.K. Gupta & Man Mohan. (2013). Problems in Operations Research, Sultan Chand & Sons New Delhi.
- 6. Dantwala, M.L. (1996). Dilemmas of Growth: The Indian Experience, Sage Publications, New Delhi.
- 7. Datt, R. (Ed.) (2001). Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- 8. Dhar P.K (2019). Indian Economy Its Growing Dimensions 23rd Ed, New Delhi, Kalyani Publishers,
- 9. Dhingra, I. C. (2019). The Indian Economy: Environment and Policy, Sulthan Chand and Sons, Delhi
- 10. Goyal, Ashima. (2019). A Concise Handbook of the Indian Economy in the 21st Century, OUP, India.
- 11. Jain, A.K. (1986). Economic Planning in India, Ashish Publishing House, New Delhi.
- 12. Jalan, B. (1996). India's Economic Policy Preparing for the Twenty First Century, Viking, New Delhi.
- 13. Kapila , Uma: (2019). Indian Economy: Performance and Policies, 16<sup>th</sup> Ed, New Delhi, Academic Foundation.
- 14. Kapila, Uma. (2019). Indian Economy Since Independence: A Comprehensive and Critical Analysis of India's Economy, 1947-2019, 30th ed. Academic Foundation.
- 15. Mahajan, Ashwani and GauravDutt. (2019). Indian Economy, New Delhi, 71st Ed. S. Chand & Company Ltd,
- 16. Misra, S.K. and V.K. Puri . (2019). Indian Economy 33rd Ed., New Delhi, Himalaya Publishing House,
- 17. Ramesh Singh (2019). Indian Economy, McGraw Hill Education; Eighth edition, New Delhi.
- 18. Rangarajan, C. (2004). Select Essays on Indian Economy. Vol.1&2. Academic Foundation, New Delhi.

Also RBI Annual Report; Economic Surveys; EX-IM Policy; Important Committee Reports, Journals like Economic and Political Weekly, Yojana, Industrial economics, & business dailies like Business line, Economic Times etc.

#### PS 114.4 ECONOMICS OF INSURANCE (50 hours)

# **COURSE OBJECTIVES:**

- > To provide a comprehensive view of the subject of Insurance sector to students of Financial Economics in order to make them understand the role of the insurance sector in mobilizing a country's savings for channelizing them into capital formation and economic development.
- > Develop the analytic al skills necessary to make optimal decisions relatively to insurance products and alternative strategies

#### **COURSE OUTCOME:**

- CO1: To understand the insurance terminology and contract features.
- CO2- To understand the concept of insurance and its evolution

CO3: To evaluate client insurance and risk management needs.

CO4- To understand the different needs of customers on insurance products

CO5: To Identify and explain features of private and public insurance available to meet each identified need.

CO6: To understand the business operations and market condition in Insurance Companies

### **MODULE 1: RISK AND RISK MANAGEMENT (12 hours)**

Economic security; Human quest for economic security through time; Exposure to losses; Risk-Meaning, Types, Fundamentals of uncertainty risk, Perils and Hazards. Risk Management – objectives, Process, Essentials of risk management — Risk Analysis, Risk assessment; Risk control, risk financing and risk transfer. Expected utility and decision making under uncertainty.

# **MODULE II: INTRODUCTION TO INSURANCE BUSINESS(12 hours)**

Definition of insurance - Characteristics of insurance - Principles of contract of insurance; Demand for and supply of insurance; Economic and legal perspectives; Classification of Insurance. Social vs. private insurance; Role of insurance in economic development.; Set-up and management of insurance companies-agents and underwriters. Reinsurance, Fundamentals, Types of reinsures. Scope and Limitation of Indian Agriculture Insurance.

# MODULE III: ESSENTIALS OF GENERAL AND LIFE INSURANCE(12 hours)

General insurance – Meaning, Fundamentals, Types – Fire insurance ,Marine insurance , Motor insurance,Personal accident insurance,Miscellaneous insurance; Importance of general insurance. Life insurance- Fundamentals, Functions, Plans of life insurance; Legal aspects of life insurance; Provisions of policies; Principles of underwriting of life; Group insurance and superannuation (pension) schemes.

