

**CURRICULUM AND CREDIT FRAMEWORK FOR
UNDERGRADUATE PROGRAMMES**

Syllabus for

**Department of Economics
Nagaland University**

(Approved 12th December, 2023)

2023

Major Course (Core papers):

Paper Code	Course Code	Title of the paper	Total Credit
FIRST SEMESTER			
C-1	EC1.CC1	Introductory Microeconomics	4
C-2	EC1.CC2	Mathematical Methods for Economics – I	4
SECOND SEMESTER			
C-3	EC2.CC3	Introductory Macroeconomics	4
C-4	EC2.CC4	Mathematical Methods for Economics – II	4
THIRD SEMESTER			
C-5	EC3.CC5	Intermediate Microeconomics – I	4
C-6	EC3.CC6	Statistical Methods for Economics	4
FOURTH SEMESTER			
C-7	EC4.CC7	Intermediate Microeconomics – II	4
C-8	EC4.CC8	Intermediate Macroeconomics – I	4
FIFTH SEMESTER			
C- 9	EC5.CC9	Intermediate Macroeconomics – II	4
C-10	EC5.CC10	Introductory Econometrics	4
C-11	EC5.CC11	Indian Economy	4
SIXTH SEMESTER			
C-12	EC6.CC12	Development Economics I	4
C-13	EC6.CC13	Public Economics	4
C-14	EC6.CC14	International Economics	4
C-15	EC6.CC15A	Political Economy – I	4
	EC6.CC15B	Applied Econometrics	

SEVENTH SEMESTER			
C-16	EC7.CC16A	Political Economy – II	4
	EC7.CC16B	Money and Banking	
C-17	EC7.CC17A	Economics of Health and Education	4
	EC7.CC17B	Economic history of India (1857-1947)	
C-18	EC7.CC18A	Environmental Economics	4
	EC7.CC18B	Development Economics II	
C-19	EC7.CC19	Research Methodology	4
EIGHTH SEMESTER			
C-20			4
C-22			4
C-22			4
C-23			4

1. C-20, C-21, C-22 and C-23 may be planned later (after receiving NEP guidelines for P.G. Programme)
2. For C-15, C-16, C-17 and C-18, students are to choose one paper each respectively from the given options (A & B).
3. C-19 will be common for whole UG course, therefore individual department need not proposed the contents for this paper.

FIRST SEMESTER

**Introductory Microeconomics
(C-1)**

**Course code: EC1.CC1
Credit: 4**

Course description:

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

UNIT – 1: Exploring the Subject Matter of Economics

Concept, scope and methodology of economics; the basic economic problems; science of economics; role of price mechanism; economic systems

UNIT – II: Demand and Supply

Law of demand and supply; determinants of individual demand and supply; Market versus individual demand and supply; shifts in the demand and supply curves; Elasticity and its applications. Consumer and producer surplus.

UNIT – III: Consumer Theory

Utility approach – cardinal and ordinal; consumer preferences; indifference curves; the marginal rate of substitution; revealed preference- theorem and hypothesis.

UNIT – IV: Costs and Revenue

Costs and cost curves: Derivation of Short and long run cost curves and their relationships. Revenue and revenue curves under perfect and imperfect markets.

UNIT – V: Market Structure

Concept and features of Perfect and imperfect competition; the production process; Equilibrium of a firm and industry under perfect competitive market: short run and long run

Reading List

Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
N.Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

Mathematical Methods for Economics – I
(C- 2)

Course code: EC1.CC2
Credit: 4

Course description:

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general.

Unit - I Sets and Functions

Sets – Concepts and types; Venn diagram; numbers of elements and Cartesian products. Functions – types of function and its applications; system of equations.

Unit – II: Number system

Uses of numbers; axiomatic properties of real number and completeness; complex numbers; graphical representation of complex number.

Unit –III: Analytical Geometry

Application of straight line; points and lines; slope of the line curves; distance and section formulas, parabola, circle.

Unit-IV: Differentiation

Functions and Limits; Differentiation; Rules of differentiation, Marginal revenue, average revenue, total revenue, marginal cost, average cost and total cost, Maxima and Minima, profit maximisation.

Unit-V: Integration of functions

Indefinite integrals - Rules of integration; Techniques of integration- substitution rule, integration by parts and partial fraction; Applications to economic problems; Derivation of total functions from marginal functions; Definite integrals - properties of definite integrals; Application in case of consumer's surplus and producer's surplus.

Reading List:

K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.

GS Monga: *Mathematics and Statistics for Economics*.

SECOND SEMESTER

**Introductory Macro Economics
(C-3)**

**Course code: EC2.CC3
Credit: 4**

Course Outline:

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Unit –I: Introduction to Macroeconomics

Meaning: Nature and Scope of Macroeconomics. Concepts, definition, importance and methods of measuring National Income; difficulties in measuring National Income; Circular Flow of income; two sector and three sector model .

