A N N A M A L A I   U N I V E R S I T Y
D E P A R T M E N T   O F   E C O N O M I C S
C h o i c e   B a s e d   C r e d i t   S y s t e m
M . A .   E C O N O M I C S
(E f f e c t i v e   f r o m   2 0 1 8 - 2 0 1 9 o n   w a r d s)
REGULATIONS

For the Faculties of Arts, Science, Indian Languages and Education (except for the Department of Education).

Master's Programme

The Master's Programme will consist of

i.   Core courses which are compulsory for all students.
ii.   Elective courses which students can choose from amongst the courses approved within the Department or in other Departments of the Faculty and other Faculties.
iii.   The Elective subjects will be allotted after counseling by committee of the Head of the Department under the Chairmanship of the Dean.
iv.   Dissertation/ Project work / Practical training/ Field work, can be done in an organization (Government, Industry, Firm, Public Enterprise etc.) approved by the concerned Department.
v.   A Course is divided into five units to enable the students to achieve modular and progressive learning.

SEMESTERS

An academic year is divided into two Semesters, Odd Semester and Even Semester. The normal Semester periods are:

   Odd Semester : July to November (90 working days)
   Even Semester : December to April (90 working days)

CREDITS

The term credit is used to describe the quantum of syllabus for various courses in terms of hours of study. It indicates differential weightage given according to the contents and duration of the courses in the curriculum design.

   Minimum credit requirement for a two years Master's Programme shall be 90.In Arts Faculty, there will be 78 credits for core courses and 12 credits for elective courses.

COURSES AND COURSE WEIGHT

Each course may consist of lectures / tutorials / laboratory work / Seminars / project work / practical training report / Viva voce etc.

Core and Elective courses may carry different weight. For example, a course carrying one credit for lectures will have instruction of one period per week during the semester. If three hours of lectures is necessary in each week for that course then 3 credits will be weightage . In each of the courses, credits will be assigned on the basis of the lectures/ tutorials / laboratory work and other forms of learning in a week schedule:

i.   One credit for each lecture period per week.
ii.   One credit for each tutorial per week.
iii.   One credit for every three periods of laboratory or practical work per week.

iv.   One credit for every two period seminar.

v.   Five credits for project work/ dissertation.

Eligibility for Admission

    A pass in any undergraduate Degree.

DURATION

Two academic years- full Time

MEDIUM OF INSTRUCTION: English

ATTENDANCE

    Every teaching faculty handling a course shall be responsible for the maintenance of attendance register for candidates who have registered for the course. The instructor of the course must intimate the Head of the Department at least Seven Calendar days before the last instruction day in the semester about the particulars of all students who have secured an attendance of less than 75%. A candidate who has attendance less than 75% shall not be permitted to sit for the End-Semester examination in the course in which the short fall exists.

Examination

    There will be two internal assessments and one End – Semester examination during each semester.

    Internal Assessment – I will be held after 35 working days and Internal Assessment –II will be held after 70 working days.

    Internal Assessment –I will be combination of a variety of tools such as class test, assignment, and paper presentation that would be suitable to the course. This requires an element of openness. The students are to be informed in advance about the nature of assessment and the procedures. However the tests are compulsory. Test I may be for one hour duration. The pattern of question paper will be decided by the respective Faculty. Internal Assessment – I will carry 10% of marks of the entire course.

    Internal Assessment – II will be held after 70 working days for the syllabi covered between Seventh and Eleventh weeks. It will be conducted with a variety of assessment tools. It will also have an element of openness. The students are to be informed in advance about the nature of assessment and the procedures. However the tests are compulsory. Test II may be for three hours duration. The pattern of question paper will be decided by the respective Faculty. Internal Assessment -II carries 10% of marks of the entire course.

    There will be one end semester examination of 3 hours duration in each course. The End Semester Examination will cover all the syllabus of the course for 75% of marks.

Evaluation

    Evaluation will be done on a continuous basis. Evaluation may be by objective Type Questions, Quiz, Short Answers, Essays or a combination of these, but at the End Semester Examination it has to be a written examination.

    The performance of a student in each course is evaluated in terms of Percentage of marks (PM) with a provision for conversion to Grade Point (GP). The sum total performance in each semester will be rated by GPA while the continuous performance from the 2nd Semester onwards will be marked by (OGPA).

Marks and Pass Minimum

A Student cannot repeat the Internal Assessments I and II. However, if for any compulsive reason the students could not attend the test, the prerogative of arranging a special test lies with the teacher in consultation with the Head of Department.

A minimum of 50% marks in each course is prescribed for a pass. A student has to secure 50% minimum in the End Semester Examination.

A candidate who has not secured a minimum of 50% of marks in a course shall be deemed to have failed in that course.

The Student can repeat the End Semester Examination when it is offered next in the subsequent odd / even semester till the regulations are in force. However, a candidate cannot move to the next semester if he/she has more than six papers as arrears at any point of time.

A candidate who has secured a minimum of 50 marks in all the courses prescribed in the programme and earned a minimum of 90 credits will be considered to have passed the Master's Programme.

Grading

A ten point rating scale is used for the evaluation of the performance of the student to provide letter grade for each course and overall grade for the Master's Programme.

Marks	Grade Point	Letter Grade	Class
90+	10	S	Exemplary
85 – 89	9.0	D++	Distinction
80 – 84	8.5	D+	Distinction
75 – 79	8.0	D	Distinction
70 – 74	7.5	A++	First Class
65 – 69	7.0	A+	First Class
60 – 64	6.5	A	First Class
55 – 59	6.0	B	Second Class
50 – 54	5.5	C	Second Class
49 or Less	–	RA	Reappear

The Successful candidates are classified as follows;

I Class – 60 % Marks and above in overall percentage of Marks (OPM)

II Class – 50 – 59% Marks in overall percentage of marks.

Candidates who obtain 75% and above but below 90% of marks (OPM) shall be deemed to have passed the examination in FIRST CLASS (Distinction) provided he / she passes all the courses prescribed for the programme at the first appearance.

Candidates who obtain 90% and above (OPM) shall be deemed to have passed the examination in FIRST CLASS (Exemplary) provided he / she passes all the courses prescribed for the programme at first appearance.

The maximum of 100 marks to each course is distributed as 75 marks for End semester Examination and 25 marks for Internal Assessment. For Internal Assessment the break up of 25 marks shall be as follows:

(i)   Test   (I &II)   ---   10 Marks
(ii) Assignments   ---   5 Marks
(iii) Case Study / Seminar   ---   5 Marks
(iv) Attendance   ---   5 Marks

(90% and above -5; 80-89 % -4; 75-79% - 3 marks)
Course-wise Letter Grades

  The percentage of marks obtained by a candidate in a course will be indicated in a letter grade.

  A student is considered to have completed a course successfully and earned the credits if he / she secures an overall letter grade other than RA. A letter grade RA in any course implies a failure in that course. A course successfully completed cannot be repeated for the purpose of improving the Grade Point.

  The RA grade once awarded stays in the grade of the student and is not deleted even when he / she completes the course successfully later. The Grade acquired later by the student will be indicated in the grade sheet of the odd / even semester in which the candidate has appeared for clearance of the arrears.

  If a student secures RA grade in the Project Work/ Field work / Practical Work / Dissertation , either he / she shall improve it and resubmit it if it involves only rewriting incorporating the clarifications of the evaluators or he / she can re-register and carry out the same in the subsequent semesters for evaluation.

