Goa University

P.O. Goa University, Taleigao Plateau, Goa 403 206, India

Syllabus of MA Programme in Economics

Implemented from 2013-14.

- **Purpose**

The MA Economics programme at Goa University has been designed to provide the student with a modern approach to the subject of economics. It lays equal emphasis on theory and application. The programme aims to equip the students to become economic policy makers and decision makers in addition to making them acquiring expertise in teaching and research.

- **Eligibility**

The candidate must pass the Bachelor's examination with a minimum of 40% marks with at least 3 units in Economics as a paper. All candidates have to appear for an admission test modalities of which will be announced in the Handbook.

- **Credits (80 credits)**

The instructional scheme for M.A. Economics is based on a system of time-integrated units called credits. A student shall be eligible for the award of Master's Degree on successful completion of 80 Credits in a minimum of four semesters.

- **Course pattern**

The Department offers two categories of courses: Compulsory and Optional. Each student is required to have 32 credits of Compulsory Courses. Currently each Compulsory Course carries four credits each and there are eight compulsory courses. In addition the student is required to have 48 credits of Optional Courses. These credits may be obtained from Optional Courses within the department or from any other Department/Recognised Institution. However, the student must obtain a minimum of 60 credits from the Department in order to be awarded a MA degree in Economics. As per current rules of the University, the 20 credits of Optional Courses may also be opted from other Universities/ Recognised Research Institutes in India approved by Goa University. Currently the Department has Optional courses that are of two and four credits. There is a provision for MA dissertation in the second year which carries 12 credits.

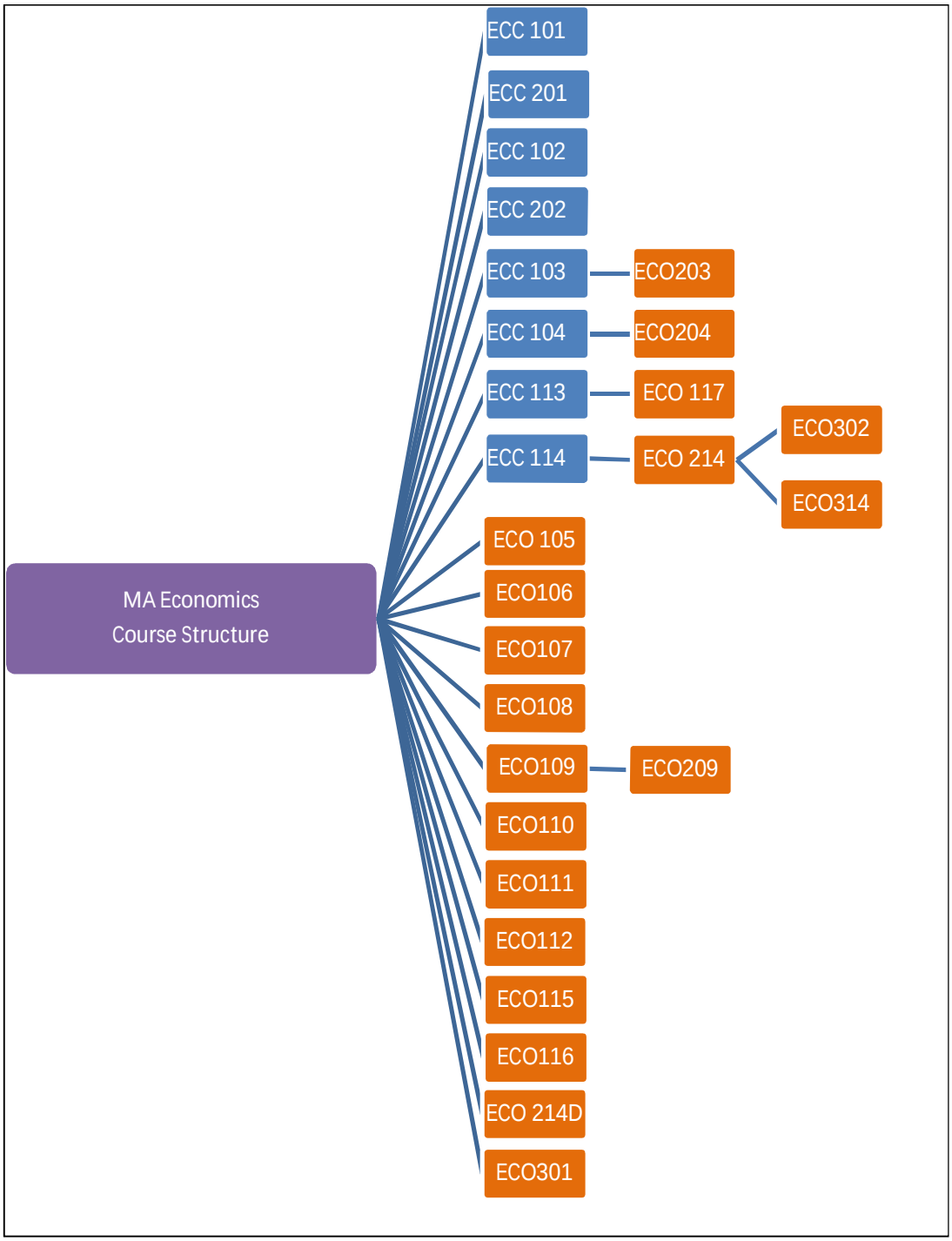
- **Number of semesters, how the courses are distributed**

The Compulsory and Optional Courses are distributed over four semesters. Course numbers starting with 100 indicate entry level courses and higher numbers 200, 300 and 400 represent increasing levels of hierarchy. Pre-requisite for courses other than the entry level courses are specified accordingly.

- **Assessment**

The Department follows a system of internal assessment. A student would undergo continuous intra-semester assessments (ISA) as well as a semester-end assessment (SEA) for each course.

Course Flow Chart - **Compulsory Courses** (Blue boxes) and **Optional Courses** (Orange Boxes)



SYLLABUS FOR M.A. ECONOMICS FROM ACADEMIC YEAR 2013-14
GOA UNIVERSITY
(Last Updated and Approved by Academic Council 28.09.2012)

DEPARTMENT OF ECONOMICS

COURSE CODE, COURSE NAME AND CREDITS

Series 100 : base level Course (No prerequisites for these courses)
Series 200 : Advanced Course at level 2 (Pre requisite: series 100 base level courses)
Series 300 : Advanced course at level 3 (Pre requisite: series 200 base level courses)

Sl.No.	Code	Paper	Number of Credits	Page Number
	COMPULSORY COURSES (8)			
1.	ECC 101	Microeconomics – I	4	4
2.	ECC 201	Microeconomics – II	4	6
3.	ECC 102	Macroeconomics – I	4	8
4.	ECC 202	Macroeconomics – II	4	10
5.	ECC 103	Public Economics	4	12
6.	ECC 113	Mathematical Economics	4	14
7.	ECC 114	Introduction to Statistics	4	16
8.	ECC 104	Development Economics	4	18
	OPTIONAL COURSES			
9.	ECO 105	International Trade and Globalisation	4	20
10.	ECO 106	International Finance	4	22
11.	ECO 107	Labour Economics	4	24
12.	ECO 108	Industrial Relations and Social Security	4	26
13.	ECO 109	Financial Economics	4	28
14	ECO 110	Human Resource Development	4	30
15	ECO 111	Agricultural Economics	4	32
16	ECO 112	Agricultural Development in India	4	33
17	ECO 116	The Indian Economy	4	35
18	ECO 203	Indian Public Finance	4	37
19	ECO 204	Growth and Development	4	39
20	ECO 209	Options : Theory & Practice	4	41
21	ECO 214	Introduction to Econometrics	4	43
22	ECO 314	Advanced Econometrics	4	45
23	ECO 115	Environmental Economics	4	47
24	ECO 301	Project Paper	4	49
25	ECO 214D	Dissertation	12	50
26	ECO 117	Introduction to Optimisation Techniques	2	51
27	ECO 302	Qualitative Data Analysis	2	52

ECC 101 MICROECONOMICS -I
COMPULSORY COURSE

Total Contact Hours: 60 **Credits : 4**

1.Theory of Consumer Behaviour (Contact Hours: 12)

Consumer's tastes: Indifference Curves-Consumer's choice and equilibrium-Income and substitution effects- Derivation of demand curve Applications of Indifference curves - Revealed preference theorem- market demand models-constant elasticity and distributed lag models-consumers' choice under uncertainty..

2.Theory of Production and Costs (Contact Hours: 10)

Technology of production-production-Production function-short run and long run-isoquants-Elasticity of substitution- Homogenous and Homothetic -Cobb Douglas Production function - CES,VES production functions-Recent developments-Technical progress and production function-

3. Returns to Scale and Costs (Contact Hours 08)

Returns to scale - Choice of least cost combination of inputs.
Costs- Short and long run-The L shaped cost curve-Engineering cost curve-Derivation of cost function -Duality of cost and production function.

4. The Theory of Competitive Market (Contact Hours: 10)

Perfect competition - short run and long run equilibrium of the firm and industry. Dynamic changes and industry equilibrium: demand changes, cost changes and government taxation. Efficiency in a competitive market- Analysis of competitive markets.

5.Theory of Imperfect Market: Monopoly (Contact Hours: 12)

Monopoly-price and output determination in monopoly-short and long run-price discrimination-degrees of price discrimination-Bilateral monopoly-monopoly and welfare loss-Control of monopoly-

6.Monopolistic Competition (Contact Hours 08)

Monopolistic Competition - product differentiation- Chamberlin's model-price competition and free entry-monopolistic competition and excess capacity.

References

- Baumol W.J (1987), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.

