

# Central University of Karnataka

## School of Business Studies

Department of Economic Studies and Planning

### SYLLABUS FOR IMA ECONOMICS

As per New Choice Based Credit System 2016 August

#### SEMESTER VI

Paper Code	Paper Title	Credits				Examination		Total Marks
		L	T	P	Total	IA	End Sem	
<b>Core</b>								
UCC-13	Econometrics-II	5	1	-	6	25	75	100
UCC-14	Introduction to Game Theory	5	1	-	6	25	75	100
<b>Discipline Specific Elective</b>								
UDSE-3	Money and Banking	5	1	-	6	25	75	100
	Introduction to Environmental Economics	5	1	-				
	Resource Economics	5	1	-				
USDE-4	Project work/Dissertation	-	-	-	6	25	75	100
<b>Total Credits</b>					<b>24</b>			

**Note: CC-Discipline Specific Core; DSE-Discipline Specific Elective, GE-Generic Elective; AECC-Ability Enhancement Compulsory Course; SEC-Skill Enhancement Courses; L-Lecture; T-Tutorial; P-Practical; IA- Internal Assessment; End Sem – End semester written exam**

## **IMA VI: UCC-13: ECONOMETRICS-II (6 Credits)**

**Aims of the Course:** It is designed by the basic objective of endowing students with the theoretical knowledge of basic econometrics tools that are generally used by social scientists and researchers in analysing socio-economic phenomenon.

**Skill Imparted:** Students get familiarity with the simple and multiple regression models and learn the skills for formulating and developing econometric model for application on real economic situations.

### **UNIT 1: Multiple Linear Regression Model**

Three variable Regression – Assumptions, Properties, Estimation and Interpretation of results - Analysis of Variance - R-squared - Hypothesis Testing - Individual and overall model significance - t and F test.

### **UNIT 2: Relaxing Assumptions of Classical Regression**

Heteroscedasticity - Meaning and consequences for OLS estimator - Tests for heteroscedasticity - Remedial measures – Multicollinearity - Meaning and Consequences for OLS estimator - Tests for multicollinearity - Remedial measures – Autocorrelation - Meaning and consequences for OLS estimator -Tests for autocorrelation - Remedial measures - Specification errors.

### **UNIT 3: Special Problems in Single Equation Model**

Dummy variables regression models - Log linear and semi-log models.

### **Compulsory Reading**

Gujarati, D.N. and S Sangeetha (2007): Basic Econometrics, Fourth Edition, McGraw-Hill.

### **Other Reading List**

Johnston, J. and J. Dinardo, Econometric Methods, Fourth Edition, McGraw-Hill, Latest Edition.

Stewart, J. and L. Gill : Econometrics, Second Edition, Prentice Hall, 1998.

Wooldridge, J.M. (2000): Introductory Econometrics: A Modern Approach, South Western College Publications.

## **IMA VI: UCC-14: INTRODUCTION TO GAME THEORY (6 Credits)**

**Aim of the Course:** The purpose of this course is to introduce students to the basic ideas, concepts, methods and results of game theory, enabling them to follow the use of these methods in other applied fields, both within economics, as well as, possibly, other disciplines as well. It is essentially a ‘tool-oriented’ course. However, the pure theory is sought to be developed with a constant eye on applications. It will, therefore, be informed throughout by applications to Economics.

### **Unit 1: Introduction**

Definition of ‘game’ - players, actions/moves, payoffs, the ‘rules of a game’- Notions of strategies, information - First ideas of Equilibrium - Classification of games: sequential, simultaneous, static and dynamic, co-operative and non-co-operative games; repeated games.

### **Unit 2: Review of the Elements of Decision Theory**

Review of Utility Theory in the presence of risk - Von-Neumann–Morgenstern Utility, risk aversion, and the Savage model.

### **Unit 3: Static Games of Complete Information**

Dominant strategies, dominant strategy solvability–Iterated Elimination of Strictly Dominated Strategies - Nash equilibrium, the relation with the dominant strategy solution - Examples of economic applications of the Nash Equilibrium concept- Cournot and Bertrand models of duopolies.

### **Unit 4: Mixed Strategies**

Min-max strategies in zero-sum games - The definition and interpretation of a mixed strategy - Nash equilibrium in mixed strategies and proof of existence of equilibrium.

### **Unit 5: Dynamic Games Complete Information**

Theories of Backward induction – Applications – Stackelberg model of duopoly- Wages and Employment in a unionized firm-Sequential Bargaining - Sub game perfection (Nash) equilibrium – Tariffs and Imperfect International Competition.