WITHDRAWAL FROM THE COURSE BY THE STUDENT
Within 2 weeks from the date of commencement of the Semester.

ANNAMALAI UNIVERSITY
DEPARTMENT OF ECONOMICS
M.A. ECONOMICS – Two Year PG PROGRAMME
2018-2019 onwards

Semester	Course No.	Course Code		Course Title	Course Type	Credit	University Exam. Marks	Internal Marks	Total Marks
I	1.	ECOC 101	1	Advanced Microeconomics	Core	5	75	25	100
I	2.	ECOC 102	2	Macroeconomic Analysis	Core	5	75	25	100
I	3.	ECOC 103	3	Research Methodology and Statistical Applications	Core	5	75	25	100
I	4.	ECOC 104	4	Economics of Agriculture	Core	4	75	25	100
I	5.		5	Elective Course	Elective	3	75	25	100
				Total		**22**	**375**	**125**	**500**
II	6.	ECOC 201	1	Welfare Economics	Core	5	75	25	100
II	7.	ECOC 202	2	Monetary Theory and Policy	Core	5	75	25	100
II	8.	ECOC 203	3	Mathematical Economics	Core	5	75	25	100
II	9.	ECOC 204(1) ECOC 204(2)	4	Managerial Economics OR Industrial Economics	Core	4	75	25	100
II	10.		5	Elective Course	Elective	3	75	25	100
				Total		**22**	**375**	**125**	**500**
III	11.	ECOC 301	1	Public Economics	Core	5	75	25	100
III	12.	ECOC 302	2	International Trade and Finance (International Economics)	Core	5	75	25	100
III	13.	ECOC 303	3	Development Economics	Core	4	75	25	100
III	14.	ECOC 304	4	Human Resource Development and Policy	Core	4	75	25	100
III	15.		5	Elective Course	Elective	3	75	25	100
III	16.	SOSC 306	6	Soft Skills	Core	3	75	25	100
				Total		**24**	**450**	**150**	**600**
IV	17.	ECOC 401	1	Environmental Economics	Core	**5**	**75**	**25**	**100**
IV	18.	ECOC 402	2	Indian Economic Development & Policy	Core	**5**	**75**	**25**	**100**
IV	19.	ECOC 403	3	Computer Applications in Economics	Core	**4**	**75**	**25**	**100**
IV	20.	ECOC 404	4	Project and Viva -voce	Core	**5**	**75**	**25**	**100**
IV	21.		**5**	Elective Course	Elective	**3**	**75**	**25**	**100**
				Total		**22**	**375**	**125**	**500**
				GRAND TOTAL		**90**	**1575**	**525**	**2100**

Note: An Elective Course has to be chosen by a student as per his/her choice. Elective Courses offered by various Departments for the Two Year PG Programmes from Semester I to Semester IV are enclosed.

Note: Inter Department Elective Course has to be chosen by a student as per his/her choice. Inter Department Elective Courses offered by various Departments for the Two Year PG Programmes from Semester I to Semester IV are enclosed.

Code	I Semester	credit
ECOE-105	Economics of Climate Change	3
	II Semester	
ECOE-205	Economics in Everyday Life	3
	III Semester	
ECOE-305	Economics of Natural Disasters	3
	IV Semester	
ECOE-405	Environmental Audit	3
Development Studies (Elective)		
	I Semester	
DESE-105	Regional Development	3
	II Semester	
DESE-205	Issues in Development	3
	III Semester	
DESE-305	Women Studies and Development	3
	IV Semester	
DESE-405	Globalisation and Development	3

ECOC-101 ADVANCED MICROECONOMICS

Objectives
1. To equip the students in micro economic theories with graphic illustrations.
2. To develop the skills of application of the principles to the real world problems.

Unit -I: Market Theories–I
1. Perfect competition – Short run and long run equilibrium of the firm and industry – Price and output determination – Optimum firm.
2. Monopoly – Short run and long run equilibrium - Price discrimination, monopoly control, and regulation – Contestable Market.
3. Monopolistic competition–Chamberlin Model- selling costs - Excess capacity.

Unit -II: Market Theories–II
1. Oligopoly – Non-collusive Models - Cournot   - Bertrand – Chamberlin – Edgeworth – Sweezy - Stackelberg
2. Oligopoly - Collusive Models - Cartels and mergers - Price leadership - Base point price system
3. Monopsony – Price and output determination – Workable competition.

Unit -III: Alternative Theories of Firm
1. Duopoly price game-dominant strategy-Nash Equilibrium
2. Full Cost Pricing Rule-Bain's limits pricing theory-Sylos-Labini Model
3. Input-output model-linear programming applications in decision making

Unit -IV: Distribution Theories
1. Neo-classical approach – Marginal productivity theory; Product exhaustion theorem; Hick's technical progress.
2. Modern theory of distribution – Factor Pricing in imperfect product and factor markets.
3. Determination of Wages – Labour supply and wage determination – Role of trade unions and collective bargaining

Unit –V: Economics of Information
1. Informational asymmetry – Market for lemons.
2. Adverse selection – Insurance market and adverse selection – Solution to principal agent problem.
3. Hidden action(Moral Hazard) - Signaling and Screening

Text Books
1. Ahuja H.L (2004) *Advanced Economic Theory* (Sultan Chand Co., New Delhi).
2. Hal R. Varian (2004), *Intermediate Micro Economics* (East-West Press: New Delhi).
3. Jhingan. M.L (2004) *Micro Economic Theory*, (Vrinda Publications- Delhi).
4. Ruffin Roy. J (1992) *Intermediate Micro Economics* (Harper & Collins Publishers-   New york).
5. Sundaram K.P.M. and Vaish M.C. (2004), *Micro Economic Theory* (S.Chand

Reference Books
1. Koutsyiannis A. (1978) *Modern Micro Economics*, (Macmillan- London).
2. Ferguson C.E. (1970) *Micro Economic Theory*, (Homewood, U.S.A).
3. Gisser Michall (1978) *Introduction to Price Theory*, (International Text Books Co.),
4. Salvatore, Dominick (2004), *Micro Economic Theory* (Tata Mcgraw Hill-New Delhi).
5. Watson (1975) *Price Theory and its uses*, (Scientific Book Company , Calcutta).

ECOC-102 - MACROECONOMIC ANALYSIS

Unit-I: Introduction to Macro Economic Analysis

1. Nature and Scope of Macro Economics –
2. National Income Accounting: Concepts -Components - Methods of measuring National Circular flow model

Unit-II: Classical and Keynesan Model

1. Classical Theory of Employment
2. Keynes theory of employment and output – Aggregate supply function – Aggregate demand function
3. IS-LM Model
4. Theories of Consumption Function: Absolute Income Hypothesis, Relative Income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis

Unit-3: The New Classical Macroeconomics

1. Rational expectations hypothesis
2. Policy ineffectiveness theorem
3. Policy implications of new classical approach

Unit-4: New Keynesian Macroeconomics

1. Core propositions of new Keynesian macroeconomics
2. Wage and Price Rigidities
3. New Keynesian business cycle theory
4. Policy implications of new Keynesian macroeconomics

Unit-5: Real Business Cycle Theory and Austrian Macroeconomic Theory

Real Business Cycle Theory

1. Source of Productivity shocks in Real Business Cycle Theory
2. Role of money in Real Business Cycle Theory'.
3. Policy implications of real business cycle theory

Austrian Macroeconomic Theory

1. Basic principles of Austrian macroeconomics
2. Austrian Theory and Business Cycles
3. Policy Implications of Austrian Theory

Textbook

Business Cycle Economics by Todd A. Knoop (Santa Barbara, California: Praeger)

Reference Book

*Modern Macroeconomics : Its origins, development and Current State*by Brian Snowden and Howard R Vane (Cheltenham and Massachusetts : Edward Elagar 2005

ECOC-103 RESEARCH METHODOLOGY & STATISTICAL APPLICATIONS

Unit – I: Research Methods in Economics
1. Nature of Social Science Research – Research Methods in Social Science – Formulating the problem.
2. Types and Sources of Hypothesis – Characteristics of a Good hypothesis.
3. Components and types of research design – Collection of data – sources and methods.
4. Presentation of results – Format of a Report.