- Cowell A Frank (2006) Microeconomics: Principles and Analysis, Oxford University Press, New York
- Gravelle Hugh and Ray Rees (2008), Microeconomics, Pearson Education Inc.and Dorling Kindersely Publishing Inc., New Delhi
- Heathfield and Wibe,(1987),An Introduction to Cost and Production Functions, Macmillan, London.
- Hirshleifer,J, A.Glozer and D Hirshleifer (1997), Price Theory and Applications, Cambridge University Press, New York
- Jehle Geoffrey A and Philip J Reny (2008), Advanced Microeconomic Theory, Pearson Education Inc.and Dorling Kindersely Publishing Inc., New Delhi
- Koutsoyannis,A(1983),Modern Microeconomics, Macmillan, London.
- Kreps.A(1992) , A Course in Microeconomic Theory, Prentice Hall of India, New Delhi.
- La manna Manfredi M.A(1997), Readings in Microeconomic Theory, The Dryden Press, London.
- Landsburg E Stevan (2008), Pricing, South Western and Centage Learning, New Delhi
- Maddala G.S and Ellen Muller(1989), Microeconomics: Theory and Applications, McGraw Hill, Singapore.
- MasColell Andreu, Michel D Whinston and Jerry R.Green(1995), Microeconomic Theory, Oxford University Press, Oxford.
- Pashigian B. Peter(1995), Price Theory and Applications, McGraw Hill, New York.
- Perloff.J.M.(2001), Microeconomics, Addison -Wesley Longman, Delhi.
- Pindyck, Robert, Daniel L .Rubinfeld and Prem L Metha (2009), Microeconomics, Pearson Education and Prentice Hall of India, New Delhi.
- Sen A (1998),Microeconomics: Theory and Applications, Oxford University Press, New Delhi.
- Stigler, G(1996), Theory of Price, Prentice Hall of India, New Delhi.
- Varian, H. R. (1992), Microeconomic Analysis, Norton, New York.
- Varian, H.R.(1999), Intermediate Microeconomics, Norton, New York.

ECC 201 MICROECONOMICS -II
COMPULSORY COURSE

Total Contact Hours: 60 **Credits : 4**

1.Oligopoly Market Structure (Contact Hours: 12)

Uncertainty and interdepence- Non Collusive Oligopoly models - Counot, Bertrand, Chamberlin, Sweezy and Stackelberg models-Collusive models-Cartels and Price leadership models.

2.Managerial Theories of Firm (Contact Hours: 10)

Baumol's sales revenue maximisation- Marris maximum rate of growth and profits hypothesis-Williamson's discretion model -Behavioural model of Cyert and March-

3.Theory Of Games (Contact Hours: 10)

Framework of Game theory- two person zero sum game- under certainty and uncertainty-Dominant Strategies- Non-zero sum games: Prisoners dilemma-Nash equilibrium- sequential games- repeated games-.

4.Factor Pricing, General Equilibrium (Contact Hours: 12)

Firm's demand for factors in the short run and long run-factor shares-Technological progress and factor shares-Product Exhaustion theorems-General Equilibrium- General equilibrium in production and exchange -Walrasian Model- Existence, uniqueness and stability of General Equilibrium.

5.Information Economics (Contact Hours 08)

Information Economics-Adverse Selection and Moral hazards-Market for Lemons-Pooling and separating equilibrium-signaling and screening-Principal-agent Problem.

6.Linear Programming (Contact Hours 08)

Linear Programming-linear programming problem-Feasible solution, objective function and optimal solution-Simplex method and iterative procedure.

References

- Baumol W.J (1987), Economic Theory and Operations Analysis, Prentice Hall, New Delhi.

- Cowell A Frank (2006) Microeconomics: Principles and Analysis, Oxford University Press, New York
- Gravelle Hugh and Ray Rees (2008), Microeconomics, Pearson Education Inc.and Dorling Kindersely Publishing Inc., New Delhi
- Hirshleifer,J, A.Glozer and D Hirshleifer (1997), Price Theory and Applications, Cambridge University Press, New York
- Jehle Geoffrey A and Philip J Reny (2008), Advanced Microeconomic Theory, Pearson Education Inc.and Dorling Kindersely Publishing Inc., New Delhi
- Koutsoyannis,A(1983),Modern Microeconomics, Macmillan, London.
- La manna Manfredi M.A(1997), Readings in Microeconomic Theory, The Dryden Press, London. Landsburg E Stevan (2008), Pricing, South Western and Centage Learning, New Delhi
- Maddala G.S and Ellen Muller(1989), Microeconomics: Theory and Applications, McGraw Hill, Singapore.
- MasColell Andreu, Michel D Whinston and Jerry R.Green(1995) Microeconomic Theory, Oxford University Press, Oxford.
- Pashigian B. Peter(1995), Price Theory and Applications, McGraw Hill, New York.
- Perloff.J.M.(2001), Microeconomics, Addison Wesley Longman, Delhi.
- Pindyck Robert S, Daniel Rubinfield and Prem L Metha(2009) Microeconomics, Pearson Education and Prentice Hall, New Delhi.
- Sen, A (1998) Microeconomics: Theory and Applications, Oxford University Press, New Delhi.
- Varian, H.R. (1992) Microeconomic Analysis, Norton, New York.
- Waldman D.E and Elizabeth J.Jensen(1998), Industrial Organisation: Theory and Practice, Addison-Wesley Longman, New York

ECC 102 MACROECONOMICS I
COMPULSORY COURSE

Total Contact Hours: 60 **Credits : 4**

1. **National Accounts System:** (**Contact hours :10**)

   UN system of accounts, India's Accounting system, Green Accounting

2. **Classical System:** (**Contact hours : 5**)
   Classical model introduction – Employment , labour , supply – Equilibrium output and employment Money prices and interest under classical system –

3. **Keynesian system 1**: (**Contact hours : 5**)
   Simple Keynesian Model – Equilibrium income and changes in equilibrium income. Consumption function &. Investment function

4. **Keynesian system 2**: (**Contact hours : 10**)
   IS-LM model Policy effects on IS-LM model. Open Economy Macroeconomics (Mundell-Fleming and others).

5. **Monetarists and New Classical Economics**: (**Contact hours : 10**)

   Restatement of quantity theory, National Rate of Unemployment Theory-- Philips Curve – short run and long run, Rational Expectations Theory.

6. **Real Business Cycle Theory and New Keynesian Economics**:
   (**Contact hours : 10)**
   Microeconomic foundations in real business cycle theory – Real business cycle model –Emergence of new Keynesian Economics – New Keynesian Model – Sticky price, efficiency wage and Insider – Outsider model.

7. **Convergence & New Growth Theories:** (**Contact hours : 10**)
   Logic of convergence and explanations of why different countries grow at different rates. Empirical evidence. Endogenous Growth Models of Human Capital, Endogenous Technology and Product
   Innovation- Increasing Returns to Scale.

References

- Abel, A. W. & B.S. Bernanke (2001) Macroeconomics, Addison Wesley Longman, New York.
- Barro, Robert (1998) Macroeconomics, John Wiley & Sons, New York.
- Barro, R. and X. Sala-I-Martin (1995) Economic Growth, McGraw Hill, New York.
- Bhaduri, A. (1990) Macroeconomics : The Dynamics of Commodity Production, Macmillan, Delhi.

- Blanchard , O.J. & S.Fisher (1992) Lectures on Macroeconomics, MIT Press, Cambridge, MA.
- Blanchard, O. (2009) Macroeconomics, Pearson Education, New Delhi .
- Chakravarty, Sukhomoy (1982) Alternative Approaches to a Theory of Economic Growth, Orient Longman , Calcutta.
- Dornbusch, R., S. Fisher, & R. Statz (2002) Macroeconomics, Tata McGraw Hill, Delhi.
- Dutt, Amitava, K. (1990) Growth, Distribution & Uneven Development, Cambridge University Press, Cambridge.
- Ewjik, Casper Van (1991) On the Dynamics of Growth & Debt, Clarendon Press, Oxford.
- Froyen, R.T. (1999) Macroeconomics: Theories and Policies, Addison Wisley Longman, New York.
- Gylafson, T. (1999) Principles of Economic Growth, Oxford University Press, Oxford.
- Hicks, J. et al (1984), The Social Framework of the Indian Economy, Oxford University Press, Delhi.
- Jorgenson, D.W. (ed) (1998) Growth, Vol. I & II, MIT Press, Cambridge, MA.
- Labini, Paulo Sylos (1993) Economic Growth and Business Cycles, Edward Elgar, Engalnd.
- Mankiw, N. Gregory (1999) Macroeconomics, Worth Publishers, New York.
- Mankiw, N. Gregory & David Romer (eds) (1991) New Keynesian Economics, Vol.1 & 2 , MIT Press, Cambridge.
- Patnaik, P. (1997) Accumulation and Stability under Capitalism, Clarendon Press, Oxford.
- Patnaik, P. (1988) Time, Inflation and Growth : Some Macroeconomics Themes on Indian Perspective, Orient Longman, Calcutta.
- Sen, A. (1990) (ed.) Growth Theory, Penguin Books, Harmondsworth.
- Snowdown, B. & H.R.Vane (1997) A Macroeconomics Reader, Routledge, London.
- Solow, R. (2000) Growth Theory, Oxford University Press, Oxford.
- Thirlwall, A.P. (2002) The nature of Economic Growth, Edward Elgar, New York.

ECC 202 MACROECONOMICS II
COMPULSORY COURSE

Total Contact Hours: 60 **Credits : 4**

1. **Money: Conceptual Background** (**Contact Hours: 5**)

   Money-Functions-Classifications: Inside and outside money-Gurley and Shaw -Pesek and Saving-Money and near money-Money ,banks and financial institutions

2. **Demand for Money** (**Contact Hours: 5**)

   Fishers quantity theory of money-Cambridge equation-Keynesain theory of demand for money-post Keynesain developments-Baumol and Tobin-Quantity theory of money a restatement-Milton Friedman-Empirical evidence on demand for money

3. **The Supply of Money** (**Contact Hours: 10**)

   Money supply-money multiplier-model of money supply determination-Money supply in India- RBI definitions-Non Banking Financial Intermediaries and money supply

4. **Money and the Theory of Interest Rates** (**Contact Hours: 10**)

   Theories of interest rates-Classical, neoclassical, Keynesain and modern approaches-Recent developments- Term structure of interest rates-Yield curve-Theories of term structure of interest rates-Expectation, Market segmentation, and Preferred habitat theories- Empirical evidence.

5. **Monetary transmission mechanism** (**Contact Hours: 10**)

   Channels of transmission mechanism-money and credit transmission mechanism.

6. **Monetary Policy** **(Contact Hours: 10**)

   Goals and targets-strategies for monetary policy-Targeting monetary aggregates-Interest rate targeting- Intermediate targeting- Money stock versus interest rates.

7. **Role of Fiscal and Monetary Policy**: (**Contact Hours: 10**)

   Impact of fiscal and monetary operations on determination of equilibrium output, prices and rates of interest.