### **Compulsory Reading List**

Gibbons, R(1992): A Primer in Game Theory, Harvester Wheatsheaf.

Binmore, K. (1999): Fun and Games: A Text on Game Theory, Houghton-Mifflin Company.

### **Other Reading List**

Dixit, A. and S. Skeath (1999): Games of Strategy, W.W. Norton and Company.

Myerson, R: Game Theory (1991): Analysis of Conflict, Harvard University Press.

Friedman, J (1990): Game Theory with Applications to Economics, M.I.T. Press.

Kreps, D (1990): Game Theory and Economic Modelling, OUP.

Kreps, D (1990): A Course in Microeconomic Theory, Princeton University Press.

Mas-Colell, A., M.D. Whinston and J.R. Green (1995): Microeconomic Theory, OUP.

Rasmussen, E (1989): Games and Information, Blackwell.

Luce, D. and H. Raiffa (1957): Games and Decisions, Wiley.

## **IMA VI: UDSE-3: MONEY AND BANKING (6 Credits)**

**Aim of the Course:** The aim of the course is to enable the students to understand the monetary standards and various types of money in economic system, effectiveness of monetary and fiscal policy, role of the central bank and credit creation of commercial banks, reforms of banking sector in India.

### **Unit 1: Basic Concepts**

Money Functions and Classifications - Role of money in Capitalist, Socialist and Mixed economies - Monetary standards - Metallic and Paper System of Note Issue - their merits and demerits - Gresham's Law.

### **Unit 2: Theories of Demand and Supply of Money**

Theories of demand for money - Classical - Keynesian and Monetarist - Theories of money supply - The H' Theory of money Supply - Money multiplier process and its determinants - Factors affecting 'H' - RBI analysis of money supply.

### **Unit 3: Banking**

Central and commercial banks - their Functions - The process of credit creation –Purpose and limitations - Liabilities and assets of Banks - A Critical Appraisal of the Progress of Commercial Banking after Nationalisation - Recent Reforms in Banking Sector in India.

### **Unit 4: Central Banking**

Progress of Commercial Banking in India - Functions, Instruments of Monetary and Credit Control – Quantitative and Qualitative - Objectives and Limitations of Monetary Policy with special reference to India.

### **Compulsory Readings**

Friedmen, M. (1956): Studies in the Quantity Theory of Money, University of Chicago Press, Chicago.

Laidler, D. (1977): Demand for Money, Dun-Donnelly, New York.

### **Other Reading List**

Harris, L. (1985): Monetary Theory, McGraw-Hill, New York.

Goodhart, C: Money Information & Uncertainty, 2/e, Macmillan, London.

Mitra, S. (1970): Money and Banking, Random House, New York.

Savors, R. S. (1978): Modern banking,7/e, Oxford University Press, Delhi.

Chandler, L. V. and S. N. Goldfield (1977): Economics of Money & Banking, 7/e, Harper and Row, New York.

Radcliffe Committee (1959): Report of the Committee on the Working of the monetary System, Macmillan, London.

Gupta, S. B. (1983): Monetary Economics, 2/e, S. Chand & Co. New Delhi.

Reserve Bank of India (1977): Money Supply: Concepts, Compilation and Analysis, RBI Bulletin, January 2013, Bombay.

Gibson, W. E. and G. Kaufman, (1975): Monetary Economics: Readings on current Issues, 2/e, Tata McGraw-Hill, New Delhi.

Mitra, S. (1970): Money and Banking, Random House, New York.

Gibson, W. E. and G. Kaufman, (1975): Monetary Economics, 2/e, Tata McGraw-Hill, New Delhi.

Chick, V. (1977): The Theory of Monetary Policy, 2/e, Basil Blackwell, Oxford.

Culbertson, J. M. (1971): Macro Economic Theory and Stabilization Policy, McGraw-Hill, New York.

## **IMA VI: UDSE-3: INTRODUCTION TO ENVIRONMENTAL ECONOMICS (6 Credits)**

**Aim of the Course:** The aim of this course is to introduce students the basic concepts and analytical tools involved in environmental economics research.

### **Unit 1: Introduction to Environmental Economics**

Definition of Environmental Economics - Nature of Environmental Economics - Issues in Environmental Economics - Renewable resource depletion - Non-renewable resource depletion – Significance of environmental balance.

### **Unit 2: The Problem of Social Cost-Public Goods and Environmental Goods**

Inter-linkages between the economy and the environment - Market system and environment - Welfare and environment - The economics of externalities - Market failure.