Unit – II: Sampling and Data collection
1. Sampling; Need, types, Probability sampling, random, systematic, stratified, multistage or cluster sampling, Non Probality sampling; Purposive Judgment, quota and snowball sampling
2. Data collection; Primary and Secondary data; NSS and censes data Methods of data collection:
3. Tools of data collection; schedule and questionnaire:

Unit – III: Data Processing and Presentation
1. Processing and analysis of data: Editing, coding and tabulation; use of computers in social science research
2. Diagrammatic and graphic representation of data
3. Interpretation of results and Report writing – Preparation of Project Proposals.

Unit – IV: Statistical Inferences
1. Census Versus sampling -Random and Non-Random sampling Techniques.
2. Estimation – Point and interval estimation – Statistics and Parameter – Standard Error – Confidence interval.
3. Null and Alternative hypothesis – Type I Error and Type II Error, Level of Significance – Critical region – Steps in Testing of Hypothesis.

Unit – V: Large and small Sample Tests
1. Properties and uses of Normal Distribution – Standard normal 'Z' Statistic.
2. Z-Test of Significance of proportions, means and Correlation.
3. 't' Test for sample mean and Equality of mean – Paired 't' Test.
4. Chi-Square Test for Association of Attributes.

Text Books
1. C.R. Kothari (2002), Research Methodology Vikas publishing House, New Delhi.

Reference Books
1. Goode W. J and Hatt: (1952), *Methods in Social Research*, Mcgraw Hill Book Co, Tokyo.
2. Kenneth. D, and Bailey: (1962), *Methods of Social Research*, Longman's Green Co, New York.
3. Enhance. D.N, Fundamentals of Statistics: (1973), Kitab Mahal, Allahabad.
4. Gupta. C.B: (1998), *An Introduction to Statistical Methods*, Vikas publishing House, New Delhi.

ECOC – 104 ECONOMICS OF AGRICULTURE

Objectives
1. To make the students aware of the significance of agriculture in the development scenario of the nation.
2. To improve the conditions of agriculture for accelerating the pace of agricultural development in India.

Unit-I: Introduction
1.   Scope and Significance of Agriculture
2.   Agriculture and Industry - A Comparison
3.   Role of Agriculture in India's Development
4.   Inter-Sectoral Linkage - An Overview

Unit-II: Agricultural Production and Productivity
1.   Production Function Analysis - Relevance to Farm Production Economics.
2.   Productivity Trends; Low production and Productivity: Causes, Consequences and Measures.
3.   Farm Size - Efficiency relations in Indian agriculture - A.K. Sen's Hypothesis.
4.   Role of Technology in Agriculture - Structural Changes in Agriculture.

Unit-III: Agricultural Labour
1.   Agricultural Labour: Types – Supply of Labour – Problems
2.   Rural Unemployment: Types, consequences and remedial measures.
3.   Minimum wages for agricultural workers - An evaluation.
4.   Poverty Eradication programmes – Recent Wage and Self-Employment Programmes

Unit-IV: Agricultural Finance and Capital
1.   Agricultural Finance: Meaning, Nature, Types, Sources and Problems of Agricultural Finance.
2.   Co-operatives in Rural Finance.
3.   Role of Commercial Banks and NABARD in Rural Finance.
4.   Farm Capital - Meaning, Types, and Marginal Efficiency of Farm Capital and Capital formation in agriculture.

Unit-V: Agricultural Policy
1.   Agricultural Price policy - Objectives, instruments and impact.
2.   Economic Reforms and Agricultural policy – WTO and Agriculture
3.   Agricultural Taxation and its relevance.

Text Books
1. Ashok Rudra (1982). *Indian Agricultural Economics: Myths and Realities* (Allied publishers, New Delhi)
2. Dantwala M.L (ed) (1991). *Indian Agricultural Development since Independence*(Oxford and IBH Publishing company private limited, New Delhi).
3. Vasant Desai B.P (1996). *Agricultural Economics, Rural development* (Jai Prakash North, Meerut)

Reference Books
1. Hanumantha Rao C.H. (1975). *Technological changes and distribution of grains in India agriculture* (Macmillan, New Delhi).

Ruddar Datt and K.P.M. Sundharam (2001). *Indian Economy* [S.Chand andLtd.,RamNagar.NewDelhi]

ECOC-201 WELFARE ECONOMICS

Objectives
1.   In this course students will acquire the skills to normatively evaluate economic policies and think deeply about important social issues such as gender equity, income distribution and poverty.

Unit -1: Basic Concepts
1.   Positive and normative economics, welfare economics as a normative study
2.   Preference orderings
3.   utility function: properties of a utility function
4.   Interpersonal comparisons of utility: degrees of interpersonal comparability

Unit II: Measurement of Welfare
1. Ordinal measure, merits and demerits of ordinal measure
2. Cardinal measure: interval scale and ratio scale Merits and demerits of cardinal measure
3. Hicks's four measures of consumers' surplus

Unit-III: Definitions of Welfare
1. The preference definition of well-being
2. Utilitarian definition
3. Rawlsian welfare theory
4. Sen's capability approach.

Unit – IV Pareto Criterion and Compensation Tests
1.   The Pareto principle and assumptions underlying pareto optimality
2.   Conditions for Pareto optimality: efficiency in exchange, efficiency in production and efficiency in product-mix, Edgeworth Box Diagrams.
3.   The two fundamental theorems of welfare economics and Theory of second best
4.   Compensation tests : a) the compensation criteria of Kaldor and Hicks ;b) Scitovsky paradox and Scitovsky double criterion; c) Little's criterion

Unit-V: Social Choice
1.   Bergson-Samuelson social welfare function
2.   Types of social welfare functions: utilitarian, egalitarian and Rawlsian SWFs
3.   Arrow's impossibility , Resolving Arrow's paradox: single peaked preferences
4.   Sen's "paretian liberal" theorem

Textbooks
1.   Ng, Yew-Kwang (1983) *Welfare Economics: Introduction and Development of Basic Concepts* London: Macmillan
2.

Reference Books
1.Sen Amartya (2004) *Inequality Reexamined* Delhi:OUP, chapters 3,4,and 8
2.Ng, yew-Kwang (1983) *Welfare Economics: Introduction and Development of Basic Concepts* London: Macmillan

ECOC - 202 MONETARY THEORY AND POLICY

Objectives
1. To equip the students with basic theories of monetary economics
2. To make the students understand the role of financial institutions in a developing economy
3. To educated the students to understand the working of monetary policies in India

Unit – I: Demand for Money
1. Quantity theories of money – Fisher and Cambridge
2. Keynesian monetary theory
3. James Tobin's portfolio analysis of money demand
4. Don Patinkin`s Integration– Real Balance Effect
5. Milton Friedman's reformulated quantity theory

Unit – II: Supply of Money
1. Types and determinants of money supply – money multiplier
2. Theories of interest rate – classical – Keynes – Hicks – Hansen.