# MODULE IV: PRICING OF INSURANCE PRODUCTS AND REGULATION OF INSURANCE (14 hours)

Meaning of rate/premium, Objectives of rate making. Basic methods of rate making in General Insurance – Judgment rating – Class rating – Merit rating. Basic methods of rate making – Net single premium – Net annual level premium – Premium concepts- Level premium – Basic premium – Office yearly premium – Premium tables – Tabular premium – Rebate – Extra premium – Rider premium.; Valuation and distribution of surplus; – Regulation of insurance; Theories of regulation; Insurance regulation in India; Insurance Regulation and Development Authority (IRDA).

- 1. Arthur C. and C. William Jr (2001). Risk Management and Insurance Tata McGraw-Hill.
- 2. Bhole, L.M. (2009), The Indian Financial System, Tata McGraw Hill(5th edition), New Delhi.
- 3. Bickelhaupt, D.L. (1992). General Insurance, Irwin Inc., Burr Ridge, Ill.
- 4. Black, K. Jr. and H.D. Skipper Jr. (2015). Life Insurance Lucretian, LLC publishers (15<sup>th</sup>ed) New Jerssey.

- 5. Finsinger, J. and M.V. Pauly (Eds.) (1986). The Economics of Insurance Regulation : A Cross National Study, Macmillan, London.
- 6. G.Kotreshwar(2014). Risk Management, Insurance and Derivatives (2<sup>nd</sup> edition), Himalaya Publishing House.
- 7. Gupta P.K (2016). Insurance and Risk Management, (2nded) Himalya Publishing House.
- 8. George Rejda.(2016). Principles of Risk Management and Insurance Global Edition. 12th Edition.
- 9. Harold.D.Skipper (2008). Risk Management and Insurance, Wiley.
- 10. Harrington and Meshaces (2004). Risk Management and Insurance (TMH) 2e.
- 11. Head, G.L. and S. Horn II (1991). Essentials of Risk Management, Volume I, Insurance Institute of America, Malvern, Pa.
- 12. ICFAI University Press: Bank Assurance-An Introduction.
- 13. John.R. Ingrisano (2000). The Insurance Dictionary, S.Chand& Co.
- 14. M.N.Mishra (2001). Insurance principles & practice, S. Chand.
- 15. Marshall Wilson III Reavis (2012). Insurance: Concepts & Coverage, frisen press Canada.
- 16. Mark .S.Dorfman(2007). Introduction to Risk Management and Insurance, PHI.
- 17. Mishra M.N (2014). Principles and Practices of Insurance S. Chand and Co
- 18. N.Premavathy (2014). Principles and practice of insurance, Sri visnu publication.
- 19. Nalini P RavaTripathy and PrabirPal (2008). Insurance Theory and Practice, PHI.
- 20. Neelam .C.Gulati (2007). Principles of Insurance Management, Excel Books.
- 21. Panda G.S (2004). Principles and Practices of Insurance Kalyani Publications.
- 22. Scott E. Harrington Gregory R. Niehaus (2007). Risk Management & Insurance Tata McGraw-Hill.
- 23. Scott. E. Harrington (2007). Risk Management and Insurance, TMH.
- 24. Skipper, Jr., H.D. (Ed.) (1998). International Risk and Insurance : An Environmental Managerial Approach, Irwin McGraw Hill, Boston.
- 25. Stephen Diacon (2006). A Guide to Insurance Management Palgrave Macmillan.
- 26. Tacchino, K.B. and D.A. Littell (2013). Planning for Retirement Needs, The American College, Bryn Mawr, Pa.

# PS 115. 4: OPERATIONS RESEARCH FOR ECONOMIC ANALYSIS (50 hours)

# **COURSE OBJECTIVES:**

> This course aims at developing an understanding of the application of operations research models and techniques in diverse fields in making effective decision making.

# **COURSE OUTCOME**

CO 1: Able to understand the usefulness of operations research in solving economic problems.