Unit – II: Theories of Income and Employment.

The Classical Theory of Employment (Say’s Law and Pigou’s Wage Cut Policy). Keynesian systems- Simple Keynesian model of income determination; Aggregate Demand and Aggregate Supply, equilibrium aggregate output. Fiscal and Monetary multipliers.

Unit – III: Money

Definition of Money-Functions of Money: Quantity Theory of Money. Money Supply: Measures of Money Supply. Credit Creation: Tools of Monetary Policy.

Unit – IV: Inflation

Inflation – meaning, types, causes and effects; demand-pull and cost-push inflation, Inflationary gap. Deflation – meaning, effects; Inflation Vs. deflation; Hyperinflation - causes of hyperinflation, costs of hyperinflation; Anti-Inflationary Measures - Monetary policy and Fiscal policy, Trade-off between Inflation and Unemployment (Philip’s Curve).

Unit -V. Balance of Payments

Meaning and components of BOP; Equilibrium; causes of disequilibrium in the BOP; measures to control deficit in the BOP; BOP and BOT. Adjustment mechanisms of BOPs.

Reading List

Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition,2010.

N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition,2010.

Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition,2009.

Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition,2005.

Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education,Inc., 7th edition,2011.

Errol D’Souza, *Macroeconomics*, Pearson Education,2009.

Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

Mathematical Methods for Economics – II
(C- 4)

Course code: EC2.CC4
Credit: 4

Course Outline:

This course is the second part of a compulsory two-course sequence. This part is to be taught in Semester II following the first part in Semester I. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this Syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general.

Unit -1. Matrix Algebra

Matrix – different types and its elementary operations; Rank of Matrix, simultaneous solution; Determinants – basic operations, properties and solution, Cramer’s rule.

Unit-II. Partial and total differentiation

Partial differentiation and marginal product; Further application of partial differentiation; Second order partial differentiation; Unconstrained optimization with two variables; Total differentiation.

Unit-III. Constrained optimization (with equality constraints)

Constrained optimization by substitution; Lagrange multiplier; constrained maximization and minimization with two variables; Constrained optimization with more than two variables.

Unit-IV. Unconstrained optimization

First order for maximum and minimum; second order condition for maximum and minimum, Profit maximization; Inventory control.

Unit-V. Differential and difference Equations.

Basic principles of differential equation; Solution of differential equation; first order of differential equation; Definition and Solution of Difference equation; first order of difference equation.

Reading List

Rosser Mike, 2003, Basic Mathematics for Economist, second edition, Routledge Publication.

Monga GS, 2002, Mathematics and statistics for economics, second edition, Vikas Publication.

Yamane Taro, 1998, mathematics for economist, second edition, Prentice hall India publication.

THIRD SEMESTER

Intermediate Microeconomics-1
(C- 5)

Course code: EC3.CC5
Credit: 4

Course Outline:

The course is designed to provide a sound training in microeconomic theory to formally analyze the behaviour of individual agents. Since students are already familiar with the quantitative techniques in the previous semesters, mathematical tools are used to facilitate understanding of the basic concepts. This course looks at the behaviour of the consumer and the producer and also covers the behaviour of a competitive firm.

Unit-I: Consumer Theory I

Preferences and Utility: Axioms of Rational Choice, Utility, Trades and Substitutions; Indifference Curves, Utility Functions for Specific Preferences, The Many-Good case
Utility Maximization and Choice: The Two-Good Case (Graphical Analysis), The n-Good Case; Indirect Utility Function, the Lump Sum Principle, Expenditure Minimization, Properties of Expenditure Function.

Unit-II: Consumer Theory II

Income and Substitution Effects - under Normal, Inferior and Giffen goods (Hicksian and Slutsky's), Slutsky's equation, Compensated and ordinary demand curves; buying and selling; choice under risk and inter-temporal choice; revealed preference theory.

Unit-III: Production function

Technological relationship between outputs and inputs, Basic Concepts: TP, AP, MP, Isoquants, properties of isoquants, Isoquant map, Marginal Rate of Technical Substitution, Elasticity of Substitution, Expansion path, returns to scale; Production with One Variable Input (labour) and with Two-Variable Inputs. Special cases of Production Functions -Linear, Fixed Proportions, Cobb-Douglas.

Unit -IV: Cost Theories

Traditional and modern theory of cost; recent development in cost theory; Analysis of economies of scale – real and pecuniary.

Unit-V: Labour Market

Labour markets: basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; labour demand curves; shifts in labour demand curves; competitive labour market and public policy.

Reading List:

Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.

C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.

B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Tata McGraw- Hill (India), 2009.