Unit – III: Money and Capital Market
1. Significance and functions of Money market and capital market
2. Role of financial intermediaries – Effects of financial intermediation
3. Non-banking financial institutions – Gurley and Shaw theory

Unit – IV: Banking
1. Functions of Commercial banks - Credit creation – process and limitations
2. Role of Commercial banks after nationalization – after reforms
3. Role of RBI – Regulation of money supply and credit
4. Narashimham Committee Reports– 1991 and 1998
5. Raguram Rajan Committee Report -2007

Unit – V: Monetary Policy
1. Objectives and Instruments of Monetary policy– Limitations of monetary policy
2. Monetarism and Keynesianism – Comparison - Supply side policies

Text Books
1. Jhingan, M.L. (2005). *Monetary Economics*[Konark Publication, New Delhi]
2. Sundaram, K.P.M. (2003). *Money, Banking and International Trade*[Vikas, New Delhi]
3. Vaish, M.C. (2004). *Money, Banking and International Trade* [New Age International, New Delhi]

Reference Books
1. Gupta, R.D. (1995). *Keynes and Post Keynesian Economics* [Kalyani Publishers, New Delhi]
2. Basil J. Moore (1965). *An Introduction to the Theory of Finance* [Oxford University Press]
3. Basu, S.K. (1975). *Recent Banking Development*[Chand and Co., New Delhi]
4. Johnson Harry (1957). *Essays in Monetary Economics* [George Allen Unwin].

ECOC-203 MATHEMATICAL ECONOMICS
<u>(At least 50 percentages of Questions must be problems in Numeracy and application skills)</u>

Objectives
1. To teach the students the meaning and significance of Mathematical Economics.
2. To develop in Economics skill in working out simple problems.

Unit – I: Static Equilibrium Analysis
1. Ingredients of an Economic Model-Mathematical Economics Vs Literary Economics-Relations and Functions of Two or more variables in Economics.
2. Partial market Equilibrium- Method of Elimination-Simultaneous Linear Equations-Cramer's rule using determinants-Properities of Determinants.
3. Matrix operations-Addition, Subtraction, Scalar Multiplication, Transpose and Inverse-Solving a system of linear equations using matrix inverse method – Input-Output Analysis – Assumptions, uses and limitations.

Unit – II: Comparative Static Analysis
1. Differential Calculus- Derivatives of a function in two or more variables –Total and partial derivatives – Rules of first and second order derivatives.
2. Applications of derivatives- Marginal values, Elasticity and Growth rate of a function and shape of graph of the function.
3. Optimum values of a function in two or more variables- First and Second order conditions-Lagrangian Multiplier method of constrained optimization.

Unit – III: Theory of Demand
1. Utility Function-Marginal Utility- Consumer's equilibrium- Proportionality rule-Marginal Rate of Substitution-Normal properties of Indifference Curves.
2. Slutsky equation-Separation of price effect into income and substitution effect.

Unit – IV: Theory of Production
1. Production Function-Marginal product-Isoquant- Marginal Rate of Technical substitution-Expansion Path–Elasticity of Substitution.
2. Properties of Homogeneous production Function, Application of Euler's theorem to the marginal Productivity theory of Distribution - Cobb-Douglas Production Function – Properties, uses and limitations.
3. Linear programming – Graphic method and Applications.

Unit – V: Theory of Firm
1. Cost Function – Marginal, Average and Total – Normal Cost conditions.
2. Revenue Functions –Marginal, Average and Total-Normal Revenue conditions
3. Profit maximization under Perfect competition and Monopoly.

Text Books
1. Chiang, C (1994) *Fundamental Methods of Mathematical Economics* (New Delhi: McGraw Hill).
2. Dowling Edward T (1989) *Mathematical Methods* (Schaum Series, New York).
3. Geoff Renshaw (2009) Maths for Economics (OxfordUniversity Press, London)
4. Metha, B.C. & Madnani, G.M.K. (2004), *Mathematics for Economists* (Sultan Chand & Sons- New Delhi).

Reference Books
1. Allen R.G.D. (1984), *Mathematical Analysis for Economics* (London: Macmillan).
2. Henderson J.M &R.N. Quandt (1979) *Micro Economic Theory* (New York: McGraw Hill).
3. Koutsyiannis. A (2002) *Modern Micro Economics* (New York: The Macmillan).
4. Lancaster K (1998) *Mathematical Economics* (New York: The Macillian).

ECOC-204 (1): MANAGERIAL ECONOMICS

Objective
1. The students will learn to apply principles of economics to the business decision making.

Unit-I Managerial Objectives of the Firm
1. Economics and management
2. Managerial models of the firm, (a) Sales –revenue –Maximizing model (Baumol), (b) Managerial utility maximizing model (Williamson), (c) Marris model.
3. Behavioral model to the firm , (a) " Satisfying" (b) X-Inefficiency

Unit-II Competitive Advantage
1. "Structure conduct – Performance" theory
2. "Generic strategies" for competitive advantage (Michal porter)
3. The " five forces " model of competition
4. Sustaining competitive advantage, (a) Economics of scale as barrier to entry- mergers, (b) differentiation as barrier to entry.

Unit-III Pricing Strategies
1. Price discrimination : First degree, Second degree and third degree price discrimination
2. Approached to Pricing: (a) Cost-plus pricing (b) target return pricing (c) product life cycle pricing: skimming strategy-penetration strategy (d) transfer pricing

Unit-IV Non Price Competition
1. Non-Price Competition : Components of the "marketing mix"
2. Promotion in marketing mix: (a) Dorfman-Steiner condition for advertising expenditure (b) Determinants of advertising elasticity of demand
3. Product policy and place in the marketing mix: (a) Product mix decisions
   (b) Place: selecting a "marketing channel"

Unit-V Investment Appraisal
1. The investment selection process
2. Estimating cash flows
3. Evaluating Investment: (a) payback method (b) net present value method
4. The cost of capital (a) dividend valuation model (b) Capital –asset pricing model

Text Books
1. Howard Davies (1998) : Managerial Economics London : Pitman
2. William Boyes (2005): The New Managerial Economics(Indian Adaptation Edition),New Delhi Biztantra

Reference Books
1. Ahuja H.L.(2008) Managerial Economics (S.Chand & Co, New Delhi)
   Mathur (2008) Managerial Economics (Power Book Mark)

ECOC-204(2)   INDUSTRIAL ECONOMICS

Objectives
1. To make the students understand the role of industries and corporate form of organization
2. To gain the knowledge of the new industrial policy and some issues in industry

Unit-I – Basic Concepts, Theory of Firm and Pricing
1. Concepts: Firm, Industrial Combination-Causes-conglomerate, cartel, pattern of industrialization– Economies of scale – Market structure.
2. Objectives of the firm – Growth of firms – Marginal cost pricing vs. full cost pricing – Depreciation –Administered prices.

Unit -II – Industrial Organization
1. Industrial Organization -Structure and change- Relevance of industry studies for public policy.
2. Monopoly and concentration: Concepts –Measures of monopoly – Control of monopoly-Industrial monopoly legislation- The Indian MRTP Act, 1969.

Unit –III – Theories of Industrial Location and Regional Development
1. Industrial location: Factors affecting industrial location - Measures of localization – Weber and Sargent Florence - Regional growth of industry in India
2. Need for balance regional development of Industries- Industrial policy on backward areas.