- CO 2: Describe the various techniques of operations research.
- CO 3: Students are equipped to use the tools like transportation table, assignment to analyse and solve problems relating to cost, marketing, production etc.
- CO 4: Be able to understand the characteristics of different types of decision-making environments and the appropriate decision making approaches and tools to be used in each type.
- CO 5: Able to prioritise the specific use of the techniques of operations research.
- CO 6: Be able to design new simple models.

# **MODULE - 1: INTRODUCTION TO OPERATIONS RESEARCH (10 hours)**

Operations Research: Meaning and significance of operation research – Evolution of operations research - Steps in designing operation research studies-Scope of operations research- Phases of Operations Research- Operations research models- Limitations of Operations Research.

# MODULE-II: TRANSPORTATION AND ASSIGNMENT PROBLEM (10 hours)

General structure of the problem transportation tables - solution of transportation problem - Initial Basic Feasible Solution- Moving towards optimality. Assignment problems: Hungarian Method Algorithm- Routing Problem-Travelling Salesman Problem

# **MODULE - III: LINEAR PROGRAMMING (15 hours)**

Fundamentals of LP models- Formulation of LPP - Applications, Advantages, Limitations - Solutions of LP models- Graphical Methods to Solve Linear Programming Problems - Maximisation of Objective Functions- Minimisation of Objective Functions- Simplex method with two variables.

#### **MODULE IV: DECISION MAKING AND GAME THEORY (15 hours)**

Basic concepts - decision rule - decision making under certainty, under risk, under uncertainly - Harwicz  $\infty$  criterion, expected opportunity loss - expected value of perfect information (EVPI) Bayesian Decision Theory - Decision tree. Game Theory: Meaning - zero -sum games - two person zero sum games - pay-off matrix - maximin and minimax principle - saddle point - mixed strategies - optimal mixed strategies and the saddle point theorem - graphical solution of 2 x n and m x 2 games - dominance property - reducing the game problem to L. P.P.

- 1. Baumol, William J. (1999). Economic Theory and Operations Analysis--Prentice Hall of India, New Delhi,
- 2. Gupta P.K., Gupta S.P.(2018). Quantitative Techniques & Operations Research, Sulthan Chand & Sons, Delhi.

- 3. KanthiSwaroop, Gupta and Man Mohan, (2019). Operations Research, Sultan Chand & Sons
- 4. Kapoor, V. K. (2019). Operations Research, Sulthan Chand & Sons, Delhi.
- 5. Kothari, C.R. (2018). An Introduction to Operational Research, 3<sup>rd</sup> Ed., Vikas Publications, New Delhi.
- 6. Lieberman and Frederick Hillier. (2020). Introduction to Operations Research, 10th edition McGraw Hill India.
- 7. P.K. Gupta & Man Mohan. (2013). Problems in Operations Research , Sultan Chand & Sons New Delhi.
- 8. P.R Vittal&V.Malini. (2012). Operations Research MarghamPublications ,Chennai.
- 9. Paneerselvam, R. (2019). Operations Research, Prentice Hall India, Delhi.
- 10. Pc Tulsian and Vishal Pandey (2016). Quantitative Techniques: Theory and Problems, Pearson India Education ServocesPvt Ltd, UP.
- 11. Rardin, Ronald L.(2018). Optimisation in Operations Research, 2nd Ed, Pearson India.
- 12. Sharma, K.R(2012). Quantitative Techniques and Operation Research, Kalyani Publication, Ludhiana.
- 13. Sharma SC, et al.(2011). Quantitative Techniques for Managerial Decision Making, Wiley Western Ltd, New Delhi.
- 14. Sharma, J.K.: (2012). Operations Research Theory and Applications, Macmillan India Ltd, New Delhi.
- 15. Taha, Hamdy, A. (2019). Operations Research: An Introduction, 10th edition Pearson India.
- 16. Wagner, H.M. (1999). Principles of Operations Research, Prentice Hall India, Delhi.
- 17. Winston, Wayne L (2008). Operations Research, Cengage Learning, New Delhi.