### **Unit 3: Environmental Problems**

Air pollution - Global warming and Green house effect - Water pollution - Pollution and urbanization - Energy use and Environmental problem - Transport and technology - Health and environment.

### **Unit 4: The Coase Solution and Political Economy of Regulation**

Coase theorem- Equi-Marginal principle - Fees vs subsidies - Second best solution- Game Theory and Environmental Policy.

### **Unit 5: Cost-Benefit Analysis-Non-Market Valuation**

Problems with non-market valuation - Environmental Kuznet Curve.

### **Compulsory Readings**

Hanley, Nick, Jason F Shogren and Ben White, (2001): Introduction to Environmental Economics, Oxford University Press.

Shankar U, (2001): Environmental Economics, Oxford University Press.

### **Other Reading list**

Charles Kolstad (2003): Environmental Economics, Oxford University Press.

Conrad J M. (1999): Resource Economics, Cambridge University Press.

Field B C and Field M K. (2006): Environmental Economics, Mc Graw Hill.

## IMA VI: UDSE-3: RESOURCE ECONOMICS (6 Credits)

**Aims of the Course:** This course provides immense new knowledge about new branch of economics on resource economics which is getting more importance especially after 1970. In the name of economic development the quality of environmental resources is being fastly deteriorated. Hence this paper spreads light on judicial and planned use of natural resources, various approaches, measures, etc.

### **Unit 1: Renewables and Non-renewables**

Renewable and non-renewable – Economic development and resources – Decision making over time and rationality in resource use – Property rights and natural resources – Resource use and welfare maximization.

### **Unit 2: Scarcity of Resources**

Malthusian approach – Stationary state of the classical – Club of Rome approach – Steady State School – Sustainable development – Indicators of non-sustainability – Bio-sphere and economic growth – Famine and poverty (Amartya Sen's approach).

### **Unit 3: Optimal rate of Extraction**

Gray's model – Hotelling's Model – Uncertainty and exhaustible resources – Biodiversity – Intellectual property rights, Plant breeders rights – Geographical application act – Demand for resources–recycling of resources – Quality and quantity of resources (human, cattle, land, water, minerals, solar, wind, climate, health, education and nutrition).

### **Unit 4: Biological Mechanics**

Bionomic equilibrium – Harvesting under open access – Socially optimal harvests under private property rights – Regulation of harvesting - Taxes – Quota – Sole ownership (to be discussed with reference to fishery and forestry) - People's participation and people's movements against resource degradation - Types of externalities – Types of pollutions – Measurement of pollutions (air, water, sound and soil) – Measures to control pollutions.

### **Unit 5: Resource Pricing**

Institutional mechanism in resource management – Role of NGOs resource management in India – Resource availability, use and misuse of land and land degradation, water use and irrigation, water pollution, salinity power resources, solar, wind, tidal livestock resources, forest resources and deforestation – Fisheries, mineral resources, human resource : quality, health, education, oil and gas.

### **Compulsory Reading**

Hartwick, J. M. & Olewiler, N. D (1986): The Economics of Natural Resource Use.  
Bergstrom, John Clark and Randall, A. (2010): Resource Economics: An Economic Approach to Natural Resource and Environmental Policy, Edward Elgar Publishing.  
Barnet, H. J. and Morse, C: Scarcity and Growth: The Economics of Natural Resource Activity. Latest Edition.  
Rabindra N. Bhattacharya (2001): Environmental Economics: An Indian Perspective, Oxford University Press.

### **Other Reading List**

Conrad, J. M. & Clark, C. W: Natural Resource Economics. Latest Edition.  
Dasgupta, P: The Control of Resources. Latest Edition.  
Dasgupta, P. and Heal, G. M: Economics Theory and Exhaustible Resources. Latest Edition.  
Nadkarni, M. V: Political Economy of Forest Use and Management in India. Latest Edition.

Karpagam, M (1991) : Environmental Economics, Sterling Publishers Private Limited.  
World Resource Institute, World Resources, Annual Reports, other publications.  
The Hindu Survey of Environment, Various issues.  
Report on NCA.  
World Bank Reports, UNO Publications. Various issues.

## **IMA VI: UDSE-4: PROJECT WORK/ DISSERTATION (6 Credits)**

- Students will do the Dissertation work under the supervision of the Guides
- Students are expected to submit the written Dissertation on the chosen topic at the end of VI semester which will be evaluated for 60 marks.
- The Internal Assessment of the Dissertation comprises of presentations, seminars, assignments and final presentation/viva-voce will be evaluated for 40 marks