Unit –IV – Industrial Productivity and Finance
1. Industrial Productivity-Measures –factors affecting productivity- and efficiency.
2. Financial statements: Ratio analysis and interpretation.
3. Industrial finance-sources of finance- Industrial Development Bank of India – IFC-Objectives and functioning – Impact of these institutions.

Unit –V – Issues in Indian Industry
1. Public sector: Rationale-organization – Pricing policies – The question of efficiency – Performance of public sector in India – The concept of joint sector.
2. Industrial problems: Industrial sickness, Evaluation of Industrial reform measures
3. Industrial policy since 1991-Foreign capital and role of MMNC in India.

Text Books
1. Divine, P.J. *et al*., (1978). *An Introduction to Industrial Economics* 3e [George Allen and Unwin, London]
2. Hay, D.A. and D.J.Morris (1979). *Industrial Economics: Theory and Evidence* [Oxford University Press, Oxford]

ECOC-301 PUBLIC ECONOMICS

Objectives

1. To make the students appreciate relative roles of Government and market in resource allocation from a theoretical perspective.
2. To teach the students the working of the fiscal policy with emphasis on tax structure, debt management in the context of federal setup.

Unit – I:Introduction

1. Role of public finance - Major Fiscal functions.
2. Private and Public goods – Mixed goods –Merit goods- Social goods-Market failure Public goods and externalities.

Unit – II:Public Expenditure

1. Theories of Public Expenditure – Musgrave – Wagner - Peacock Wiseman– Growth of Public Expenditure – Canons and Evaluation of Public Expenditure.

Unit – III:Taxation and Public Debt

1. Direct and Indirect taxation – Cannons and Principles of Taxation – Theory of optimal taxation – modern theory of incidence.
2. Classification and Sources of public debt–Burden of public debt–Principles of public debt–Methods of repayment of public debt–Compensatory aspects of public debt policy

Unit – IV:Fiscal Policy and Fiscal Federalism

1. Objectives and Instruments of Fiscal policy –Compensatory Fiscal policy – Fiscal policy for Economic stability and growth– Effectiveness of fiscal policy.
2. Fiscal federalism – Role of finance commission – Principles –Recommendations of 12th Finance Commission and Terms of Reference of the 13th Finance Commission – Transfer of resources from Union and States and States to Local Bodies.

Unit – V:Indian Public Finance

1. Financial Autonomy in India – Tax Reform proposals of Kelkar Committee.
2. Tax structure and Working of Fiscal federalism in India – Resource transfer from union to state of Tamilnadu – VAT – Merits and Demerits.
3. Fiscal consolidation in India since 2001-2002 – Fiscal responsibilities of central and state.
4. Central and State government Budgets – issues of fiscal deficit
5. Fiscal policy and Economic downturn : Fiscal correction versus additional Stimulus

Text Books

1. Richard A Musgrave and Pegy B. Musgave (2000). *Public Finance in Theory and Practice* [New Delhi]
2. Singh S.K.(2004) , *Public Finance in theory and Practice* (S.Chand & Co)
3. Tyagi B.P. (1982). *Public Finance* [Jai Prakash Nath]
4. Sundaram, K.P.M & Andley K.K. (1998) *Public Finance in theory and Practice*   S.Chand & Co)

Reference Books

1. Kavita Rao R. (2004). *Impact of VAT Central & State Finance*, EPW No :26
2. Kelker V (2002), "*Indian Tax Reform Report of a Survey*". Ministry of Finance.
3. Lekha Chakravarthy (2008) "*Analysing the Raguram Rajan Committee Report on Finance Sector Reforms*" EPW 43 (25): 11-14 June -21-27.
4. Raja J Chelliah (1960). "*Fiscal Policy in Underdeveloped Countries: With Special Reference in India*" [George Allen And Unwin Ltd, London]
5. Rangarajan C. (2005) EPW No: 31, *Approach to 12th Finance Commission*.
6. Reddy T.T,*12th Finance Commission & Backward States,* EPW 41 (32): (Aug 12)
7. Reddy Y.V. (May 2008): *Fiscal Policy & Economics Reforms* (NIPEP) New Delhi.
8. Shankara Acharya (2006) "*30 years of Tax Reform in India*" EPW (April)

ECOC-302 INTERNATIONAL TRADE AND FINANCE

Objectives

1 To familiarize the students with trade theories and modern institutions.
2 To develop analytical skill of the students for identifying international economic problems and the complexities in international trade and policy

UNIT – I: PURE THEORY OF INTERNATIONAL TRADE

1. Comparative Cost Theory - Refinements of Comparative Cost Theory.
2. Modern Theory of Factor Endowments – Leontief Paradox.
3. Factor price equalization theorem – Factors Intensity Reversal: The Stolper-Samuelson Theorem and the Rybezynski Theorem.

UNIT-II: RECENT THEORIES OF INTERNATIONAL TRADE

1. Karvi's Theory of Availability – Lindar's Theory of Volume of Trade and demand pattern.
2. Posner's Technological Gap Theory – Vernon's Product Cycle Theory - Kenen's Human capital theory
3. Intra- Industry Trade – Theory of Imperfect Competition - Strategic Theory – External Economies and International Trade.

UNIT-III: BALANCE OF PAYMENTS POLICIES

1. BOP Disequilibrium – Adjustment Mechanism: Elasticity Approach, Absorption approach and Monetary Approach
2. Expenditure changing monetary and fiscal policy – Monetary and Fiscal policies for internal and external balance: The Swan Model and Mundallian Model
3. Expenditure Switching Policies and Expenditure Reducing Policies – Foreign Trade Multiplier

UNIT-IV: FOREIGN AID AND MNCs.

1. Foreign Aid - Types of Foreign aid – Advantages and Disadvantages – Factors determining foreign aid -
2. Foreign Investment – Foreign Direct investment – Types of FDI – FDI Policy of India.
3. Multinational Corporations – Features of Multinational Corporations - Advantages and Limitations of MNCs – MNCs and International Trade

UNIT-V: MANAGING FOREIGN EXCHANGE RISK

1. Foreign exchange risk - Sources of foreign exchange risk – types of exchange rate risk - Transaction risk, Translation risk, Economic risk.
2. Measurement of Exchange Rate Risk - value-at-risk (VaR) model. Methods of managing foreign exchange risk - internal and external techniques.
3. Forward contracts, Money market hedges, Currency futures, Currency Options, Currency swaps.

Textbooks:

1. Francis Cherunillam(2004),International Economics(Tata McGraw Hill,NewDelhi)
2. Paul Krugman and Maurice *International Economics: Theory and Policy* Obstfeld (New Delhi: Pearson, 2013)

References:

1. J.N. Bhagwati *Free Trade Today* (New Delhi: Oxford University Press, 2003),
2. Jeff Madura *International Financial Management* (Mason, Ohio: Southwestern Cengage Learning, 2011)
3. Sarno, Lucio; Mark P. Taylor & Jeffrey A. (2002), *The Economics of Exchange Rates* (Cambridge University Press, Frankel)

ECOC -303 DEVELOPMENT ECONOMICS

Objectives
1. The students will be introduced to the economic way of reasoning about economic progress and to traditional and contemporary thinking about the central issues pertinent to poor economics.

Unit – I :Introduction
1. Conceptualizing development: (a) GNP) as development indicator (b) Sen's capabilities approach to development: The Human Development Index.
2. The structural characteristics of developing economies
3. Factors of development : (a) Capital accumulation (b) Labour (c) Natural resources (d) Technological Progress (e) Social institutions cultural values and entrepreneurial ability.