# PS 116.4 INTERNATIONAL FINANCE (50 hours)

#### **COURSE OBJECTIVES:**

- ➤ To provide an understanding about the terms and concepts in the field of international finance and institutions.
- > Students will be able to understand the decisions taken by economic agents and their interaction in the markets and helps to analyse economic and market indicators, when taking decisions within the organisation.

#### **COURSE OUTCOME**

- CO 1: Familiarity with financial concepts and analytical techniques and introduce their application to international transactions.
- CO 2: Ability to relate concepts and knowledge in different areas which support the learner to solve problems and help to take decisions in complex as well as changing environments.
- CO 3: Provide an in-depth understanding of the process and techniques used to make international investment decisions.
- CO 4: Ability to analyse the causes of historical exchange rate movements and apply the models to solve the wide range of current issues in international finance.
- CO 5: Review the problems of dealing in foreign currency and the advantages and disadvantages of overseas funding.
- CO 6: Obtain a good working knowledge of the crucial questions adjacent to international capital flows, FDI, foreign exchange rate determination and exposure management, international capital markets and institutions, and develop an understanding of the working of the financial management of a multinational firm.

# MODULE I: INTRODUCTION TO INTERNATIONAL FINANCIAL SYSTEM (10 hours)

Meaning and Scope – Significance of International Finance – Functions of international finance – Emerging Challenges - Recent changes in global financial markets - Bretton wood conference and afterwards, Managed flexibility-fixed vs. Floating exchange rate regimes.

# MODULE II: INTERNATIONAL FINANCIAL INSTITUTIONS (15 hours)

Creation of euro dollar-emergence of global currency markets-size and structure of Europe and Asian Markets-transaction regulatory systems - domestic, foreign and euro currency markets for lending and investment- forex risk-interest rate parity- interest rate risk - cover deals-using global markets for hedging-arbitrage-speculation-cost comparisons.

# MODULE III: INTERNATIONAL FINANCIAL MARKETS AND INSTRUMENTS (10 hours)

GDRs, ADRs, IDRs, Euro bonds, Euro loans, Repos, CPs, Derivatives, Floating rate instruments, Loan syndication and euro deposits, IMF, IBRD, Development banks, International Banking: Meaning and Functions – Interbank Communication- Account Relationships – VOSTRO, LORO, NOSTRO.

# MODULE IV: FOREIGN EXCHANGE MARKET (15 hours)

Foreign exchange market-meaning, Characteristics and participants in foreign exchange market-Foreign exchange trading- - Foreign exchange rate - nominal, real and effective- Purchasing Power Parity Theory - Quotation of Exchange Rate- spot, forward and cross rates - Impact of change in exchange rate - TT and Bill Buying rates and selling rates. Foreign Direct Investment -Types -International capital budgeting: concepts - problems - risk evaluation - impact on value.

- 1. Apte P G, (2017). International Financial Management, McGraw Hill Education; 7 edition, New Delhi.
- 2. Avadhani, V.A, (2014). International Finance: Theory and Practice, Himalaya Publishing House.
- 3. Cheol S Eun and Bruce G Resnick, (2014). International Financial Management (7<sup>th</sup>ed), Tata McGraw Hill, New Delhi.
- 4. Frankel, Jeffrey and George Saravelos (2012). Are Leading Indicators Useful for Assessing Country Vulnerability? Evidence from the 2008-09 Global Financial Crisis, in Journal of International Economics 87, no.2, July, pp.216-31.
- 5. Goldstein, Morris, Graciela L. Kaminsky, and Carmen M. Reinhart (2000) Assessing Financial Vulnerability: An Early Warning System for Emerging Markets, Institute for International Economics: Washington, DC.
- 6. Henning C N, Peggot, W & Scott W H, International Financial Management, (2008). Mcgraw Hill Int. ed., New York
- 7. Jain P K, JosettePeyrad, Surendra S Yadav, (2008). International Financial Management, Macmillan New Delhi.
- 8. Jeff Madura, (2012). International Finance Management, (11thed), South-Western, CENGAGE Learning USA.
- 9. Jose Antonio Ocampo, Jan Kregel and Stephany Griffith Jones, International Finance and Development, (2017). Orient Longman, New York.
- 10. Joshi, Rakesh Mohan, (2010). International Business, Oxford University Press (4<sup>th</sup>ed), New Delhi.
- 11. Krugman, Paul R; Obstfeld, Maurice; Melitz, Marc, (2018). International Finance: Theory and Policy, Pearson Education.
- 12. M. Mofett, A. Stonehill, and D. Eiteman (2018). Fundamentals of Multinational Finance, by, published by Pearson, 15<sup>th</sup> Edition.
- 13. Maurice, Levi, International Finance (2009). Routledge; 1 edition, New York.
- 14. Obstfeld, Maurice (2012). Financial Flows, Financial Crises, and Global Imbalances (January) Journal of International Money and Finance.
- 15. Pilbeam, Keith, (2014). International Finance (4th edition), Red Globe Press.
- 16. Rajiv Srivastava (2014). International Finance, Oxford University Press.
- 17. Reinhart, Carmen M and Kenneth S Rogoff (2011). From Financial Crash to Debt Crisis. American Economic Review, Vol. 101, No. 5, August, 2011, 1676-1706.
- 18. Rodriqufe, (2008). R M & E E Carter, International Financial Management, Prentice Hall.
- 19. Shailaja G, (2008). International Finance, Universities Press, Hyderabad.