References

- Bain, K. & P.G.A. Howells (2003) Monetary Economics: Policy and its Theoretical basis, Palgrave Macmillan, London
- Baye Michel. R and Dennis W.Jansen (1996), Money banking and financial markets: An economic approach, Houghton Mifflin, USA.
- Bofinzer ,P. (2001),Monetary Policy, Oxford University Press, Oxford.
- Froyen Richard T(1999) Macroeconomics, Addison Welsey , Delhi.
- Gupta, Suraj B (1997) Monetary Planning for India, Oxford University Press, New Delhi
- Handa, J. (2000) Monetary Economics, Routledge, London.
- Harris, Laurence (1985), Monetary Theory, McGraw Hill, New York.
- Lewis, M and Paul Misen (2000), Monetary Economics, Oxford University Press, Oxford.
- Patnaik, Prabhat (2008) The Value of Money, Tulika Publishers, New Delhi
- Shapiro, E,(1996), Macroeconomic Analysis,
- Snowdon Brain and H.R.Vane (1997), Macroeconomic Reader, Routledge, New York.
- Walsh Carl.E (1998) Monetary Theory and Policy, MIT Press, Cambridge.

ECC 103 PUBLIC ECONOMICS
COMPULSORY COURSE

Total Contact Hours: 60 **Credits : 4**

1. General Equilibrium and Welfare Economics (contact hours 10)

Perfect Competition and Pareto Optimality. Social Welfare Functions. Fundamental Theorems of Welfare. Compensation Tests.

2. **Market Failure (contact hours 10)**

Externalities and Market Processes. Market Failure and the Theory of the Second Best. Information asymmetry and Third Best Policies.

3. **Theory of Public Goods (contact hours 10)**

Voting Models - Public goods allocation mechanism and Efficiency Conditions. Demand Revealing Schemes for Public Goods.

4. **Theory of Taxation: (contact hours 10)**

Principles of Taxation –Principle of Fiscal Neutrality, Excess Burden, Doctrine Principle of Equity, Benefit Principle, Bowen and Lindhal Models, Ability to pay Principle Administrative Efficiency .

5 Application of Taxation Principles in Developing Countries (contact hours 10)

Meaning, Types and Measurement of Taxable Capacity.

Incidence of Tax- Issues in Efficiency and Equity, Deadweight losses. Benefit and Ability to Pay approaches. Theory of Optimal taxation.

5. **Theory of Public Expenditure**: **(contact hours 10)**

Criterion for Public Expenditure- Cost Benefit Analysis, Social Rate of Discount, Shadow Prices.

References:.

- Atkinson, A. & J. Stigltiz (1980) Lectures in Public Economics, McGraw Hill, London.
- Aurebach, A. & M. Feldstein (eds) (1987) Handbook of Public Economics, Vol.I & II, Elsevier, New York.
- Baumol, W. J. (Ed.) (2001), Welfare Economics, Edward Elgar Publishing Ltd. U.K

- Cornes, R. & T. Sandler (1986) The Theory of Externalities, Public Goods and Club Goods, Cambridge University Press, Cambridge
- Cullis, J & P. Jones (1999) Public Finance & Public Choice, McGraw Hill, London.
- Dasgupta, P. & A. Sen and S.Marglin (1972) Guidelines for Project Evaluation, Unido, Vienna.
- **Hindriks** J and Gareth D. Myles (2006) **Intermediate Public Economics,** Prentice-Hall Of India, Delhi.
- Jha, Raghavendra (1998) Modern Public Economics, Routledge, London.
- Mundle, S. (ed.) (1997) Public Finance: Policy Issues for India, Oxford University Press, Delhi.
- Musgrave, R. A. and C. Shoup (Eds.) (1970), Readings in the Economics of Taxation, George Alien and Unwin, London
- Myles, G. (1997) Public Economics, Cambridge University Press, London.
- Nicholas, B. (Ed.) (2001), Economic Theory and the Welfare state, Edward Elgar, U. K.
- Singh S.K. (1986) Public Finance in Developed and Developing Countries, S.Chand, New Delhi.

ECC 113 Mathematical Economics
COMPULSORY COURSE

Total Contact Hours: 60 **Credits : 4**

1. **Set Theory**: **(Contact Hours: 10)**

Sets, Set operations, Finite and Infinite Sets, Non-denumerable sets, Cartesian Product, Relations, Functions, Ordered Sets, Linear Point Sets.

2. **Functions & Limits**: (**Contact Hours: 10)**

Metric Spaces, Open & closed sets, Neighbourhood and point of accumulation, sequence, Cauchy sequence, limit of a function, continuity, Necessary and sufficient conditions.

3. **Differentiation** (**Contact Hours: 20)**

Rules of differentiation: Total derivatives and Partial derivatives. Maxima and minima, points of inflexion.

4. **Integration**: **(Contact Hours: 10)**

Reimann integral, Fundamental Theorem of the calculus, Techniques of integration and Definite integrals. Applications in economics: Theory of the firm (cost) & Growth

5. **Vectors and Matrices**: **(Contact Hours: 10)**

Vectors, Vector Spaces, Linear Dependence, Basis. Elementary operations with Matrices, Equivalence, Determinants, Inverse of Matrix, Rank of a Matrix, Cramer's Rule. Introduction to Input-Output techniques.

References :

- Allen, R.G.D. (1978) Mathematical Economics, Macmillan, London.
- Binmore, K. (1994) Mathematical Analysis, Cambridge University Press, Foundation Books, New Delhi.
- Chiang, A.C. (1995) Fundamental Methods in Mathematical Economics, McGraw Hill, New York.
- Chow, G.C. (1997) Dynamic Economics, Oxford University Press, New York.
- Dorfman, R., P.A. Samuelson and R. Solow (1972) Linear Programming and Economic Analysis, McGraw Hill, London
- Hadley, G. (1987) Linear Algebra, Addison Wesley & Narosa Publishers, Delhi
- Henderson, J.M. & R.E. Quandt (1995) Microeconomic Theory: A Mathematical Approach, McGraw Hill, New York.

- Hsiung, C.Y. G.Y. Mao (1998) Linear Algebra, World Scientific, Singapore
- Mascollel, A., M.D. Whinston & J.R. Green (1995) Microeconomic Theory, Oxford University Press, Oxford.
- Simon, Carl P. & L. Blume (1994) Mathematics for Economists, W.W. Norton, New York.
- Smith, A.H. & W.A. Albrecht, Jr. (1995) Fundamental Concepts of Analysis, Prentice Hall, New Delhi.
- Varian, H (1993) Microeconomic Analysis, Norton, New York.

ECC 114 Introduction to Statistics
COMPULSORY COURSE

Total Contact Hours : 60 **Credits : 4**

1. **Probability** **(Contact Hours: 10)**

Sample Space, Random Variable, Addition and multiplication theorem-Conditional Probability, Bayes Theorem, Distribution Function, Mathematical Expectation, Measures of central tendency and variance.

2. **Probability Distributions** : **(Contact Hours : 12)**

Discrete, Continuous and Sampling Distributions: Binomial, Poisson, Normal, Standard Normal, Student-t, Chi-Square, F-distribution.

3. Testing of Hypotheses: Concepts **(Contact Hours : 5)**

Testing of Hypothesis; Null and Alternative Hypothesis, Type I & II errors. Levels of Significance.

4. Applications of Hypothesis Testing **(Contact Hours: 15)**

Testing mean, proportion -single and two populations. Testing t, z, F, chi-square test.

5. **Correlation & Regression**: **(Contact Hours: 10)**

Covariance, Correlation, Rank Correlation. Introduction to Two Variable Regression.

6. **Introduction to Time Series Analysis**: **(Contact Hours : 08)**

Nature of Decomposition- Trend, Cycle, Seasonal and Random components, Analysis of trend, Moving Averages and De-seasonalisation of data.

References

- Aczel Amir D & Jayavel Sounderpandian (2006), Complete Business Statistics, Tata Macgraw Hill, Delhi
- Anderson D.R, D.J.Sweeney &T .A.Williams (2009), Statistics for Business and Economics, South Western and Centage learning, New Delhi
- Bajpai Naval (2010), Business Statistics, Pearson Education Inc and Dorling Kindersely Publishing Inc. New Delhi.
- Freund, J. & R. Walpole (1996) Mathematical Statistics, Prentice Hall, Delhi.

- Levin Jack & James Alan Fox (2006), Elementary Statistics In Social Research, Pearson Education Inc and Dorling Kindersely Publishing Inc. New Delhi
- Levine David. M, D.Stephen, T.C. Krehbiel & Mark L.Berenson (2009), Statistics for Managers: Using Microsoft Excel, Prentice Hall of India, New Delhi
- Millar, J. (1996) Statistics for Advanced Level, Cambridge University Press, Cambridge
- Mills, R.L. (1982) Statistics for Applied Economics and Business, McGraw Hill, New York.
- Mittelhammer, R.C. (1995) Mathematical Statistics for Economics & Business, Springer, New York.
- Nagar, A.L. & R.K. Das, (2006) Basic Statistics, Oxford University Press, Delhi.
- Sanders, D. and Robert Smidt (2000) Statistics: A first Course, McGraw Hill, New York.
- Schofield, N.J., S.E. Satchell, M. Chatterji & P.F. Whiteley (1985) Advanced Statistical Methods in Economics, Holt, Reinhart & Winston, London

ECC 104 DEVELOPMENT ECONOMICS
COMPULSORY COURSE

Total Contact Hours: 60 **Credits : 4**

1. Growth and Development **(Contact Hours: 06)**

Meaning and Criteria – Measures of development – Per Capita Income – Index of Human Development – Per Capita Income and human development

2. Theories of Economic Development **(Contact Hours: 12)**

Rostow's Stages of Growth- Big Push- Balanced and Unbalanced Growth- Critical Minimal Effort- Ranis Fei

3. Inequality and Development **(Contact Hours: 07)**

Measures of Inequality – Inequality, Savings and Growth – Kuznets Curve- Human Capital

4. Poverty and Development **(Contact Hours: 08)**

Conceptual issues – Poverty, credit and insurance – Poverty, nutrition and labour markets – Poverty and the household .

5. Population and Development **(Contact Hours: 10)**

The determinants of fertility – The costs of children – The costs and benefits of Population Growth – The Optimum Population – The low-level equilibrium trap.

6. Land and Labour in Developing Economies **(Contact Hours: 10)**

Land market : Principal-Agent Model - Risk, Tenancy and Share Cropping - Land size and productivity : Concepts - Imperfect insurance markets and small farm productivity - Imperfect labour markets and small farm productivity.

Labour Market: Role of poverty, nutrition and labour markets - Permanent labour markets - Permanent labour and economic development.