Statistical Methods for Economics

(C- 6)

Course code: EC3.CC6

Credit: 4

Course Description

This is a course on statistical methods for economics. The course is basically concentrated of sampling and probability. The course begins with basic concepts that are fundamental to statistical analysis and inference followed the principal steps that are essential for sample survey and its methods are discussed. The concepts and theorems of probability are also taught which then follows with discussions on random variables. The course concludes with the study of probability distribution such as properties of discrete and continuous series.

Unit-I: Introduction to Statistics.

Basic concepts, importance and limitations of statistics; primary and secondary data, sampling and census; questionnaire, interview and observation methods of collecting data.

Unit- II: Sampling

Principal steps in a sample survey; methods of sampling (probability and non-probability); Merits and limitations of sampling, sampling and non-sampling errors.

Unit- III: Measure of Central Tendency and Dispersion

Measures of central tendency-Mean, Median and Mode, Measure of Dispersion: Range, Quartile deviation, Mean deviation, Standard deviation, Variance and Coefficient of variation, Moments, Skewness and Kurtosis.

Unit IV: Elementary Probability

Probability - concepts of Sample Space and Events, Probability of an Event, Addition and Multiplication Theorems, Conditional Probability and Independence of Events, Inverse Probability, Bayes' Rule, Mathematical Expectation,

Unit- V: Time Series and Index Numbers.

Time series analysis- concept and components, measurement of trend, determination of seasonal variations. Index numbers- concept, methods of constructing index numbers (Laspeyers, Paaches and Fishers index, Family budget method, Chain index numbers), Problems in construction and limitation of index numbers.

Reading List:

Gupta, S. P. and V. K. Kapoor, (1993), *Fundamentals of Applied Statistics*, S. Chand & Sons, New Delhi

Larsen, Richard J. and Morris L. Marx (2011), *An Introduction to Mathematical Statistics and its Applications*, Prentice Hall.

Cochran, William G. (2007), *Sampling Techniques*, Jon Wiley.

FOURTH SEMESTER

Intermediate Microeconomics – II **(C-7)**

Course code: EC4.CC7
Credit: 4

Course Description

This course is a sequel to Intermediate Microeconomics I. The emphasis will be on giving conceptual clarity to the student coupled with the use of mathematical tools and reasoning. It covers general equilibrium and welfare, imperfect markets and topics under information economics.

Unit- I: Wages and Rent

Wage differential; marginal productivity theory of wages; modern theory of wage. Rent-concepts; scarcity rent, differential rent; quasi rent; Ricardian theory of rent

Unit- II: Theories of Profits

Profits: innovation, risk, rent, dynamic and uncertainty

Unit- III: Welfare Economics

Welfare economics - Nature, scope and concept; criterion of measuring social welfare - Paternalist, Cardinalist, Pareto and Bentham, welfare maximization; value judgment

Unit- IV: Imperfect Market Structure

Monopoly: pricing with market power; price discrimination. Monopolistic competition: short-run and long-run, Chamberlin. Oligopoly: Cournot and Sweezy.

Unit- V: Market Failure

Meaning of Externalities, externalities in consumption and production, externalities and allocative inefficiency. Solutions to the externality problem - the Coase theorem; Public goods, Government intervention of public goods; Asymmetric information - complex contracts, principal-agent problem, hidden actions, owner manager relationships, moral hazards, adverse selection, signaling.

Reading List

Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, 8th edition, W.W. Norton and Company/Affiliated East-West Press (India), 2010. The workbook by Varian and Bergstrom could be used for problems.

C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.

Intermediate Macroeconomics-1
(C- 8)

Course code: EC4.CC8
Credit: 4

Course Outline:

This course introduces the students to formal modeling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Unit-I: Consumption Function

Short run and long run consumption functions; APC, MPC, APS, MPS, Fundamental Psychological Law of Consumption and its Implications; Theories of Consumption - Absolute, Relative, permanent and life cycle hypothesis.

Unit-II: Investment Function

Gross and Net, Induced and Autonomous Investment; Marginal Efficiency of Investment (MEI). Marginal Efficiency of Capital (MEC) and its measurement, short-run and long-run Factors, Investment multiplier and accelerator principle.

Unit III: Theories of Interest

The Classical theories of Interest, Loanable Fund theory, Keynes Liquidity Preference theory of Interest, Modern theory of Interest.

Unit IV: Theories of Trade Cycle

Meaning, phases of business cycle, Hawtray's Monetary theory of Trade cycle, Schumpeter theory of innovations, Kaldor's theory of trade cycle, Samuelson's model, Hicks model of trade cycle.

Unit V: Open Economy Model

Short Run Open Economy Model, Mundell Fleming model, Expenditure Switching policies, the Mint parity theory, and Purchasing Power Parity, Assets Market approach: Dornbush's Overshooting Model, International Financial Markets.