# PS 117.4 RURAL BANKING (50 hours)

#### **COURSE OBJECTIVE**

> To provide a conceptual framework and understanding of financial management practices and methods for rural development agencies.

#### **COURSE OUTCOME**

- CO 1: Understand the working of banks in rural areas.
- CO 2: Students get the knowledge of the credit structure in the rural economy.
- CO 3: Helps to understand the various problems of the rural economy without adequate credit facility.
- CO 4: Students are able to grasp the importance of various sources of rural credit in the development of an economy.
- CO 5: Assess the role of rural economy in the development of a nation.
- CO 6: Analyse the usefulness of effective policy measure in improving rural credit.

# MODULE I: RURAL POVERTY AND INDEBTEDNESS (10 hours)

Rural occupational structure -Poverty – Concept – poverty line – Incidence of Rural poverty - causes of poverty – Strategies for poverty eradication – Poverty alleviation programmes – Employment programmes – Area development programmes – Minimum Needs programme – Institutional Reform programme – Rural Indebtedness – Incidence -factors, analysis and Implications.

## **MODULE II: RURAL DEVELOPMENT AND FINANCE (15 hours)**

Rural Development – concept – Strategies - Policies – Panchayat Raj System in India-Micro level Planning- Rural Finance – Needs – objectives – sources – institutional and non-institutional- types – short term – medium term and long term – Rural Farm and non- farm credit – Problems of Overdues – causes and remedies – Problem of recoveries – reforms in Rural credit system. – Multi agency approach to Rural Credit and Agricultural Finance.

# **MODULE III: RURAL BANKING (10 hours)**

Role of Commercial banks in rural credit – Village Adoption – strategies and objectives–Priority Sector Lending- Agricultural Development branches - Regional Rural banks- organisation – objectives – role, performance – reorganization of RRBs –Lead Bank Scheme – Service Area Approach - District and Block Credit Planning - Problems and Issues in Rural banking.

#### **MODULE IV: RURAL CREDIT (15 hours)**

NABARD and rural credit - RIDF - Micro finance: Concept – progress in India- problems – Self – Help Groups. Micro Finance Institutions and their regulations - Crop Loan Schemes. Role of Cooperatives – Credit Cooperatives - Block, District, State and Central Level cooperative institutions and agencies for rural credit – Structure – role- and performance. Agricultural and Rural Development Banks- progress – problems.