Unit – II: Theories of Development
1. Development as growth: (a) Harrod-Doman model (b) Rostow's stages of growth theory (c) Lewis theory (d) balanced and unbalanced growth (e) Neo classical growth theory –Solow Model
2. Contemporary theory of development: (a) New growth theory: Romer model (b) Underdevelopment as Co-ordination failure (c) Kremer's O-Ring theory of development
3. Dependency theory-path dependence in development: QWERTY
4. 　　　　Geography and development: Krugman's theory

Unit – III : Poverty, Inequality and Human Capital
1. Measurement of inequality and poverty-Inverted –U hypothesis -Cause of inequality
2. Investing in education and health-the human capital approach.
3. Education and Development(a) social and private benefits of education
   (b) education, inequality and poverty (c)Women's education and development
4. Health system in development (a) health and productivity (b) financing health system in developing economics (c) Gender perspective in health care.

UNIT – IV: Agriculture and Rural Development
1. The role of agriculture in development
2. Agricultural policy : (a) agricultural taxation (b) pricing policy
3. Risk aversion and uncertainty in subsistence farming-sharecropping and   interlocking factor markets
4. Rural urban migration –Todaro model –Rural credit markets (a) providers and characteristics (b) theories of informed credit markets: lender's monopoly and default collateral

Unit- V: Policies for development
1. Market and the state in development:(a) The Washington consensus components and critical evaluation (b) The role of state in development (c) market failure state failure and development
2. Trade Policy in development : (a) import substitution (b) export promotion
3. Fiscal policy for development: (a) direct Vs indirect taxes (b) pattern and level of taxation.
4. Financial system in development: (a) the role of financial system in development (b) role of central banks (c) financial liberalization.

Text Books
1. Michael p. Todaro and Stephen C. Smith (2004) *Economic Development,* Pearson Education, Singapore cha- 2, 6,7, 8,
2. Yujiro Hayami (2003), *Development Economics: New DelhiOxfordUniversity Press*

Reference Books

1. Debraj Ray (2009) Development Economics, New Delhi, OxfordUniversity Press
2. Jomo K.S. and Ben Fiveth (Eds); (2005), "The New Development Economics: London Zes Books and New Delhi, Tulika Books
3. World Development Reports, (The World Bank1998,2005,2007,and 2009)

ECOC -304 HUMAN RESOURCE DEVELOPMENT AND POLICY

Objectives
1. To make the students understand the utilization of human resources
2. To familiarize the students with the measures for human resource development

Unit-I Introduction
1. Human resource development – Concept and background – Need and importance
2. Role of human resource development and productivity
3. Human capital formation and skill formation – Factors influencing human resource development.

Unit-II – Education
1. Role of education in human resource development
2. Investment in education – Effects of education – Economic impact of education
3. Women's education and human resource development in developing countries.

Unit-III Nutrition and Health
1. Economics of public health – Factors affecting health – Preventive and curative services – Investment in public health
2. Health policies of India – Health policies with special reference to women's health.

Unit-IV Entrepreneurship
1. Role of entrepreneurship in development – Factors stimulating entrepreneurship – Principles of entrepreneurship
2. Entrepreneurial skills for the poor and unemployed – Need for entrepreneurship in developing countries.

Unit-V Manpower Planning
1. Meaning, need and importance of manpower planning – Objectives and methods of manpower planning
2. Manpower planning in LDCs, Manpower shortages – Manpower surpluses – Strategy for manpower planning
3. Human resource policy in India

Text Books
1. Gerald M.Meier (2006). *Leading Issues in Economic Development* [OxfordUniversity Press, London]
2. T.V.Rao (1996). *Human Resource Development – Experiences, Interventions, Strategies* [Sage Publications, New Delhi]
3. Suresh Chandra Shukla and Rekha Kaul (1998). *Education, Development and Underdevelopment* [Sage Publications, New Delhi]
4. B.R.Virmani [1996]. *Economic Restructuring Technology Transfer and Human Resource Development* [Sage Publications, New Delhi]

Reference Books
1. G.S.Becker (1995). *Human Capital: A Theoretical and Empirical Analysis* [ColumbiaUniversity Press, New York]
2. F. Harbison and C.A.Myers (1975). *Education, Manpower, and Economic Growth* [OxfordUniversity Press, London]
3. Daniel J.B. Mitchell and Mahmood A. Zaidi (Ed) (1990). *The Economics of Human Resource Management* [Basil Blackwell, United Kingdom]
4. George Psacharopoulos and Maureen Woodhall (1985). *Education for Development: An Analysis of Investment Choices* [OxfordUniversity Press, London]
5. Mark Blaug (1969). *Human Capital Theory* [OxfordUniversity Press, London]
6. Peter Drucker (1980). *Innovation and Entrepreneurship* [Oxford University Press, London]

SOSC 306- SOFT SKILLS
For All the 2 Year PG Programmes of Arts Faculty

Objective:

To train students in soft skills in order to enable them to be professionally competent.

Unit 1: Soft Skills and Personality Development

Soft Skills: Meaning and Importance - Hard Skills versus Soft Skills - Self Concept: Self Awareness, Self Development and Self Realisation – Power of Positive Attitude – Etiquette and Manners.

Listening: Types of Listening, Effective Listening and Barriers to Listening – Assertive Communication.

Unit 2: Communication Skills

Oral Communication: Forms, Types of Speeches and Public Speaking – Presentation: Elements of Effective Presentation and Use of Visual Aids in Presentation.

Written Communication: Strategies of Writing – Business Letters: Form, Structure and Formats – Types of Business Letters – Memos – Agenda and Minutes.

Non-verbal Communication: Body Language and Proxemics.

Unit 3: Interpersonal Skills

Interpersonal Skills: Relationship Development and Maintenance and Transactional Analysis. Conflict Resolution Skills: Levels of Conflict and Handling Conflict - Persuasion – Empathy – Managing Emotions – Negotiation: Types, Stages and Skills – Counselling Skills.

Unit 4: Employability Skills

Goal Setting – Career Planning – Corporate Skills – Group Discussion – Interview Skills – Types of Interview - Email Writing – Job Application – Cover Letter - Resume Preparation.

Unit 5: Professional Skills

Decision Making Skills – Problem Solving – Emotional Intelligence – Team Building Skills – Team Spirit – Time Management – Stress Management: Resolving Techniques.

References:

1. Ghosh, B.N. *Managing Soft Skills for Personality Development*. (Ed). New Delhi: Tata McGraw Hill Education Pvt. Ltd., 2012.

2. Krishna Mohan and Meera Banerji. *Developing Communication Skills*. (2nd Edition). New Delhi: MacMillan Publishers India Ltd., 2009.

3. Neera Jain and Shoma Mukherji. *Effective Business Communication.* New Delhi: Tata McGraw Hill Education Pvt. Ltd*.,* 2012.

4. Rao, M.S. *Soft Skills - Enhancing Employability: Connecting Campus with Cororate.* New Delhi:I.K International Publishing House Pvt. Ltd., 2011.

5. Ashraf Rizwi, M. *Effective Technical Communication*. New Delhi: Tata McGraw Hill Education Pvt. Ltd., 2010.

ECOC-401 ENVIRONMENTAL ECONOMICS

Objectives
1. To learn the importance of environmental system for economic system.
2. To make the students understand the environmental issues from the view point of economic incentives and placing monetary values on the environment.
3. To teach the need to balance economic growth and environmental protection, especially in the context of "sustainable development".