7. Credit and Insurance in Developing Economies **(Contact Hours: 07)**

Credit Market -Sources of demand for credit – Rural credit markets - Inter-linked markets - Credit and information - Issues in Micro-Finance

Insurance Market -Basic concepts - Role of information and enforcement.

References:

- Basu Kaushik (1998), Analytical Development Economics, , Oxford University Press , Delhi.
- Behrman,S. and T.N.Srinivasan (1995), Handbook of Development Economics, Elsevier, Amsterdam.
- Cyphez and Dietz James L. (2009), The Process of Economic Development, Theory, Institutions, Applications and Evidence, Routledge, London.

- Dasgupta Partha, (1993), An Enquiry Into Well Being and Destitution, Clarendon Press, Oxford.
- Ghatak Subrata, (2007), Introduction to Development Economics, Routledge, London.
- Hayami, Y. (2001), Development Economics, Oxford University, Press, New York.
- Meir Gerald M. and Raunch James (2000), Leading issues in Economic Development , Oxford University Press, Delhi.
- Nafziger ,E. W(2006), Economic Development, Cambridge University Press, New York
- Naqvi, Syed N. H., (2002), Development Economics - Nature and Significance, Sage Publications, Delhi.
- Ray, Debraj, (2008), Development Economics, OUP, Delhi.
- Sen, A. & J. Dreze (1999) The Amartya Sen and Jean Dreze Omnibus, Oxford University, Press, Delhi.
- Thirlwall, A.P.(2008), Growth and Development, Macmillan, U.K.

ECO 105 INTERNATIONAL TRADE AND GLOBALISATION
OPTIONAL COURSE

Total Contact Hours: 60 **Credits : 4**

1.TradeTheories **(Contact Hours:10)**

Trade and Globalisation-Introduction to absolute cost advantage and comparative cost advantage - Heckscher Ohlin Model and factor endowments- Factor price equalisation-Stolper Samuelson Theorem-Tests of H-O model-Leontief paradox.

2. Alternative trade models **(Contact Hours: 08)**

Specific factors model-Product life cycle-Intra-industry trade-Imperfect competition and trade -Reciprocal dumping model.

3. Economic Growth and International Trade **(Contact Hours: 08)**

Growth of factors of production -Rybczynski theorem-Technical progress and international trade - Effects of growth on trade- immiserising growth-International trade and growth: Dynamic models-closed economy and open economy-trade and development

4. **Commercial Policy** **(Contact Hours: 12)**

Tariff-Economic effects of tariff-Partial and general equilibrium analysis-Tariff structure-Effective rate of protection-Optimum tariff- Non-Tariff measures-Quota-Economic effects of quota-Subsidies-Voluntary export restraints-Domestic content requirements-Dumping and anti-dumping regulations

5. Factor Movements **(Contact Hours: 08)**

Welfare effects of international labour and capital movements- Foreign Direct Investment(FDI)-Foreign Institutional Investment(FII)-Financial Globalization-Capital movements to developing countries- International labour migration -Recent trends.

6. Regional Trading Agreements and New World Order **(Contact Hours: 12)**

Regionalism v/s Mulilateralism-Regional Trade Agreements- Theory of customs union-Trade creating and trade diverting- European Union(EU)-North American Free Trade Agreement(NAFTA)-Regional co-operation in South Asia (SAFTA)- Gravity Model as an analytical tool .

7. WTO and Trade Liberalisation **(Contact Hours: 10)**

WTO-Structure and constitution-Agriculture, industry, services and labour under WTO-UNCTAD- functions-role-UNCTAD and developing countries-Trends in Global trade in goods and services

References

- Balasubramanim V.N.(ed), (1998) ,Writings on International Economics, Oxford University Press, New Delhi.
- Bardhan Pranab (2003), International Trade, Growth and Development, Blackwell Publishing, USA.

- Carbaug Robert J.(2007) , International Economics, South Western and Centage Publishing, New Delhi
- Gandolfo, G (2006), International Trade: Theory and Policy, Springer (India) private limited

- Gerber James (1999), International Economics, Addison -Wesley, California.
- Goldin Ian and Kenneth Reinert (2006) Globalisation for Development, Palgrave Macmillan.
- Husted Steven and Michel Melvin(2009), International Economics, Addison-Wesley, New York.
- Kenen, Peter B(2000) International Economy, Cambridge University Press, Cambridge.
- Kindleberger, C. (1998) International Economics, AITBS, New Delhi.
- Krugman, paul and Maurice Obstenfeld (2009),International Economics: Theory and Policy Pearson Education, Addison Wesley Longman, New Delhi.
- Marrewijk C.V, (2002), International Trade and the World Economy, Oxford University Press, Oxford
- Salvatore, Domnic (2007) International Economics, Macmillan, Singapore
- Sodesretrn Bo and Geoffery Reed(1994), International Economics, Macmillan , London.
- Srinivasan.T.N. and Suresh D.Tendulkar(2001), India in the World Economy, Institute for International Economics, New York
- Thompson, Henry (2001) International Economics, World Scientific, Singapore

ECO 106 INTERNATIONAL FINANCE
OPTIONAL COURSE

Total Contact Hours: 60 **Credits : 4**

1. BOP adjustment **(Contact Hours: 10)**

Balance of payments (BOP) accounts and balances-BOP and National Income-Foreign trade multiplier-BOP adjustments- Elasticity's approach-Marshall-Lerner condition-J curve-Absorption approach-Internal balance and external balance-Assignment Problem.

2. Open Economy Macroeconomics and BOP **(Contact Hours : 10)**

Mundell-Flemming model-Adjustments under pegged exchange rate systems and flexible exchange rate systems, imperfect and perfect capital mobility -Monetary approach to BOP.

3. Exchange Rate **(Contact Hours : 12)**

Foreign exchange market--Exchange rate determination-Spot markets- Forward markets-Interest arbitrage-Covered-uncovered-Hedgers-Speculators-Theories of exchange rate determination-Purchasing power parity-Monetary model-Flexi-price-Sticky price-Exchange rate overshooting-Portfolio balance model.

4. Currency Futures, Options & Swaps **(Contact Hours: 10)**

Futures market -Characteristics-Distinction with forward market-Hedging in futures market-Options market-Characteristics-Call option-Put option-Option premium-Profit and loss analysis in options market-Option pricing model-Foreign exchange risk-Exchange rate systems- Currency Swaps

5. International Money and Capital Market **(Contact Hours: 08)**

Eurocurrency market-Characteristics- loan syndication technique-Asian currency market-Capital market-International bond market-Equity market-GDRs-ADRs.

6. International Liquidity **(Contact Hours : 10)**

Bretton Woods system-IMF-collapse of Bretton Woods system-managed floating- Optimum currency areas-Currency boards-European Monetary System- Euro- Financial crisis-models of currency crisis- IMF-International monetary reform

References

- Argy Victor (1994), International Macroeconomics: Theory and Policy, Routledge, New York.
- Butler, Kirt.C (2003), Multinational Finance, South Western College Publishing , New York.
- Carbaug Robert J.(2007) , International Economics, South Western and Centage Publishing, New Delhi.
- De Rosa David F(1998), Currency Derivatives, John Wiley , New York.
- Gandolfo Giancarlo,(2006), International Finance and Open -Economy Macro Economics, Springer, New York.
- Husted Steven and Michel Melvin(2009), International Economics, Addison-Wesley, New York.
- Kenen Peter B(2000), International Economy, Cambridge University Press, New York.
- Krugman, Paul and Maurice Obstfeld (2009),International Economics: Theory and Policy Pearson Education, Addison Wesley Longman, New Delhi.
- Levi, M.D (2005) International Finance, Routledge, Taylor Francis Group, New York
- London
- Pilbeam. K (2004) International Finance, Macmillan, London.
- Salvatore Domnic(2007), International economics, Macmillan, London.
- Shapiro Alan, C (1999),Multinational Financial Management, John Wiley , New York.
- Soderstern Bo and Geoffery Reed (1994), International Economics, Macmillan Press,
- Ugur Mehmet(2002), An Open Economy Macroeconomics Reader, Routledge, New York.

ECO 107 LABOUR ECONOMICS
OPTIONAL COURSE

Total Contact Hours: 60 **Credits : 4**

1. The Supply of Labour **(Contact Hours: 15)**

Supply of labour by an individual, by a household to an economy – A Household model of labour supply – A bargaining model of family labour supply – Changes in work participation over time: The decline in male participation rates; the increase in female participation rates – Labour force growth during recessions: The Added Worker Effect-The Discouraged Worker Effect - Classical Theory of Job Choice - Modern Theory in terms of investment in Human Capital - Migration.

2.The Demand for Labour **(Contact Hours: 05)**

The individual firm's demand for labour in the short run - The individual firm's demand for labour in the long run - Industry demand for labour - Elasticity of demand for labour.

3.**The Labour Market** **(Contact Hours: 05)**

Definition of the labour market – Differences between Labour Markets and Commodity Markets - Labour Market Structure: Structured Labour markets- Unstructured Labour Markets-Internal and External Labour markets- Primary and Secondary Labour Markets.

4. Theories of Labour Market Discrimination (**Contact Hours: 10)**

Types of discrimination – Taste-for- discrimination model – Market Power: The Monopsony model – Theory of Statistical discrimination – The Crowding model.

5. Employment **(Contact Hours: 08)**

Types of unemployment – The measurement of unemployment – Causes of unemployment: Job Search (The Stigler model, The McCall model)-Rigid wages-Efficiency wages.

6. Wage Determination **(Contact Hours: 10)**

Wage determination in a perfectly competitive market – Wage determination in a Monopsony market – Minimum wage – Minimum wage in a perfectly competitive market – Minimum wage in a monopsony market – The minimum wage and efficiency wage theory – Segmentation and Dual Labour Market Theory.

7. Productivity **(Contact Hours: 07)**

Concept - Measurement – Importance of productivity increases - Factors influencing labour productivity - Productivity and inflation - Productivity and employment .