- 1. Bhalla. G. S. (1994). Economic Liberalization and Indian Agriculture (Ed) Institute for Studies in Industrial Development, New Delhi.
- 2. Desai, Vasant. (2018). Rural Development in India, Himalaya Publishing House, India.
- 3. Mellor, John W. (2017). Agricultural Development and Economic Transformatio, Palgrave MacMillan, New York.
- 4. Joshi G.V et al.(Ed).( 1997). Problems and Prospects of Rural Banking in India: Mangalore University.
- 5. Joshi, G.V., et al ,(Ed.) (2000). Banking for Rural Development: Corporation Bank Chair in Bank Management, Mangalore University.
- 6. NABARD (1999). Review of working of Regional Rural Banks, Mumbai.
- 7. Naidu, L.K. (1986). Bank Finance and Rural Development, Ashish, New Delhi.
- 8. Reddy, Venkata, K. (2018). Agriculture and Rural Development, Himalaya Publishing House, India.
- 9. Saha, Annesha&Chinmoy Roy.(2018). Microfinance and Rural Women Entrepreneurship, Himalaya Publishing House, India.
- 10. Satyasundaram, I. (2019). Rural Development, Himalaya Publishing House, New Delhi.
- 11. Singh Katar& Anil Shishodia. (2019). Rural Development: Principle, Practices and Management, Sage Publications, New Delhi.
- 12. Singh, Ajith (1985). Rural Development and Banking in India: Theory and Practice, Deep and Deep, New Delhi.
- 13. Somanath, V S, (2009). Microfinance Redifining the Future, Excel Books, New Delhi.
- 14. Tara Nair, Ajay Tankha. (2014). Microfinance India: State of the Sector Report 2013, Sage Publications, Delhi.
- 15. Thingalaya, N.K. (2013). Rural Banking, Sage Publications, New Delhi.
- 16. Vasant Joshi and Vinay Joshi. (2009). Managing Indian Banks: The Challenge Ahead, Sage Publications, Delhi.
- 17. Yunus, Mohammed. (2002). Banker to the Poor: Micro Lending and the Battle against World Poverty, Public Affairs.

#### **GUIDELINES FOR THE PREPARATION AND PRESENTATION OF PROJECT REPORTS**

#### 1. Introduction

Project Work is compulsory and it stands for 4 credits in the IV semester according to the CBCS-PG as per the direction of Mangalore University. It is an important aspect of the curriculum wherein students are helped to do and learn on their own by going through the documents, collecting relevant materials, undertaking surveys and analysing them to arrive at their own findings and conclusions. It is a work that a student must do largely under his / her own direction, in the field of the chosen area. This guideline helps to undertake project work successfully. It describes the procedures need to follow in order to get project started. It outlines the general rules and regulations which govern the project, both in terms of conduct and that of other involved parties. It tells who those involved parties are and how to communicate with them. It contains advice on a number of issues including presentation and quality standards.

# 2. Project Objectives

The primary aim of the project work is to initiate and train the students in the process and the methodology of research and make them competent enough to prepare themselves to face the challenges of further research. Specifically, project work intended to help:

- To apply previously learned knowledge and techniques to investigate / solve the problem and to manage the project;
- To identify a topic area appropriate for conducting a project, taking account of the student's particular interests.
- To find out a suitable research problem on current socio –economic issues of relevance for investigation or solution within the topic area.
- To plan the project so as to accomplish its goals within the allotted time.
- To evaluate the results or outcome of the work and present its findings.
- To present a satisfactory systematic written account of the project.

### 3: Planning the Project Work

The Students are advised to begin working on their project immediately after second semester.
 He / she should see the supervisor on a regular basis – at least once in every week in the beginning. The student in consultation with the supervisor selects a problem, and plans and controls the project.

#### 4: The Role of Supervisor

- The role of the supervisor will be to advise the student about all aspects of the project as it unfolds.
- Suggest some general areas of research for consideration and where possible, any examples of current research relevant to the topic.
- Discuss possible directions for the study and advice on aims and objectives.
- Be available for regular meetings.
- Examine written work and provide constructive criticism. It is not the responsibility of the supervisor to correct spelling mistakes, etc. other than to point out these are present: nor is it the duty of the supervisor to organize the presentation content of the work, although advice may be provided if enough work has been submitted.

• Make student aware of inadequate progress or any other facts which could impede the completion of a successful piece of work.