Reading List

Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.

N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.

Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.

Steven M. Sheffrin, *Rational Expectations*, Cambridge University Press, 2nd edition, 1996.

Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.

Errol D'Souza, *Macroeconomics*, Pearson Education, 2009

Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

FIFTH SEMESTER

Intermediate Macroeconomics-II
(C- 9)

Course code:EC5.CC9
Credit: 4

Course Description

This course is a sequel to Intermediate Macroeconomics I. In this course, the students are introduced to the long run dynamic issues like growth and technical progress. It also provides the micro-foundations to the various aggregative concepts used in the previous course.

Unit-I: Supply of Money

Financial Intermediation; Money supply and High-Powered Money; money multiplier; Mechanistic model of bank deposit determination, Behavioural model of money supply determination

Unit- II: Post Keynesian Theories of Demand for Money

Patinkin's Real Balance Effect, Tobin portfolio approach, Baumol Inventory Approach Friedman Quantity Theory Approach

Unit- II: Monetary Policy

Monetary policy objectives and targets, 'H' Theory of Money, Money Multiplier, RBI's monetary policy. Role of Monetary policy, Recent development in Indian Monetary System.

Unit-IV: Fiscal Policy

Fiscal policy objectives and targets, Role of Fiscal policy and economic stabilisation; crowding-out Effect and effectiveness of Fiscal policy; Recent Developments in Indian Fiscal System.

Unit- V: Banking Sector

Central Bank, Commercial banks, Regional Rural Banks, Cooperative and Non-Banking Financial Corporations and Microfinance Institutions.

Reading List

Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition,2010.

N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition,2010.

Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition,2009.

Charles I. Jones, *Introduction to Economic Growth*, W.W. Norton & Company, 2nd edition,2002.

Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition,2011.

Errol. D'Souza, *Macroeconomics*, Pearson Education,2009.

Robert J. Gordon, *Macroeconomics*, Prentice-Hall India Limited,2011.

Introductory Econometrics
(C- 10)

Course code: EC5.CC10
Credit: 4

Course Description

This course provides a comprehensive introduction to basic econometric concepts and techniques. The course adopts a step-by-step approach of introducing students to the concepts and techniques of econometric analysis. The course begins with an introduction to the definitions and scope of econometrics. Then students will be introduced to simple and multiple regression models and the issues involved in Classical Linear Regression Modelling. There is a separate unit to discuss the use of dummy variables in econometric analysis. The course also covers the consequences of and tests for misspecification of regression models.

Unit- I: Introduction

Definition and scope of econometrics; Methodology of econometric research; Historical origin of the term regression and its modern interpretation; Statistical vs. deterministic relationship; regression vs. causation, regression vs. correlation; Terminology and notation; The nature and sources of data for econometric analysis.

Unit- II: Statistical Concepts

Normal distribution; chi-sq, t- and F-distributions; estimation of parameters; properties of estimators; testing of hypotheses: defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test; tests for comparing parameters from two samples.

Unit- III: Simple Linear Regression Model

Two Variable Case Estimation of model by OLS method: Assumptions; Properties of Least Square Estimators (BLUE) in SLRM: Gauss-Markov Theorem; Testing of regression coefficient; Test for regression as a whole: Coefficient of determination.

Unit- IV: Multiple Linear Regression Model

Multiple Regression Analysis: The problem of estimation, notation and assumptions; meaning of partial regression coefficients; the multiple coefficients of determination: R^2 and the multiple coefficients of correlation; R^2 and adjusted R^2 ; partial correlation coefficients; interpretation of multiple regression equation.

Unit-V: Relaxing the Assumptions of CLRM

Introduction to Multicollinearity, Heteroscedasticity & Autocorrelation: the nature of the problem; its detection and corrective measures.

Reading List:

- Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. (2014). *Essentials of Statistics for Business and Economics*. Boston: Cengage Learning.
- Gujarati, D. N., Porter, D.C., & Gunasekar, S. (2017). *Basic Econometrics*. (5thed.). New Delhi: McGraw-Hill.
- Gupta, S. P. and V. K. Kapoor, (1993), *Fundamentals of Applied Statistics*, S. Chand & Sons, New Delhi.
- Sharma, J. K. (2010). *Fundamentals of Business Statistics*. (2nded.). New Delhi: Vikas Publishing House.
- Studenmund, A. H. (2016). *Using Econometrics: A Practical Guide*. (7thed.). New Delhi: Pearson.
- Koutsoyiannis, A. (1973). *Theory of Econometrics*. New York: Harper & Row.
- Wooldridge, J. M. (2014). *Introductory Econometrics: A Modern Approach* (4thed.). New Delhi: Cengage Learning.
- R. Carter Hill, William E Griffiths and George Judge, *Undergraduate Econometrics*.