References :

- Basu Kaushik, (Ed.)(2002), International Labour Standards: History, Theories and Policy Options, Wiley-Blackwell
- Bauder Harold,(2006), Labour Movement: How Migration Regulates Labour Markets, OUP, USA
- Bloom G.F. and Northrup H.R., (1977), Economics of Labour Relations, Richard D. Irwin, Inc. Homewood, Illinois.
- Borjas G.J. (2009), Labour Economics, McGraw-Hill, New York.
- Datt.G.(1996), Bargaining Power, Wages and Employment : An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
- Ehrenberg R. and Smith Rob, (2008), Modern Labour Economics- Theory and Public Policy, Pearson.
- Fallen P. and Verry D. (1989), The Economics of Labour Markets, Heritage Publishers, New Delhi.
- Jacobson J., Skillman G., (2002), Labour Markets and Employment Relationships: A Comprehensive Approach.
- Kaufman B.E. and Hotchkiss J.L.(2005), Labour Market Economics, Cengage Learning, India.
- Kerr Clark and Staudohar P.D. (1994), Labour Economics and Industrial Relations, Harvard University Press, Harvard.
- McConnell, C.R. and S.L.Brue (2007), Contemporary Labour Economics, McGraw Hill, New York.
- Papola, T.S. and Rodgers,G.(Eds.) (1992), Labour Institutions and Economic Development in India , International Institute for Labour Studies, Geneva..
- Reynolds L.G. (1998), Labour Economics and Labour Relations , Prentice Hall, USA
- Sapsford David,(1983), The Economics of the Labour Market, George Allen and Unwin Ltd., London.
- Sharma, A.N. and A. Kundu (eds) (2001) Informal Sector in India: Emerging Perspectives, Institute for Human Development, New Delhi.
- Smith S.W.(1994), Labour Economics, Routledge, London.
- Solow R.M. (1990), Labour Market as an Institution, Blackwell , London.

ECO 108 Industrial Relations And Social Security
OPTIONAL COURSE

Total Contact Hours: 60 **Credits : 4**

1. **Industrial Relations** **(Contact Hours:09)**
   Concept – Importance of Industrial Relations – Scope and Aspects of Industrial Relations – Factors Affecting Industrial Relations – Approaches to Industrial Relations.

2. **Industrial Disputes** **(Contact Hours:12)**
   Concept – Classification of Industrial Disputes – Impact of Industrial Disputes - Causes of Industrial Disputes - Steps to achieve industrial peace - Methods of settlement of industrial disputes.

3. **Worker's Participation in Management** **(Contact Hours:12)**
   Concept – Objectives – Forms of Participation – Levels of Participation – Forms of Worker participation in India – Evaluation of Worker's participation in Management Scheme in India.

4. **Theories of the Labour Movement** **(Contact Hours:08)**
   Karl Marx, The Webbs, Perlman, KDHM (Kerr, Dunlop, Harbison and Myers)

5**. Trade Unions in India** **(Contact Hours:09)**

Concept of a trade Union – features and functions -Growth and structure of Trade Unionism in India – Problems of Trade Unions .- Achievements and failures of Trade Union Movement in India

6.**Social Security and Labour Welfare** **(Contact Hours:10)**

Concept of Social Security and Labour Welfare in India - Important labour legislations in India : Industrial Disputes Act - Trade Unions Act, Factories Act and Employees State Insurance Act - Government Policy towards Agricultural labour - India and the ILO.

References :

- Addison J.T., Schnabei C., (2003), International Handbook of Trade Unions, Edward Elgar.

- Jhabvala,R. and R.K. Subrahmanya (Eds.)(2000), The Unorganised Sector : Work Security and Social Protection, Sage Publications, New Delhi.

- Joseph J. (1995), Industrial Relations: Towards a Transformational Process Model, Global Business Press, Delhi.
- Johnston T.L. (1985), Introduction to Industrial Relations, Macdonald and Evans, G. Britain.
- Mathur B.L. (1992), Management of Industrial Relations, National Publishing House , Jaipur.
- Mamoria C.B.& Mamoria S.(2005), Dynamics of Industrial Relations, Himalaya Publishing House, Mumbai.
- McConnell C.R. and Brue S.L. (2007), Contemporary Labour Economics, McGraw-Hill, New Delhi.
- Michael V.P. (1991), Industrial Relations in India and Workers' Involvement in Management, Himalaya Publishing House, Mumbai.
- Papola T.S., P.P.Ghosh and A.N. Sharma (Eds.) (1993), Labour, Employment and Industrial Relations in India, B.R. Publishing Corporation, New Delhi.
- Sen Ratna, (2003), Industrial Relations in India, Macmillan India Ltd.
- Sloane A. and Whitney F. (1985), Labour Relations, Prentice Hall , New Jersey.
- Venkata Ratnam , C.S.(2001), Globalisation and Labour-Management Relations : Dynamics of Change, Sage Publications/Response Books, New Delhi.

ECO 109 FINANCIAL ECONOMICS
OPTIONAL COURSE

Total Contact Hours:60 **Credits : 4**

1**. Indian Capital Market** **(contact hours 15)**

Stock Markets- Mutual funds-Venture Capital- Regulatory mechanism: Role of SEBI

2. Valuation of financial assets **(contact hours 05)**
Time value of money-Money and asset pricing- Risk and return-Shares-Bonds

3.Asset Pricing Theories **(contact hours 05)**

Portfolio theory-Capital asset pricing model-Arbitrage pricing theory

4.Futures Market **(contact hours 15)**

Mechanics of futures and forward markets-Determination of forward and futures prices-Hedging-Stock futures, index futures- Interest rate futures

5. **Options Market** **(contact hours 15)**

Mechanics of options market-Call option-Put option-Pricing of stock options-Black-Scholes model- Hedging using options

6.Capital Budgeting and Investment decisions **(contact hours 05)**

Pay-back period Method, Accounting Rate of Return, Net present value method, Internal rate of return- Cost-benefit analysis.

References

- D.E. Fisher and R.J. Jordan –(2001) Security Analysis and Portfolio Management, Prentice-Hall/Pearson Edu., 6th Edition,
- Eates Brian A,(2000), Financial Engineering, Macmillan, London.
- Eichberger J and Ian.R. Harper,(1997), Financial Economics, Oxford University Press,Oxford.
- Hull(2001), Introduction to Futures and Options Markets, Prentice Hall of India, New Delhi.
- Hull(2008) Fundamentals of futures and options markets 7th edition, Prentice Hall
- Keith Redhead,(1998) Financial Derivatives, Prentice- Hall of India, New Delhi.
- Kohn Meir(1994), Financial Institutions and Markets, Macgraw Hill, New York.

- Le Roy Stephen and Jan Werner(2001), Principles of Financial Economics, Cambridge University Press, New York.
- Levinson Marc (1999), Guide to Financial Markets, Profile Books, London
- Martin Antony and Norman Biggs(2000), Mathematics for Economics and Finance, Oxford University Press, Oxford.
- Pilbeam Keith(1998), Finance and Financial Markets, Palgrave , New Delhi.
- Reilly Frank K and Keith C. Brown,(2007) Investment Analysis and Portfolio Management, 8th edition, Thomson Learning,
- Vijay Baskar P and B.Mahapatra,(2002), Derivatives Simplified , Sage Publishers, New Delhi.

ECO 110 HUMAN RESOURCE DEVELOPMENT
OPTIONAL COURSE

Total Contact Hours : 60 **Credits : 4**

1. **Introduction to Human Resource Development** **(Contact Hours : 09)**

The evolution of HRD - The relationship between HRD and HRM - HRD functions - Roles of an HRD Professional - Challenges to HRD Professionals - A Model of the HRD Process.

2. **Influence on Employee Behaviour** **(Contact Hours : 07)**

Model of Employee Behaviour - Motivation : An Internal influence on Employee Behaviour - Other Internal Factors that Influence Employee Behaviour -Environmental Influences on Employee Behaviour.

3.Assessment of HRD needs **(Contact Hours : 07)**

Definition and Purposes of Needs Assessment - Organisational Analysis - Task Analysis - Person Analysis - Prioritising HRD needs.

4.Designing HRD Programs **(Contact Hours : 07)**

Defining Program Objectives - Purchasing HRD Programs - Selecting the Trainer - Preparing a Lesson Plan - Selecting Training Methods.

5. Implementing HRD Programs **(Contact Hours : 12)**

Training Delivery Methods – On-the-Job Training Methods - Classroom Training Methods - Scheduling the Training Program - Implementing the Training Program.

6. **Evaluating HRD Programs** **(Contact Hours : 09)**

The purpose of HRD Evaluation - Models of Evaluation - Data Collection for HRD Evaluation - Research Design - Ethical Issues of Evaluation research - Assessing the Impact of HRD Programs.

7. **Case Studies** **(Contact Hours : 09)**

Types of case studies – Characteristics of a good case study – Aim of solving a case study – General method of solving a case study – Steps for solving a case study – Report writing.

References :

- Bertrand O. (1992), Planning Human Resources: Methods, Experiences and Practices, Sterling Publishers, New Delhi.
- DeSimone R.L. & Harris D.M. (1998), Human Resource Development, The Dryden Press, Fort Worth.
- Gupta S.,(2008), Human Resource Development, Deep and Deep.
- Kaushal H., (2004), Case Study Solutions: Human Resource Development, Macmillan India Ltd.

- Kothari V.N. (1992), Issues in Human Capital Theory and Human Resource Development Policy, Himalaya Publishing House, Mumbai.
- Megginson D., (2001), Human resource Development, OUP, USA.
- Michael V.P.(1996), Human Resources Management and Human Relations, Himalaya Publishing House, Mumbai.
- Mitchell D.J.B. and Zaidi M.A. (1990), The Economics of Human Resource Management, Basil Blackwell, Cambridge.
- Rao T.V. (1996), Human Resource Development, Sage Publications, New Delhi.
- Singh B., (1995), Current Trends in Human Resource Development.
- Werner J.M., (2007), Human Resource Development, South Western Educational Publishing.

ECO 111 Agricultural Economics
OPTIONAL COURSE

Total Contact Hours : 60 **Credits : 4**

1. Agriculture and Economic Development (contact hours 10)

Traditional vs. Modern Agriculture. Role of agriculture in economic development; Interdependence between agriculture and industry

2. Demand for agricultural commodities (contact hours 05)
Special characteristics - Effects of population, prices, and income on demand.

3. Supply of agricultural commodities (contact hours 05)
Special characteristics - Supply of individual commodities and aggregate supply - Effects of price on supply

4. Agricultural prices (contact hours 10)
Peculiar characteristics - Cob web cycle price income problem - Farmers dilemma - Administered prices : types and determination - Price Quotations.