#### **5: Responsibilities of Students**

- Student should try to keep supervisor informed about progress and plans in respect of project and of ideas concerning the nature of the ensuing report.
- To make appointments with the supervisor on a regular basis. If he / she is facing difficulty in arranging appointments he /she must contact the Head of Department.
- Provide written work to the supervisor to comment on.
- Submit the written work in advance of the appointment in order that the supervisor has time to offer constructive criticism.
- Comply with the regulations as detailed by the department from time to time.

#### 6: Format of the Report

The project work will culminate in the submission of a report. All reports should have the following structure:

- **Title Page:** Giving the title, name of the student, student register Number, date, and supervisor name.
- **Preliminary Pages:** Certificates, Declaration, Acknowledgement etc.
- **Contents Page**: Giving the section structure and page numbers. The contents page should index all sections and appendices in the report with both their section reference and physical page number.
- **Abstract**: A one page summary of the work.
- The Body of the Report
- Introduction:
- Project Definition stating what questions are set out to answer, the project objectives, the deliverables you were going to submit, and the justification for the work you have done. Often there is a high-level statement of purpose; followed by a detailed specification of the deliverable(s) you will produce to achieve the purpose(s). It includes:
- Name / Title of the Project
- Statement of the Problem
- Why is the particular topic chosen?
- Objectives
- Hypothesis
- Methodology (mathematical or statistical tools for hypothesis testing if any can be included)
- Study Area
- Scope of the Project
- What contribution would the project make?

# • Literature Review:

• This should include a discussion of the relevant research already done in the area.

• **Work Undertaken:** The methods chosen, their justification and the outcome, how the project is accomplished should be documented.

#### • Results.

Findings, analyses, results of experiments and tests. All projects produce results.
 Examples of results include lists, tables, other reports, test outcomes and formal experimental results. These results must be clearly identified and presented as such. All results obtained should refer clearly to the methods used to obtain them and the shortcomings must be clearly stated.

# • Analysis and Discussion:

• The findings and its interpretation are to be analysed pointing out its strengths and weaknesses.

#### • Conclusion:

- In the conclusion the candidate has to explain how well the objectives of the study have been achieved, where things worked well and where they did not, what he /she has learned from the project work.
- Appendices: ( if any)
- Detailed technical material is often best in an appendix so the main report can be read without a break.

### • Bibliography:

• A list in alphabetical order by author of those items referred to in the text. The final section must be a list of references consulted with full attribution and the text must contain full cross-referencing. All appendices require citations where necessary. When done well this section becomes an important deliverable of the project.

#### 7: Submission

• Hand in three copies of the report to the department before the final dates for submission. Late submission will only be permitted under certain special conditions and only with the permission of the HOD in consultation with the supervisor.

# 8: Assessment

•	Methodology	10%
•	Highlights	10%
•	Project Report and Presentation	50%
•	Viva Voce	30%
•	Total	100

#### 9: The Viva Voce

A viva voce will only be held in respect of projects which have been completed and assessed in advance.

#### • Format of the Viva Voce

• When a viva voce is indicated, the student will be informed in time of the date, time and place of the meeting. The viva voce will be conducted by the Chairman of BOE (or his/her representative.) and the supervisor and one of the faculty members.

- During the course of the viva voce, the student may be asked;
- Questions relating to the conduct of the project;
- Questions relating to the contents of the report;
- To demonstrate any conclusions / inferences arising out of the project;
- To give a brief (about 10 minutes) presentation of the project. [Facilities for such presentation must be provided.]

#### 10: Technical Guide lines

The following suggested guidelines must be followed in preparing the Final project Report:

- Good quality white executive bond paper A4 size should be used for typing and duplication. Care should be taken to avoid smudging while duplicating the copies.
- **Page Specification**: (Written paper and source code)
- Left margin 3.0 cms
- Right margin- 2.0 cms
- Top margin 2.5 cms
- Bottom margin 2.5cms
- Page numbers All text pages as well as Program source code listing should be numbered at the bottom center of the pages.
- **Normal Body Text:** Font Size: 12, Times New Roman, Double Spacing, Justified. 6 point above and below para spacing
- **Paragraph Heading Font Size:** 14, Times New Roman, Bold, Left Aligned. 12 point above & below spacing.
- **Chapter Heading Font Size:** 20, Times New Roman, Centre Aligned, 30 point above and below spacing.
- Coding Font size: 10, Courier New, Normal