Unit – I: Economy and the Environment
1. The interaction between the economic system and the environmental system – The services provided by the environmental system to the economic system – The Material Balance model.
2. Types of Pollutants: Cumulative and non- cumulative; Local, régional and global; Point source and non- point source.
3. Welfare effects of pollution: Local and global air pollution (acid rain, ozone depletion, global warming), water pollution, municipal solid waste.

Unit – II: Market and the Environment
1. Conditions for efficient functioning of markets.
2. Market failure and environmental damage – Environmental damage as an externality – Environmental goods as public goods – Asymmetric information and environmental damage; adverse selection, moral hazard.
3. Property rights and environmental damage: the Coase Theorem.
4. "Government failure" and environmental damage.
5. Pollution control Policies – Command-and-control policy – Market based instruments: Pollution taxes, tradable permits, subsidies.

Unit – III: Environmental Valuation
1. Cost-Benefit analysis
2. The need for environmental valuation - The categories of environmental value.
3. Methods of environmental valuation – Revealed preference methods: Hedonic pricing method, travel cost method: - Stated preference approach; Contingent Valuation Method.

Unit – IV: Natural Resource Economics
1. Types of natural resources, the McKelvey classification.
2. Measuring resource scarcity: Resource lifetime, unit cost measures, real prices, economic rent - Allocating non-renewable resources: The Hotelling Theorem.
3. Renewable resources – Forests: Frontier model and immiserisation models of deforestation; Consequences of deforestation; - Fisheries: "Efficient sustainable yield"; - Water: Efficient allocation of surface and ground water.
4. Common Property Resources (CPRs) – Characteristics of CPRs -Dissipation of Hotelling rents ("tragedy of the commons") - Ostrom's "design principles" for sustainable local CPR governance.

Unit – V: Economic Growth and Sustainable Development
1. Growth and the environment: The environmental Kuznets curve.
2. The "limits to growth" Club of Rome model.
3. Economics of sustainable development – Brundtland Commission definition – Theories of sustainable development: weak sustainable development and strong sustainable development – sustainability rules: The "Hartwick rule"; Safe minimum standards; -

Measuring sustainable development: "green national accounts"; genuine savings - Link between poverty and environmental degradation

4. Economics of Climate Change – Summary of Stern Review.

Text Books

1. Hanley, Nick, J.F. Shogren, and Ben White (2001): *Introduction to Environmental Economics* (London: OxfordUniversity Press).
2. Karpagam M. (1998) *Environmental Economics* (Streling Publishers, New Delhi).

Reference Books
1. Field, Barry C (2001): *Natural Resource Economics: An Introduction* (London: McGraw Hill).
   2. Sankar U (2000) *Environmental Economics* (OxfordUniversity Press: New Delhi).

ECOC-402 INDIAN ECONOMIC DEVELOPMENT AND POLICY

Objectives

1. To make the students familiar with the issues in Indian economic development.
2. To gives an insight into the functioning of the economy through macroeconomic policies and instruments.
3. To train the students with working of diverse economic policies in India.

Module-1: Growth and Structural Change

1. Indian economy at Independence
2. The policy framework: statist policy, transition to market-oriented policy, role of erstwhile Planning Commission And NITI Ayog
3. Two phases of growth (1950-1980 and 1980 onwards), factors underlying turnaround
4. Structural change in Indian economy

Module 2: Agricultural and Industrial Sectors Agricultural Sector

1. Performance of agricultural sector, factors determining agricultural growth
2. Factors underlying food inflation
3. Agricultural price policy and food security
4. Industrial Growth - Industrial growth before and after reforms - Dualism in Indian manufacturing
5. Issues in performance of public sector enterprises and privatisation

Module-3: Fiscal Developments, Finance and External Sector

1. Expenditure trends
2. GST: rationale and impact
3. Evolution of the financial sector in post-liberalisation period
4. External sector performance: emergence of India as major exporter in services, performance of manufacturing sector

Module-4: Poverty and Inequality

1. Measuring poverty in India: Selection of poverty lines
2. Poverty in pre and post liberalization periods
3. Impact of growth on poverty
4. PDS vs cash transfers, feasibility of universal basic income in India
5. Inequality in India in pre and post liberalization periods

Module-5: Social Issues

1. Gender gap in India and trends in female labour force participation rates, factors determining female labour force participation
2. Employment : changing nature of employment in India, "jobless growth"
3. Labour in informal sector
4. India's demographic transition

Textbook

Indian Economy SInce Independence Edited by Uma Kapila (New Delhi: Academic Foundation), the latest edition

Supplementary Reading

Economic Survey 2018 and subsequent editions (Government of India: Ministry of Finance)

ECOP-403

COMPUTER APPLICATIONS IN ECONOMICS

Objectives

To equip skill in applying statistical tools to Economics using computers

Unit–I - Text Management with MS-WORD

Creating new Documents –Document template – Typing Text – Editing Text – Insert Text – Go to, Find, and Replace text or word - Formatting of Text – Format painter – Cut and Paste utility - Copying Document/text in the same or Different file or Document – Drag and drop of typed text- creating tables – using auto correct, dictionary thesaurus.

Unit–II - Managing Data Base

EXCEL: The typical worksheet or spread sheet – cell and their properties – formatting cell – text, numbers, currency, accounting, date, time, percentage, scientific – formats.

Formula: using arithmetic and relational operators in a worksheet -Advanced Formulas: sum, count, Average, Max, Min, Product -Using auto format

Unit-III - Graphs and Charts

1. Bar diagrams, pie charts, Area,
2. Building Line Diagrams, Histograms, Scatter plots
3. Frequency Graphs, Ogive, Lorenz curve
4. Time Series

Unit– IV - Data Analysis-I

1. Naming variables - Coding and Recoding of data - Arithmetic calculations with in variables
2. Descriptive Statistics: Frequencies, Descriptive, Explore, Cross Tabulation
3. Compare Means: One sample T- test, Independent Sample T – test, paired sample T test, One way ANOVA
4. Correlation: Bivariate, Partial,
5. Regression: Linear, Curve Estimation, Multiple Regression

Unit-V - Data Analysis–II

1Classification: K-means cluster, Hierarchical cluster, Discriminant function

2Non-parametric Test: Chi-square, Bi-nomial

3Time Series – Exponential Smoothing, Auto regression, Seasonal Decomposition

Text Books

1. Lipschuztz M.M. and S. Lipschultz (1982) *Theory and problems of Data processing : Schaum's Outline Series*, (McGraw Hill, New York

2.Corey Sandler, Tom Badgett, Jan Weingarten (1997) *Office 97 for Windows*(BPB Publications, New Delhi)

3. Andy Field (2000). *Discovering Statistics Using SPSS for Windows – Advanced Techniques for the Beginner* [Sage Publications, New Delhi]

ECOE – 105 ECONOMICS OF CLIMATE CHANGE

Objectives

    To familiarize the students with the economic aspect of climate change

Unit-1: Introduction
1. The roots of climate change: greenhouse gas emissions and rising global temperature
2. Climate change and economic development: a) climate change –economy   transmission mechanisms; b) impact of climate change on human well-being: known and uncertain impacts c) The " tipping points" of dangerous climate change
3. Impact of climate change on developed and poor economies

Unit-2: Economic Policies for Climate change Mitigation
1. The need for climate change mitigation
2. Economic explanation of climate change: the concept of "market failure" and how it causes climate change
3. Using prices and markets for climate change mitigation: taxes, carbon emissions trading ('cap-and-trade') and regulations promoting green technology
4. Ethics of climate change : limits of cost-benefit analysis