5. Agricultural production (contact hours 10)
Production decisions by a rational farmer -Risk and uncertainly. Resource use and efficiency; production function analyses in agriculture; Factor combination and resource substitution

6. Land and Capital Markets (contact hours 05)
Characteristics - Lease market - Capital market - Role of credit and peculiarities

7. Labour Markets (contact hours 05)
Characteristics and structure.

8. **Agricultural Marketing (contact hours 10)**
Characteristics - Free trade - Cooperative Markets - Regulated Markets.

References

- American Economic Association (1970) Readings in the Economics of Agriculture , Allen Unwin, London.
- Bishop C.E. and W.D Tansaint (1958), An Introduction to Agricultural Economic Analysis, J. Wiley, New York.
- Capstice M. (1970), Economics of Agriculture, Allen and Unwin, London.
- Cohen R.L. (1965), The Economics of Agriculture , James Nisbet, London
- Ghatak, (1984), Agriculture and Economic Development, Prentice Hall, New York.
- Martin, Anne (1958), Economics and Agriculture , Allen and Unwin, London.
- Sawant S.D. (1978), Supply Behaviour in Agriculture, Himalaya Publishing House, Mumbai.
- Schultz T.W.(1953), Economic Organisation of Agriculture , McGraw Hill, New Delhi.
- Snodgross and Wallace (1977), Economic, Agriculture and Resource Management, Prentice Hall , New Delhi.

ECO 112 Agricultural Development In India
OPTIONAL COURSE

Total Contact Hours : 60 **Credits : 4**

1. WTO and Indian Agriculture (contact hours 10)

Agricultural Imports and Exports . Agricultural Export- Import Polices – history and recent changes Agreement on Agriculture under WTO.

Impact of WTO on Agriculture. Problems of Agricultural exports – imports

2. **Land reforms (contact hours 05)**

Aims and objectives - Evaluation of land reforms - New Economic Policy and land reforms.

3 . Agricultural Price Policy in India (contact hours 05)

Its role in Green Revolution- Functions of CACP, PDS and FCI - Evaluation of Agricultural Price Policy in India - Agricultural Price Policy under the New Economic Policy.

4. Agricultural Credit in India (contact hours 10)

Organized and unorganized Credit Markets - Cooperative credit - Role of commercial banks - Evaluation of agricultural credit in India.

5 . Agricultural marketing in India (contact hours 10)

Organized, regulated, cooperative and Unorganized markets - Evaluation. Forward trading

6. Indian Agricultural Problems (contact hours 10)

Inputs for Indian agriculture, Agriculture Input subsidy - Irrigation policy- user charges. Recent Agricultural Problems in India

7 . Strategy for agricultural development (contact hours 10)

Institutional reforms vs. Technological change - Biotechnology , Green Revolution - Nature - Progress and present problems - Trends in investment in Agriculture - Issues in Agricultural Taxation. Impact of agricultural development , New developments in commodity derivatives in India.

References:

- Ajit Singh (1993) Economic Crisis and Third World Agriculture *Cambridge University press*
- Bhaduri, A. (1984), The Economic Structure of Backward Agriculture, Macmillan,Delhi.
- Bhalla G.S and Gurnail Singh (2001) , Indian Agriculture, Sage Publishers, New Delhi
- Bilgram, S. A. R. (1996), Agricultural Economics, Himalaya Publishing House,Delhi

- Chakravarty S (1987) : Development Planning , The Indian Experience, Oxford University Press, New Delhi.
- Dantwala M.L. (ed.) (1991) Indian Agricultural Development since Independence, Oxford Production conditions in Indian Agriculture : Cambridge University Press.and IBH, New Delhi.
- Dantwala M.L.(1996), Dilemmas of Growth: The Indian Experience : Sage Publishers , New Delhi.
- Dhawan, B.D.(1988), Irrigation In India's Agricultural Development, Sage Publications, New Delhi.
- Ghatak (1984), Agriculture and Economic Development, Prentice Hall, New York
- Government of India, (1976) Report of the National Commission on Agriculture, Economic Survey annual , New Delhi.
- Gulati Ashok and Tim Kelly (1999), Trade Liberalisation and Indian Agriculture, Oxford University Press, U.K.
- Johnson P.A. (2003) Development Issues of Indian Economy Manan Prakashan.
- Joshi P.C.(1975) Land Reforms in India : Trends and Prospects, Allied Publishers, Bombay.
- Kapila Uma (ed) (2003) Indian Economy Since Independence. Academic Foundation
- Karmakar K.G (1999), Rural Credit and Self Help Groups, Sage Publications, New Delhi.
- Rao C.H.H.(1975) Agricultural Growth, Rural Poverty and Environmental Degradation in India, Oxford University Press, New Delhi.
- Rao, C. H. Hanumantha (1994), Agricultural Growth, Rural Poverty andEnvironmental Degradation in India, Oxford University Press, New Delhi.
- Rudra Ashok (1982), Indian Agricultural Economics : Myths and Reality , Allied Publishers , New Delhi.
- Saini G.R.(1979), Farm Size Resource Use Efficiency and Income Distribution, Allied Publishers, New Delhi.
- Singh B.K. and Pushpendra (2000), Land Reforms in India:An Unfinished Agenda, Sage Publications, New Delhi.
- Subbarao, K. and De Janvry (1986), Agricultural Price Policy and IncomeDistribution in India, Oxford University press, New Delhi.

ECO 116 THE INDIAN ECONOMY
OPTIONAL COURSE

Total Contact Hours : 60 **Credits :4**

1. Growth Structure (Contact Hours : 10)
   Economic growth in the last two decades – Changing structure of Indian economy and service sector led growth – New Economic Policy –liberalisation, privatisation, globalisation – state versus market.

2. Agricultural Development (Contact Hours 10)
   Green revolution, success and failures – Issues in agricultural development – finance, marketing, warehousing – Cropping pattern- cash crops and oil seeds – agricultural exports.

3. Industrial Development (Contact Hours 10)
   India's industrial growth – New industrial policy - privatisation, disinvestment and exit policy, Small scale industries – role in development, Research and Development, Technological and Industrial productivity – Emerging industries in India, SEZs.

4. Unemployment, Inequality and Poverty (Contact Hours 10)
   Unemployment – measurement and trends, Regional inequality in growth and convergence, Poverty – measurements and trends, issues in poverty measurement.

5. Public Finance (Contact Hours 10)
   Fiscal federalism – Finance Colmmissions and revenue sharing – Public revenue and expenditure – Public debt and deficit financing – Budgets and fiscal policy.

6. Trade and Development (Contact Hours 10)
   Foreign Trade of India – structure and direction, New trade policy and exports, FDI and related issues, India's free trade agreements.

References

- Acharya Sankar and Rakesh Roshna (2010), India's Economy : Performance and Challenges, Oxford University Press, New Delhi.
- Bala Pulapre (2010), Economic Growth in India : History and Prospect, Oxford University Press, New Delhi.
- Bimal Jalan (2004) , The Indian Economy, PROBLEMS AND Prospects, Penguin Books, New Delhi.
- Ghate Chetan (Ed) (2012), The Handbook of Indian Economy, Oxford University Press, New Delhi.
- Hansen A. And Sanjay Kathuria (2000), India : A financial Sector for the twenty first century, Oxford University Press, New Delhi.
- Mahendra Dev (2007), Inclusive Growth in India : agriculture, poverty and human development, Oxford University Press, New Delhi.

- Nayak, Goldar Agarwal (2010), India's Economy and Growth, Sage Publications, New Delhi.
- Sudhakara Reddy B (2009), Economic Reforms in India and China : Emerging Issues and Challenges, Sage Publications, New Delhi.

ECO 203 INDIAN PUBLIC FINANCE
OPTIONAL COURSE

Total Contact Hours: 60 **Credits : 4**

1. Allocation of Resources and the Budgetary Process: **(contact hours 10)**

Indian System of allocation- Planning Commission and Finance Commission processes; changes in devolution systems and role of budget in providing framework for growth and stabilisation.

Government Budgeting, Budget meaning and components, presentation and execution of Budget. Economic classification of Budget. Revenue and capital account. Budget deficit and their implications.

2. Black Economy **(contact hours 10)**

Estimates of black economy in India. Its impact on income, prices and effectiveness of economic policy.

3. Indian Tax System: **(contact hours 10)**

Alternative Sources of Taxation of Goods and Services in India: Direct and Indirect taxes.

4. Debt and deficit: **(contact hours 10)**

Impact on growth, prices and employment. Central and State-level distribution of borrowings - impact on growth (National and Regional).Deficit Financing - Meaning and Objectives of Deficit Financing. Trends in Different Types of Deficits Since 1991-Deficit Financing in India. Effects of Deficit Financing on Indian Economy. Assessment of the Recent Central Government Budget.

5. Indian Expenditure System: **(contact hours 10)**

Revenue & Capital, Development and Non-development, Plan and Non-plan: Trends and impacts. Changes in structure of expenditure of the Centre and states- consequences on growth and welfare.

6. **Fiscal Federalism**: **(contact hours 10)**

Logic of devolution of resources between different tiers of Government . Allocation of financial responsibilities of revenue and expenditure.

References:

- Ashutosh Raravikar, (2003), Fiscal Deficit and Inflation in India, Macmillan India Ltd. New Delhi.
- Bagchi, A. & N. Stern, & (1993) (eds) Tax Policy for Developing Countries, Oxford University Press, Delhi.

- Bagchi, A., J.L.Bajaj and W.A. Byrd (1992) (eds) State Finances in India, Vikas Publication, New Delhi.
- Basu, K. & P. Nayak (1995) Development Policy and Economic Theory, Oxford University Press, Delhi.
- Chelliah, R. (1995) Sustainable Economic Growth, Oxford University Press, Delhi.
- Kumar, A.(2001), The Black Economy of India, Penguin, Harmondsworth.
- Mundle, S (1997) (ed.), Public Finance: Policy Issues for India, Oxford University Press, Delhi.
- Rao, M. Govinda and Nirvikar Singh (2005), Political Economy of Fiscal Federalism in India, New Delhi: Oxford University Press
- Shome, P(1995) Tax Policy: A Handbook, IMF, Washington.
- Srivastava D.K(2005) Issues in Indian Public Finance, New Century Publications

ECO 204 GROWTH AND DEVELOPMENT
OPTIONAL COURSE

Total Contact Hours: 60

1.**Capital and Technical Progress** (**Contact Hours: 08)**

The role of capital in development – The Capital-Output Ratio – Capital and Labour Saving Technical Progress – Harrod and Hicks' classification of technical progress – Investment in Human Capital.