# I. Cover Page

Title of the Project Report

(Times New Roman, Italic, Font size = 24)

# Submitted in partial fulfillment of the requirements for the award of the degree of M A in Economics

(Bookman Old Style, 16 point, center)

St.Aloysius College (Autonomous)

Mangaluru -3

Supervisor Submitted by:
(Name with Designation) (Student's name)
Reg. No.:

#### **Submitted To**

Note: Cover Page is to be repeated as first Inner Page

# **II: Acknowledgement**

 In the "Acknowledgement" page, the writer recognises his / her indebtedness for guidance and assistance of the project supervisor and other members of the faculty. Courtesy demands that he also recognize specific contributions by other persons or institutions such as libraries and research foundations. Acknowledgements should be expressed simply, tastefully, and tactfully.

# III: Certificate of the project Supervisor

#### **CERTIFICATE**

Name of the Supervisor Full Address partial fulfillment of the degree of MASTER OF ARTS (Economics) to the Department of Post Graduate Studies and Research in Economics St Aloysius College(Autonomous) Mangaluru, done by Mr./Ms.\_\_\_\_\_, Reg. No. \_\_\_\_\_ is an authentic work carried out by him/her under my guidance. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief. Signature of the student Signature of the Supervisor Date: Seal of the College Signature of the HOD with Date IV: Self Certificate **CERTIFICATE** by me is an authentic work carried out for the partial fulfillment of the requirements for the award of the degree of M A in Applied Economics under the guidance \_\_\_\_\_. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief. Signature of the student

#### V: Bibliography

Use the following style and punctuation in references.

#### Books

Name of the Student

**Department Name** 

Reg No.

- Bowersox, Donald J., Closs, David J. (1996). "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963). "Factors of Industrial Location in Ohio," Ohio State University.

#### Contributions to books

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David
- Crowther& Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

#### Journal and other articles

 Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

#### Conference papers

 Chandel K.S. (2009): "Ethics in Commerce Education." Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

#### Unpublished dissertations and theses

 Kumar S. (2006): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

### • Online resources

 Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

#### Website

Kelkar V. (2009): Towards a New Natural Gas Policy, Economic and Political Weekly,
 Viewed on February 17, 2011, http://epw.in/epw/user/viewabstract.jsp

#### • Regarding the single-volume reference

Author's name in normal order (and not beginning with the last name as in a bibliography) followed by a comma; 2. Title of work, underlined to indicate italics; 3. Place and date of publication; 4. Pagination references (The page number). Example: John Gassner, Masters of the Drama, New York: Dover Publications, Inc. 1954, p. 315.

#### Regarding multivolume reference

• Author's name in the normal order; 2. Title of work, underlined to indicate italics; 3. Place and date of publication; 4. Number of volume; 5. Pagination references (The page number).

#### Regarding works arranged alphabetically

- For works arranged alphabetically such as encyclopedias and dictionaries, no pagination reference is usually needed. In such cases the order is illustrated as under:
- Example: "Salamanca," Encyclopaedia Britannica, 14th Edition.
- Regarding periodicals reference
- Name of the author in normal order; 2. Title of article, in quotation marks; 3. Name of periodical, underlined to indicate italics; 4. Volume number; 5. Date of issuance; 6. Pagination.
- Regarding anthologies and collections reference Quotations from anthologies or collections of literary works must be acknowledged not only by author, but also by the name of the collector.

# Regarding second-hand quotations reference

- In such cases the documentation should be handled as follows:1. Original author and title;2. "quoted or cited in,";3. Second author and work.
- Example: J.F. Jones, Life in Ploynesia, p. 16, quoted in History of the Pacific Ocean area, by R.B. Abel, p. 191.

# • Case of multiple authorship

• If there are more than two authors or editors, then in the documentation the name of only the first is given and the multiple authorship is indicated by "et al." or "and others". Subsequent references to the same work need not be so detailed as stated above. If the work is cited again without any other work intervening, it may be indicated as ibid, followed by a comma and the page number.

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