Indian Economy
(C- 11)

Course code: EC5.CC11
Credit: 4

Course Description:

Using appropriate analytical framework, this course reviews major trends in economic indicators. And policy debates in India in the post-Independence period with particular emphasis on paradigm shifts and turning points.

Unit- I: Economic Development Strategy since Independence

Characteristics of Indian Economy –dualistic, mixed and a planned developing economy; determinants of economic growth and developments; key and strategic role of PSUs; economic crises and NEP 1991. Fiscal and monetary reforms in the context of New Economic Policy.

Unit – II: Demographic Features and Growth Distribution

Demographic features, Rural – Urban Migration and Occupational Structure. Unemployment- Government policies and measures of unemployment in India.

Poverty: Poverty in India and Strategy of Poverty alleviation. Income inequality - Government policies and measures.

Nagaland:- Demography, Poverty, Unemployment, Structural Composition and Infrastructural Development.

Unit – III: Policies and Performance in Economic Sectors

Agriculture: Changing structure of Indian agriculture, growth and productivity, Green revolution, WTO and agriculture, Nagaland Agriculture.

Industry: Pattern of Industrialization, growth and productivity in the post reform period, Disinvestment and privatization, and Industrial policy reforms.

Service: Role of the service sector in the Indian Economy, Growth and composition of the service sector, Trade in services and WTO.

Unit – IV: Economic Planning and National Income

Meaning and rationale of Planning, Basic strategies, objectives and achievements of planning, inclusive development - NITI Aayog. Measures for growth performance, national income by industrial origin.

Unit – V: External Sectors

Role of Foreign Trade; Trends in export and imports; Composition and Direction of India's foreign trade; Balance of payments position- Pre and Post Reform period and crises; Export promotion measures and the new trade policy; Foreign capital - FDI and MNCs.

Readings List:

Jean Dreze and Amartya Sen, 2013. *An uncertain Glory: India and its Contradictions*, Princeton University Press.

Pulapre Balakrishnan, 2007, *The Recovery of India: Economic Growth in the Nehru Era*, *Economic and Political Weekly*, November.

Himanshu, 2010, *Towards New Poverty Lines for India*, *Economic and Political Weekly*, January.

Misra S.K. and Puri V.K. – *Indian Economy. Its Development and Experiences*. Himalayan Publishing House.

Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.

Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, *Agricultural Growth in India Since 1991*, *RBI DEAP Study no.27*.

B.N. Goldar and S.C. Aggarwal, 2005, *Trade Liberalisation and Price-Cost Margin in Indian Industries*, *The Developing Economics*, September.

P. Goldberg, A. Khandelwal, N. Pavcnik and P. Topalova, 2009, *Trade Liberalisation and New Imported Inputs*, *American Economic Review, Papers and Proceedings*, May.

Kunal Sen, 2010, *Trade, Foreign Direct Investment and Industrial Transformation in India*, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.

SIXTH SEMESTER

Development Economics – I
(C- 12)

Course code: EC6.CC12
Credit: 4

Course Description

This is the first part of a two-part course on economics of growth and development. The course begins with the fundamental concepts on growth and development. It then proceeds to aggregate model of growth and development and cross-national comparison of the growth experience that can help evaluate these models. The course ends by studying on investment and planning.

Unit – I: Concepts of Growth and Development

Meaning of economic development and underdevelopment; distinction between economic growth and development; measurement and indicators of economic development; factors affecting growth; importance of agriculture; industry and infrastructure in economic development

Unit – II: Theories of Economic Development

Adam Smith, Ricardo, Malthus and J. S. Mill; Karl Marx and Schumpeter; Development as freedom – A. Sen's view

Unit – III: Theories of Economic Growth

Harrod-Domar, Solow, Joan Robinson, Kaldor, Romer and convergence hypothesis

Unit – IV: Partial Theories of Growth and Development

Circular causation; Stages of growth; Big push theory; Balanced and Unbalanced growth.

Unit – V: Investment and Planning

Meaning and need for planning, types of planning; Investment criterion, choice of technique in LDC; Project evaluation cost – benefit analysis

Reading List:

Debraj Ray, *Development Economics*, Oxford University Press, 2009.

Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007.

Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University Press, 2006.

Kaushik Basu, *The Oxford Companion to Economics in India*, OUP, 2007.

Amartya Sen, *Development as Freedom*, OUP, 2000.

Daron Acemoglu and James Robinson, *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, 2006.

Robert Putnam, *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton University Press, 1994

Public Economics
(C -13)

Course code: EC6.CC 13
Credit: 4

Course Description

Public economics is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures. The subject encompasses a host of topics including public goods, market failures and externalities. The paper is divided into two sections, one dealing with the theory of public economics and the other with the Indian public finances.