Unit-3: Adapting to Climate Change
1. The case for Adaptation to climate change
2. Adaptive management of riska : managing physical, financial and social risks
3. International action and adaptation in developing nations

Unit-4: Natural Resources Management and Climate Change
1. The fundamentals for natural resource management
2. Economics of water use in context of climate change
3. Climate change and efficient management of agriculture and fisheries
4. Sustainable energy

Unit-5: Local and Global Action
1. Economic incentives for "climate smart" Individual action
2. The role of firms in climate change adaptation and mitigation
3. National and International policies for "climate smart" innovation and technology diffusion

Text & Reference Books
1. Nicholas Stern (2010), *A Blueprint For A Safer Planet* London :Vintage Books
2. United Nations development Programme (2007) *Human Development Report 2007/2008: Fighting Climate Change* Available online http://hdr.undp.org/en/reports/global/hdr2007-2008/
3. The World Bank (2010) *World Development Report 2010: Development and Climate Change* Full text online : *http://econ.worldbank.org*

ECOE-205 ECONOMICS IN EVERYDAY LIFE

Objectives
1. To introduce the economic way of thinking about society.
2. The students will learn to use basic economic reasoning to reflect on a wide range of issues in a society.

Unit – I: Thinking about Prices
1. How are prices determined: The concept of willingness to Pay.
2. Understanding Inflation: Meaning of Inflation and how it is measured in India.
3. Inflation rate and the prices you pay in shops: why they diverge.
4. Application: why prices are higher in some locations than others although the production and selling costs are identical.

Unit – II: Economics of Social Customs
1. Economics of rising age of marriage and declining family size.
2. How economic globalization is changing the Indian family.
3. Economics of gift-giving: why value of gift in kind is higher compared to gift in cash.
4. Application: Reasoning about economic Inequality between men and women

Unit – III: Economics of Social Evils
1. Discrimination: Why discrimination can be "rational" and the economic harm it causes.
2. Pollution: The economic roots of the pollution problem.
3. Addiction: Economic case for legalizing drugs as solution to addiction.
4. Corruption – An Economists Perspective
5. Application: Why prohibition does more harm than good: An Economic Perspective.

Unit – IV: Economics of Arts, Sports, and Science
1. Understanding the declining demand for performing arts from economic perspective.
2. Economics of Sports: Role of economic competition in sporting activity.
3. Economics and Science: What motivates scientific research?
4. Application: How economic Globalization and commercialization enrich Indian music.

Unit – V: National Issues
1. The Union Budget and you – Taxes, Subsidies and Fiscal Deficit
2. How the stock market works – Bulls and Bears
3. The global economic crisis: Its origin and impact on India.
4. Application: Living through an economic downturn.

Text and Reference Books
1. Robert J. Stonebraker (2005), *The Joy of Economics: Making Sense of Life*, Online book available free at http://www.facutly.winthrop.edu.stonebraker/book.html
2. Tim Harford (2000), *The Logic of Life: Discovering the New Economics of Everything*, (London: Little)

ECOE-305 ECONOMICS OF NATURAL DISASTERS

Objectives
1. To make the students understand economic impact of natural disasters.
2. To teach them appropriate economic policies.

Unit – I: Introduction
1. The goal of disaster economic analysis
2. Important terminology-hazard, vulnerability, disaster, disaster risk, mitigation, preparedness, rehabilitation and reconstruction.
3. Types of hazards - Natural hazards- Man made hazards

Unit – II: Economic Effects of Disasters
1. Direct effects-Indirect effects -Secondary effects
2. Consequences of disasters - measurement of consequence -Tangible losses - Intangible losses

Unit – III: Disaster Risk Reduction and Mitigation
1. Quantification of disaster risk: UNDP's Disaster Risk Index.
2. Components of disaster risk reduction –Role of market.
3. Integrating disaster risk in poverty reduction strategy and incorporating disaster risk in economic appraisal.
4. Vulnerability context - Source of Vulnerability - Tools for assessing hazard-induced Vulnerability - Vulnerability indicators.
5. Mitigation of economic and human impact.

Unit – IV: Intervention Policies
1. Differences in intervention for natural and human – made disasters
2. Policy instruments for disaster intervention
3. Interventions for general multi – sectoral disasters - Disasters involving displaced populations - Disasters leading to food insecurity - Disaster expected from climate change.

Unit – V: Finance Options
1. Debt swaps-Triangular food aid.
2. Disaster insurance
3. Revolving funds-Central bank assistance.

Text Books
1. Ahmad, Ayaz: (2003), Disaster Management,(Anmol Publications. New Delhi).
2. Ghosh, G.K: (2007),Disaster Management; Saujanya Books.
3. Ross Bull (1994) Disaster Economics, UNDP, Disaster Management Training Programme.

Reference Books
1. AgarwalS.K:(2006),*Perspectiveson Organisational Disaster Management,(*Indian Books).
2. Benson, Charlotte and John Tuigg: (2007), *Tool for Mainstreaming Disaster Reduction* Geneva: Prevention consortium (online ed) (unit-3).
3. Bull Ross: (1994), *Disaster Economics* UNDP, DHA, (online ed) .
4. Institution of Civil Engineers: (1995), *Modalities: Reducing vulnerability to Natural disasters,* (London: ODA.)
5. Kamal Taori: (2007), *Disaster Management Through Panchayat Raj*, (Concept Publishers).
6. Richard Sylves: (2008), *Disaster Policy and Politics,* **(**SAGE Publications.)
7. Satish Modh *Citizen's Guide to Disaster Management*: (2006), (Macmillan Press India.)

ECOE-405 ENVIRONMENTAL AUDIT

Objectives

1. This course is intended to introduce accounting skills to enable decision makers to evaluate the environmental strategy of a firm.
2. The course deals with various facets of environmental accounting such as economic valuation of environment, corporate environmental accounting and green national accounts.

Unit – I: Approaches to Environmental Valuation
1. "Total Economic Value" of the Environment - Cost – Benefit Analysis
2. State Preference Approaches: Contingent Valuation Method
3. Revealed Preference Approaches: Travel Cost & Hedonic Pricing Method.
4. Production Function Approach: Dose-Response Model

Unit – II: Environmental Risk and Environmental Impact Assessment
1. Assessing Environmental Risks - Choice Under Risk - Valuing Risks to life -Regulating Risk
2. Environmental Impact Assessment - Information Gathering - Impact Assessment and Mitigation Measures - EIA Report and Review

Unit – III: Environmental Cost Accounting
1. Full Cost Accounting
2. Internal Environmental Cost Accounting
3. External Environmental Cost Accounting: Internalizing Externalities

Unit – IV: Environmental Information Management
1. Life Cycle Assessment
2. Environmental Share Holder Value
3. Environmental Reporting - Environmental Audit

Unit – V: Green National Accounts
1. Limitations of Conventional National Accounts
2. Genuine Savings - Environmentally Defensive Expenditures
3. Integrated Economic and Environmental Accounting (IEEA)

Text and Reference Books
1. Hanley, Shogren and White (2001) *Introduction to Environmental Economics* (Oxford University Press).
2. Richard Welford (1996) *Corporate Environmental Management*, Chapter 7, 8, and 9.
3. Schaltegger, Buritt and Peterson (2003) *Corporate Environmental Accounting* (Greenleaf Publishing).