2. The Choice of techniques (**Contact Hours: 08)**

The capital intensity of techniques in developing countries – The conflict between employment and output and employment and saving in the choice of techniques – Support of the unemployed – Use of taxes and subsidies to reconcile the conflict between employment and saving.

3. Transnational Corporations and economic development (**Contact Hours: 12)**

Foreign Direct Investment and Less Developed Countries - Gains and potential costs of Transnational Corporations to a host country – Long term costs of TNCs: The potential for environmental degradation – Export Processing Zones and the problems of small nations - Bargaining with the TNCs.

4. Classical Theories of Growth (**Contact Hours: 12)**

Classical - Adam Smith – Ricardo – Malthus;

Schumpeter - The Production Process – Schumpeter's view of the system – Growth and development of an economy - Business fluctuations and the Process of Development.

5. Keynesian Theory of Growth (**Contact Hours: 07)**

Harrod – Domar Model - The conditions required for steady growth – Domar's model of economic growth – Harrod's model of economic growth – Comparison of the two models - Critical evaluation of the Harrod-Domar models.

6. Neoclassical Theories of Growth **(Contact Hours: 05)**

Solow – Meade - Issues of Stability, Exogenous technical progress and population growth

7. Cambridge Models of Growth **(Contact Hours :08)**

Joan Robinson – assumptions-structure of the model-the golden age-various types of golden and platinum age-critical evaluation of the model- Kaldor's model

References:

- Barro, R. and X. Sala-I-Martin (1995) Economic Growth, McGraw Hill, New York.
- Berg Hendrick Van Den Berg (2001), Economic Growth and Development, McGraw-Hill.
- Chakravarty, Sukhomoy (1982) Alternative Approaches to a Theory of Economic Growth, Orient Longman , Calcutta.

- Dutt, Amitava, K. (1990) Growth, Distribution & Uneven Development, Cambridge University Press, Cambridge.
- Ewjik, Casper Van (1991) On the Dynamics of Growth & Debt, Clarendon Press, Oxford.
- Gylafson, T. (1999) Principles of Economic Growth, Oxford University Press, Oxford.
- Jorgenson, D.W. (ed) (1998) Growth, Vol. I & II, MIT Press, Cambridge, MA.
- Labini, Paulo Sylos (1993) Economic Growth and Business Cycles, Edward Elgar, Engalnd.
- Nafziger ,E. W(2006), Economic Development, Cambridge University Press, New York
- Patnaik, P. (1988) Time, Inflation and Growth : Some Macroeconomics Themes on Indian Perspective, Orient Longman, Calcutta.
- Rutton Vernon W. (2000), Technology, Growth and Development, OUP, Nw York.
- Sen, A. (1990) (ed.) Growth Theory, Penguin Books, Harmondsworth.
- Solow, R. (2000) Growth Theory, Oxford University Press, Oxford.
- Thirlwall, A.P. (2003) The nature of Economic Growth, Edward Elgar, New York.

EC 209 OPTIONS: THEORY & PRACTICE
OPTIONAL COURSE

Contact Hours : 60 **Credits : 4**

1. **The basics of options** (Contact Hours : 12)
   The need for options – Introduction to different types of options – stock options, index options, currency options, etc.Characteristics of options : call options, put options, European and American, Long call options and put options, Short call options and put options. Advantages of options compared to futures, forwards and stocks.

2. **Pricing of options** (Contact Hours : 12)
   Factors affecting the price of the options. Intrinsic value and Extrinsic value. Options status relative to the underlying asset : In the money (ITM) At the money (ATM), Out of the money (OTM).

3. **Option valuations** (Contact Hours : 12)
   Theoretical values of option, Black-Scholes options pricing model.
   Option Greeks : variables that affect the options values – Delta, Gamma, Theta, Rho, Vega.

4. **Options strategies** (Contact Hours : 12)
   Different strategies of options for bullish, bearish and neutral market situations. Bullish strategies : long calls and short puts, bull call spreads and put spreads. Ratio call spreads.
   Bearish strategies : long puts, short calls bear put spreads,
   Neutral strategies : covered call writing, straddles, strangles, butterfly.

5. **Applications of Options** (Contact Hours : 12)
   The functioning of the option market : stock options, index options, currency options, commodity options.

References

- Burghardt, Galen, (2003), The Eurodollar Futures and Options Handbook, McGraw-Hill.
- Figlewski. S., W. Silber and M. Subrahmanyam, (1990), Financial Options, : From Theory to Practice, Business One Irwin.
- Gastineau, G. L., (1988), The Stock Options Manual, 3rd edition, McGraw-Hill.
- Graeme Guthrie,(2009) Real Options in Theory and Practice, Oxford University Press.
- Hull , J., (2012), Options, Futures and Other Derivative Securities, 8yj edition.
- Jarrow, R. A. And A. Rudd, (1983), Option Pricing, Dow Jones – Irwin.
- McMillan, L.G.,(1993), Options as a Strategic Investment, 3rd edition, New York Institute of Finance.
- Natenberg, S., (1994), Options Volatility and Pricing : Advanced Trading Techniques, 2nd edition, Probus.
- Sheldon Natenberg, (1994) Option Volatility & Pricing : Advanced Trading Strategies and Techniques, McGraw-Hill.

- Stoll, H. And R. Whaley, (1993), Futures and Options : Theory and Application. Thomson South Western
- Taleb, Nassim, (1997), Dynamic Hedging : Managing Vanilla and Exotic Options, Wiley.
- Tompkins, R. G., (1994), Option Analysis, Probus.

ECO 214 Introduction to Econometrics
OPTIONAL COURSE

Contact Hours: 60 hours **Credits : 4**

1. Two-Variable Regression Analysis: **(Contact Hours : 12)**

Introduction to Econometric Software: Statistical/ Econometric Software for data analysis.

Basic ideas - Population Regression Function (PRF) - Sample Regression Function (SRF). Linearity in variables and coefficients.

Ordinary Least Squares (OLS) - Classical model. Assumptions and Properties of OLS Estimates; The Co-efficient of determination - R^2, Testing of Hypothesis

2. **Multiple regression analysis**: **(Contact Hours 15)**
Problems of Estimation - The three - variable model Interpretation - Partial Regression Coefficients - estimation and maximum likelihood - Multiple co-efficient of determination R^2.

Functional forms of regression models; Omitted variables, Specification tests, Ramsey RESET test, Wald, LM test

3. **Multi-collinearity**: **(Contact Hours: 06)**
Estimation in the presence of perfect and imperfect multi-collinearity - practical consequences of multi-collinearity - detection - remedies.

4. **Heteroscedasticity**: **(Contact Hours : 10)**
OLS Estimation in the presence of Heteroscedasticity -- Methods of Generalised Least Squares (GLS); Consequences of Heteroscedasticity - Detection - Remedies.

5. **Autocorrelation**: **(Contact Hours: 10)**
OLS Estimation in the presence of Autocorrelation; Consequences - Detection - Remedies.

6. **Regression on Dummy Independent Variables** **(Contact Hours : 07)**

Application of Dummy Variables. The nature of dummy variables - Regression using quantitative variable and qualitative variable

References

- Asteriou Dimitrious,(2006), Applied Econometrics, Palgrave Macmillan, New York
- Cameroon Samuel (2005), Econometrics, Mcgraw Hill, New York.
- Davidson, J. (2000) Econometric Theory, Blackwell, USA
- Goldberger, A.S. (2000) Introductory Econometrics, Harvard University Press, Cambridge.
- Greene, W. (2004) Econometric Analysis, Prentice Hall, New York.
- Gujarati, D. (2004) Basic Econometrics, McGraw Hill, New Delhi.
- Hayashi, F (2000), Econometrics, Princeton University Press, Princeton.
- Johnston, J. & J.D. Nardo (1997) Econometric Methods, McGraw Hill, New York.
- Kmenta, J. (1997) Elements of Econometrics, Michigan Press, New York.
- Pattreson, Kerry (2000) An Introduction to Applied Econometric: Time Series Approach, Palgrave Macmillan, New York
- Ramanathan Ramu (2002), Introductory Econometrics with applications, Thomson South Western, Singapore
- Wooldridge (2006), Introductory Econometrics, Thomson-South Western, Singapore.

ECO 314 Advanced Econometrics
OPTIONAL COURSE

Total Contact Hours: 60 hours **Credits : 4**

1. Qualitative Dependent variable Regression (Contact Hours 12)
Logit, Probit and Tobit models.

2. Auto Regressive and Distributed Lag Models (Contact Hours 12)

Estimation of distributed lag models - Adaptive Expectations models - Stock adjustment models - Estimation of auto-regressive models - Method of instrumental variables

3. Simulatenous Equation Models (Contact Hours 12)
Problems of Bias, Identification and Simultaneity - Recursive models and OLS - The method of indirect Least Squares - Method of two-stage least squares

4. Time Series Analysis (Contact Hours : 12)
Stationarity, Unit Root, Co-integration, Spurious Regression, Random Walk Model, ARIMA, ARCH, GARCH, Granger Causality

5. Panel Data Analysis (Contact Hours 12)
Cross Section and Time Series data analysis- Fixed Effects and Random Effects Models. Applications of Panel Data

References

- Baltagi (2005), Econometric Applications of Panel Data, John Wiley and Sons, England
- Davidson, J. (2000) Econometric Theory, Blackwell, USA
- Diebold, Francis X (2004) Elements of Forecasting, Thomson South Western, USA
- Goldberger, A.S. (1998) Introductory Econometrics, Harvard University Press, Cambridge.
- Gourieroux, C(2000) Econometrics of Qualitative Dependent Variables, Cambridge University Press, Cambridge.
- Greene, W. (2004) Econometric Analysis, Prentice Hall, New York.
- Harris, R. (1995) Using Co-integration Analysis in Econometric Modelling, Prentice Hall, New York.
- Hasio Chang (2003), Analysis of Panel Data, Cambridge University Press
- Hayashi, F (2000), Econometrics, Princeton University Press, Princeton

- Krishna, K.L. (1997) Econometric Applications in India, Oxfrd University Press, Delhi.
- Maddala, G.S. & I.M. Kim (1998) Unit Roots, Co-integration & Structural Change, Cambridge University Press, Cambridge
- Mukherjee, C., H. White & M. Wuyts (1998) Econometrics & Data Analysis for Developing Countries, Routledge, London
- Pattreson, Kerry (2000) An Introduction to Applied Econometric: Time Series Approach, Palgrave Macmillan, New York
- Pattreson, Kerry (2010) A Primer for Unit root testing, Palgrave Macmillan, USA
- Ramanathan Ramu (2002), Introductory Econometrics with applications, Thomson South Western
- Pindyck, R.S. & D.L. Rubinfeld (1991) Econometric Models, & Economics Forecasts, McGraw Hill, Singapore.
- Rao, B. Bhaskara (1994) Co-integration for the Applied Economist, St. Martin's Press, New York.
- Wooldridge, Jeffrey M (2002), Econometric Analysis of cross section and Panel Data, MIT Press, USA

ECO 115 Environmental Economics
OPTIONALCOURSE

Total Contact hours: 60 **Credits : 4**

1. Environment & Economy **(Contact hours: 10)**

Inter-linkages and Trade-offs, Poverty, Environment and Development debate. Issues of Climate Change – Adaptation and Mitigation

2. Theory of Externalities **(Contact hours: 10)**

Missing Markets, Non-convexity, Non-linearity, Public Goods, Common Property Resources

3. Environmental Policy **(Contact hours: 10)**

Pigouvian Taxes, Subsidies, Tradable Permits, Price v/s Quantity tools, Coase Theorem and Issues in Property Rights.