Unit - I: Introduction

Public Finance: meaning and scope, distinction between public and private finance; public good versus private good; Market failure and role of government, Externalities.

Unit- II: Public Expenditure

Theories of public expenditure- Wagner's law of increasing state activities – Peacock Wisemans hypothesis- Principle of Maximum Social advantage –Growth and pattern of public expenditure, Effects of public expenditure-Cost benefit analysis.

Unit- III: Taxation & Public Debt

Approaches to taxation- Benefit approach, Ability to pay approach and Neutrality approach Elasticity and buoyancy of taxation-incidence and shifting of taxation-Types and classification of taxes and VAT, Approaches to public debt.

Unit- IV: Fiscal Policy & Federal Finance

Definition of fiscal policy and its objectives; Fiscal Policies for redistribution of income and wealth and stabilization – fiscal policies in a developing country, federal financial structure and its main features – Direct taxes-Income tax-Corporate tax. Indirect tax structure- Union excise duties, customs duties, sales tax –VAT, Centre-State financial Relations.

Unit- V: Budget

Budget – Classification of budgets –Economic, Functional, organizational, classification of budgets- performance, programming and zero based budgets- surplus, balanced and deficit budgets. Concepts of budget deficit and their implications – State and Central budgets.

Reading List

Atkinson, A Band J.E Siglitz (1980) :Lecturers on Public Economics, Tata McGraw Hill, New York..

Buchanan, J M (1970) :The Public Finances, Richard D Irwin, Homewood.

Goode, R (1986) : Government Finance in Developing Countries, Tata McGraw Hill, New Delhi.

Houghton, J M (1970) : The Public Finance: Selected Readings, Penguin, Harmondsworth.

Jha, R (1998): Modern Public Economics, Routledge, London.

Menutt, P (1996) :The Economics of Public Choice, Edward Elgar, U.K.

Musgrave, R A and P.B. Musgrave (1976) : Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.

International Economics
(C- 14)

Course code: EC6. CC 14
Credit: 4

Course Description

This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

Unit I: Introduction:

Meaning, Features and importance of International Trade. Inter-Regional and International Trade; Terms of trade; an overview of world trade.

Unit II: Theories of International Trade

The Ricardian, Specific Factors and Heckscher - Ohlin Models, New Trade Theories (Product cycle theory and the Krugman Model), Firms in the Global Economy- outsourcing and Multi-National Enterprises.

Unit III: Trade Policies

Instruments of Trade Policies, Political Economy of Trade Policies, Controversies in Trade Policies.

Unit IV: International Macroeconomic Policy

Fixed versus Flexible Exchange Rates, International Monetary System, Financial Globalisation; import quota

Unit V: International Economic Institutions and Trading Blocks

International Monetary Fund (IMF), World Bank, World Trade Organisation (WTO), Asian Development Bank (ADB), ASEAN (Look East/ Act East Policy).

Reading List

Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012.

Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011.

Bo Sodersten and Geoffrey Reed, *International Economics*, Macmillan Press Ltd. 3rd edition, 1994

Political Economy – I
(C- 15)

Course code: EC6.CC15A
Credit: 4

Course Description

This course explores changes in the organisation of production, labour market institutions and corporate structure. It goes on to study the consequences of globalization, especially of financial flows, for the role of the state, economic performance, gender issues, environment, human welfare and development.

Unit – I: Introduction and Overview

Introduction and Historical Overview, Perspective on political economy with a historical overview: Capitalist development in the pre-second world war period, “the golden age” and later.

Unit – II: Changing Dynamics in Production

Changing Dynamics of Capitalist Production, Organisational Form and Labour Process Fordist and Post-Fordist production; Changing dynamics of organisation of production, markets and labour process; the changing nature of job security and labour rights.

Unit – III: Era of Globalisation

The State in the Era of Globalisation: Welfare, Development and Autonomy Globalisation and the limits of the welfare state, development and state autonomy.

Unit – IV: Social Dimensions

The Social Dimension, Globalisation and uneven development – growth, inequality and exclusion.

Unit – V: New Perspectives

New Perspectives Gender in work, accumulation and globalisation; issues in environment and sustainability; alternatives ahead.

Reading List:

Michel Beaud, A History of Capitalism, 1500-2000, trans. by Tom Dickman and Anny Lefebvre, New York: Monthly Review Press, 2001.

Ash Amin (ed.), Post-Fordism: A Reader, Blackwell, 1994.

Fran Tonkiss, Contemporary Economic Sociology: Globalisation, Production, Inequality, Chapter 4 (Fordism and After), Routledge India 2008 reprint, 2006.