4. Sustainable Development **(Contact hours: 15)**

Renewable and Non-renewable Resources - Optimal Use under different market Structures.

5. Issues in Valuation **(Contact hours: 15)**

Costs and Benefits. Use Values, Non-use Values, Option Values, Cost Benefit Analysis & Environmental Impact Assessment.

References:

- Baland, J. & J. Platteau (2000) Halting Degradation of Natural Resources, Oxford University Press, Oxford.
- Baumol, W.J. & W.E. Oates (1988), Theory of Environmental Policy, Cambridge University Press, London.
- Bhattacharya, R.N. (2001) Environmental Economics - An Indian Perspective, Oxford University Press, Delhi
- Bromley, D. (eds) (1995) Handbook of Environmental Economics, Basil Blackwell, London.
- Chopra, K. & G. Kadekodi (1999) Operationalising Sustainable Development, Sage Publications, Delhi.
- Dasgupta, P. & K.G.Maler (1994) The Environment & Emerging Development Issues, Volume I & II, Cambridge University Press, Cambridge.

- Dasgupta, P. & G.M.Heal (1979) Economic Theory & Exhaustible Resources, Cambridge University Press, Cambridge.
- Hanley, N., J.F. Shogren & B. While (1997) Environmental Economics in Theory & Practice, Macmillan, London
- Heal, G. (1993) The Economics of Exhaustible Resources, Edward Elgar, England.
- Kula, E., (1994) Economics of Natural Resources, the Environment and Policies, Chapman & Hall, London
- Shankar, U. (2001) Environmental Economics, Oxford University Press, Delhi
- Tietenberg, T. (1994) Environmental Economics & Policy, Harper Collins, NY.

ECO 301 Project Paper
OPTIONAL

PROJECT PAPER: **Credits : 4**

Objective :

Objective of the project paper is to provide a real life experience in data analysis/case analysis relating to the courses that the students have done at the base level. For example, a student who has done a Course in Financial Economics can go for Project Paper in Financial Economics where in he/she will be doing a detailed data collection and analysis on a particular topic in Financial Economics. A faculty member of the Department will be guiding the Project Paper.

Prerequisite:

The student must have done a base level course in the area in which he/she is opting for the project course.

Method:

Student can collect either primary data or secondary data relating to the topic. The project is expected to have analysis and interpretation of data. The student will be submitting a project report in the same semester in which the project is offered.

ECO 214D DISSERTATION
OPTIONAL

(to be started in Sem III and completed & submitted in Sem IV by March)

DISSERTATION: **Credits : 12**

Objective of the Dissertation is to inculcate analytical/research bend of mind among the students. The dissertation may involve review of literature, model building, data analysis and interpretation, submitting a comprehensive report of around 100 pages.

ECO 117 Introduction to Optimisation Techniques

OPTIONAL COURSE

Total Contact Hours : 30 **Credits : 2**

1. Differentiation **(Contact Hours 20)**

Differentiation: Total and Partial derivatives.
Constrained and Unconstrained Maximisation
Use of Lagrange Multiplier Techniques and Hamiltonian in Consumption and Production systems.

2. Integration: **(Contact Hours 10)**

Fundamental Theorem of calculus
Basic Techniques of integration: Indefinite and Definite integrals.

References

Allen, R.G.D. (1978) Mathematical Economics, Macmillan, London.
Chiang, A.C. (1995) Fundamental Methods in Mathematical Economics, McGraw Hill, New York.
Chiang, A.C. (1992) Dynamic Optimization, McGraw Hill, New York.
Chow, G.C. (1997) Dynamic Economics, Oxford University Press, New York.
Henderson, J.M. & R.E. Quandt (1995) Microeconomic Theory: A Mathematical Approach, McGraw Hill, NY.
Mascollel, A., M.D. Whinston & J.R. Green (1995) Microeconomic Theory, Oxford University Press, Oxford.
Simon, Carl P. & L. Blume (1994) Mathematics for Economists, W.W. Norton, New York.

ECO 302 Qualitative Data Analysis
OPTIONAL COURSE

Total Contact Hours : 30 **Credits : 2**

1.Limited Dependent Variable: **(Contact Hours 20)**

Binary Response Models - Maximum Likelihood Estimation, Logit and Probit Models
Multi-nomial Logit, Nested Multi-nomial logit, Ordered Probit Model.
Tobit Models, Count data (Poisson, Negative binomial), Censored and Truncated Dependent Variable Models

Simultaneous Equation Models: **(Contact Hours 10)**

Problems in OLS of Simultaneity Bias, Identification, Selection Bias, Endogeneity, Instrumental Variables (IV); Indirect Least Squares - Two-stage least squares (2SLS). Three Stage Least Squares (3SLS); (With respect to Limited Dependent variables)

Seemingly Unrelated Regression Analysis (SURE).

References

Goldberger, A.S. (1998) Introductory Econometrics, Harvard University Press, Cambridge.
Gourieroux, C. (2000) Econometrics of Qualitative Dependent Variables, Cambridge University Press, Cambridge.
Greene, W. (1997) Econometric Analysis, Prentice Hall, New York.
Hatekar, Neeraj R (2010) Principles Of Econometrics, Sage Publications, Delhi
Hayashi, F (2000), Econometrics, Princeton University Press, Princeton
Maddala, G.S. (1983) Limited-Dependent and Qualitative Variables in Econometrics, Cambridge University Press, Cambridge
Ramanathan, R (2002) Introductory Econometrics with Applications, Thomson South Western, Singapore.
Woolridge, J.M. (2009) Econometrics, Cengage Learning, New Delhi.

ANNEXURE-I

DEPARTMENT OF ECONOMICS

CHOICE BASED CREDIT SYSTEM

GENERAL FRAMEWORK AND EXAMINATION SCHEME

GENERAL FRAMEWORK

CREDITS:

Total 80 credits

One Credit=15 Contact Hours

COURSES:

(i) Compulsory Courses (ECC): 8 Courses with 4 credits each, total 32 credits

(ii) Optional Courses (ECO): 12 Courses with 4 credits or 24 courses with 2 credits as the case may be.

(a) Project Paper: Project Paper comes under elective courses. Students can opt for a project paper in the place of an elective course. The project paper will carry 4 credits and 100 marks

(b) Dissertation: Dissertation also comes under elective paper. Student can opt for a dissertation with 12 credits in the place of 3 elective courses. Dissertation will carry 300 marks.

MARKS:

There will be a total 2000 marks (Total 80 credits, 4 credits 100 marks).

PROJECT PAPER:

Objective :

Objective of the project paper is to provide a real life experience in data analysis/case analysis relating to the courses that the students have done at the base level. For example, a student who has done a Course in Financial Economics can go for Project Paper in Financial Economics where in he/she will be doing a detailed data collection and analysis on a particular topic in Financial Economics. A faculty member of the Department will be guiding the Project Paper.

Prerequisite:

The student must have done a base level course in the area in which he/she is opting for the project course.

Method:

Student can collect either primary data or secondary data relating to the topic. The project is expected to have analysis and interpretation of data. The student will be submitting a project report in the same semester in which the project is offered.

DISSERTATION:

Objective of the Dissertation is to inculcate analytical/research bend of mind among the students. The dissertation may involve review of literature, model building, data analysis and interpretation, submitting a comprehensive report of around 100 pages.

The Dissertation will be spread through 3 semesters, starting with second semester.

EXAMINATION SCHEME

I. COMPULSORY AND OPTIONAL PAPERS

Internal assessment and Semester End Assessment will be 50:50 basis

Internal Assessment:

(i) Each teacher of the given course shall be the examiner for the portion he/she teaches
(ii) There shall be minimum 3 tests/assessments for two credit courses and 5 tests/ assessments for 4 credit courses.
(iii) The assessment/test may be objective/multiple choice, short answer type, essay type, seminar, assignment or viva-voce.
(iv) Total internal assessment will be for 50 marks and each component of the test/assessment shall be of 10 marks.
(v) The course wise time table of the internal assessment shall be displayed at the beginning of each semester.
(vi) Internal assessment question paper shall not have internal choice
(vii) There is no separate passing minimum for internal assessment.

Semester End Examination (SEA)

(i) The assessment will be of a comprehensive written examination at the semester end and will carry 50 marks
(ii) The pattern of question paper shall be 5 questions of 10 marks each with internal choice. The examiner shall have the freedom to sub divide the 10 marks main question, if necessary.
(iii) All the topics covered in the syllabus should be considered for the SEA and the weightage will be on the basis of the teaching time allotted
(iv) Paper setting shall be done by each teacher who taught the course and shall be coordinated by the Department in the paper setters meeting

II. PROJECT PAPER

(i) The project paper will be offered for only those who have done the base level course in the respective area. The project Paper will be of 100 Marks. Out of this 60 marks for the report submitted by the candidate and 40 marks for presentation and defence. The DC members may attend the presentation.

(ii) The project paper offered by the Department of Economics will be guided by the teacher of the Department in the respective area

(iii) Assessment of the Project paper will be by the guiding teacher

(iv) The project paper will carry 4 credits

III. DISSERTATION

(i) Dissertation shall carry 12 credits.

(ii) Dissertation shall be spread over 3 semesters

(iii) It should begin at the start of second semester and end with the fourth semester

(iv) It will carry 300 marks.