Applied Econometrics (C- 15)

**Course code: EC6.CC15B
Credit: 4**

Course Description:

This course provides a comprehensive introduction to some of the advanced econometric concepts and techniques. The course begins with an introduction to lag modelling and covers distributed as well as dynamic models. Then follows Simultaneous Equation Models and deals in depth with the issue of simultaneity and its solutions. The students will then be introduced to the analysis of two major types of data used in econometric analysis viz. time series and panel data. Also covers different approaches to econometric forecasting. Some of the important testing procedures such as Granger Causality, Unit root tests, Seasonality tests, Structural break test, Co-integration test and Model stability tests will be introduced to the students during this course. The modules will be delivered using econometric software applications such as EViews, SPSS or STATA.

Unit- I: Regression Diagnostics and Specification

Specification Errors; types, Consequences and test of specification errors, Errors of measurements, incorrect specification of the stochastic error terms, Model selection Criteria; R² criterion, AIC, SIC and Mallow's Cp criterion.

Unit-II: Panel Data Regression Model

Introduction to panel data; Constant coefficient model; Fixed effect LSDV model; Fixed effect WG model; Random effects model, Properties of estimators.

Unit-III: Dynamic Econometric Models

Lags in econometric models; Distributed lag model; Autoregressive lag model; Reasons for lags; Estimation of distributed-lag model, The Koyck Approach to distributed-lag model; Rationalisation of Koyck model: The adaptive expectations model, partial adjustment model; Estimation of autoregressive models; The method of instrument variable (IV); Causality in economics: The granger causality test.

Unit-IV: Simultaneous Equation Models

Nature of simultaneous equations models; Simultaneous equation bias; Structural models; Reduced form models; Identification problem; Rules of identification; Tests for simultaneity and exogeneity; Method of indirect least squares (ILS); Method of two-stage least squares.

Unit-V: Basic Concepts of Time Series Econometrics

Introduction to time series; Stationary and non stationary time series; Spurious regression; Unit root tests: Dickey fuller and Augmented dickey fuller tests; Transforming non-stationary time series; Co-integration: Testing for co-integration, error correction mechanism.

Reading List:

Jeffrey M. Wooldridge, *Econometrics*, CENGAGE learning, India Edition, 2009.

Dimitrios Asteriou and Stephen Hall, *Applied Econometrics: A Modern Approach*, Palgrave Macmillan, 2007.

Damodar Gujarati, *Econometrics by Example*, Palgrave Macmillan, 2011.

SEVENTH SEMESTER

Political Economy -II
(C-16)

Course code: EC7.CC16A
Credit: 4

Course Description

Employing perspectives from alternative schools of thought, this course explores the development of the structure and institutions of capitalist economies and their relationship to social and political forces. Students are expected to read some classic texts as well as more recent commentaries.

Unit – I: Social Change in Historical Perspective

Analyzing Social Change in Historical Perspective, The method of historical materialism; the transition from feudalism to capitalism; capitalism as a historical process – alternative perspectives.

Unit – II: Perspectives of Capitalism

Capitalism as an Evolving Economic System- Basic features, accumulation and crisis; the modern corporation; monopoly capitalism— alternative perspectives.

Unit – III: The State and the Economy

The State in Capitalism, the state and the economy – contestation and mutual interdependence; the state as an arena of conflict; imperialism – the basic foundations.

Unit – IV: Role of Finance

The Changing Role of Finance, the changing role of finance in capital accumulation and corporate structure; finance and globalisation - financialisation, financial liberalisation and financial crisis.

Unit – V: Global Economic Instability and Crisis

The 2008 global economic crisis – Prelude, Immediate and Long-term structure and causes

Readings List:

J. Gurley, "The Materialist Conception of History", Ch.2.1 in R. Edwards, M. Reich and T. Weisskopf (ed.), *The Capitalist System*, 2nd edition, 1978.

O. Lange, *Political Economy*, vol. 1, 1963, Chapters 1 and 2.

E.K. Hunt, *History of Economic Thought*, M.E. Sharpe, Indian edn, Shilpi Publications, 2004.

Irfan Habib, 1995, "Capitalism in History", *Social Scientist*, Vol. 23: 15-31.

R.L. Heilbroner, "Capitalism", in *The New Palgrave Dictionary of Modern Economics*, Macmillan, 1987. Also reprinted as Chapter 2 in *Behind the Veil of Economics* by R.L. Heilbroner, W.W. Norton, 1988.

P. Sweezy, *The Theory of Capitalist Development*, Monthly Review Press, 1942.

Money and Banking
(C -16)

Course code: EC7.CC16B
Credit: 4

Course Description:

This course exposes students to theory and functioning of the monetary and banking sectors of the economy, with exclusive discussions on the Indian context. It discusses the monetary institutions, functions and determinants of money supply, commercial banking and monetary policy and interest rates.

Unit – I: Money

Evolution, concepts and functions of money, role of money, measurement; theories of money - demand and supply determination.

Unit – II: Commercial Banks

Functions, role, credit creation and its limitations. Bank nationalization – rationale and review.

Unit – III: Central Banking and Monetary Policy

Functions and role in developed and developing economies; targets and constraints of monetary policies; instruments of monetary controls; monetary management in an open economy and current monetary policy in India.

Unit – IV: Banking System

Balance sheet and portfolio management – objectives and theories of portfolio management.

Indian banking system; changing role and structure; banking sector reforms

Unit – V: Interest Rates

Determination, sources of interest rate differential; theories of term structure of interest rate; interest rates in India.

Reading Lists

- Ball, L. (2011). Money, Banking and Financial Markets. Macmillan.
- Burton, M., & Brown, B. (2014). Financial System of the Economy: Principles of Money and Banking: Principles of Money and Banking. Routledge.
- Durlauf, S. N., and Blume, L. (2010). Monetary Economics. Palgrave MacMillan
- Handa, J. (2009). Monetary Economics. Routledge.
- Jayadev, M. (2013). Basel III Implementation: Issues and Challenges for Indian banks. IIMB

Management Review, 25(2), 115-130.

Mishkin, F. S. (2007). *The Economics of Money, Banking, and Financial Markets*. Pearson Education.

Reinhart, C. M., & Rogoff, K. S. (2009). *This Time is Different: Eight Centuries of Financial Folly*. Princeton University Press.

Sen, S., & Ghosh, S. K. (2005). Basel Norms, Indian Banking Sector and Impact on Credit to SMEs and the Poor. *Economic and Political Weekly*, 40(12), 1167-1180

Economics of Health and Education
(C -17)

Course code: EC7.CC17A
Credit: 4

Course Description

This course allows making decisions to improve health outcomes and lifestyles through the study of interactions between different stakeholders. In broad terms, health economists study the functioning of healthcare systems and factors determining health and quality of life of individuals. Health economics generally deals with the purpose and planning of budgeting which is required to be done in the health care delivery system for providing care.

Unit – I: Health, Education and Human Development

Concepts - Human development indices; linkages - income on human development, human development on income, education on agriculture, health on income, women and human development.

Unit – II: Education: An Investment in Human Capital

Rate of return to education; private and social investment on health; theories of discrimination; gender and caste in India; Education towards health care

Unit – III: Evaluation of Health Care

Health system; Costing, cost effectiveness and cost-benefit analysis; burden of diseases.

Unit – IV: Overview – Health and Education in India

Importance of health and education; health outcomes – life expectancy, infant mortality rate; growth of health institutions – private and public; education outcomes – literacy rate (gender-wise), enrolment ratio, growth of educational institutions – private and public.

Unit – V: Economic Growth and Human Development in India

State-wise –per capita income, NSDP, human development index, gender-related development index, human poverty index; happiness index;

Reading List:

- Phelps, C. E. (2012). *Health Economics*. (5th ed.). London: Routledge.
Saterre, R. E, &Neun S P. (2007). *Health Economics: Theories, Insights and Industry Studies*. (5th ed.). New Delhi: Cengage Learning India Private Limited.
William, Jack, Principles of Health Economics for Developing Countries, World Bank Institute

Development Studies, 1999.

World Development Report, Investing in Health, The World Bank, 1993.

Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics: Theory and Public Policy, Addison Wesley, 2005.

Vero Y. Economic Growth and Human Development in Nagaland, Heritage Publishing House, Dimapur, 2016.

Economic History of India (1857 to 1947)
(C-17)

Course code: EC7.CC17B
Credit: 4

Course Description

This course analyses key aspects of Indian economic development during the second half of British colonial rule. In doing so, it investigates the place of the Indian economy in the wider colonial context, and the mechanisms that linked economic development in India to the compulsions of colonial rule. This course leads directly to the course of India's economic development after independence in 1947.

Unit – I: Colonial India

Background: Colonial Trade in India during pre-1857, Overview of colonial economy: drain of wealth; economic, social and religious impacts of colonisation in India.

Unit – II: Macro Trends

Trends of National income; Population; Occupational structure

Unit – III: Agriculture

Agrarian structure and land relations; agricultural markets and institutions – credit, commerce and technology; trends in performance and productivity; famines

Unit – IV: Railways and Industry

Railways: Role of railways in the colonial period. The deindustrialization debate; evolution of entrepreneurial and industrial structure; nature of industrialisation in the inter-war period; constraints to industrial breakthrough

Unit – V: Economy and State in the Imperial context

The imperial priorities and the Indian economy; International trade – direction and composition; Capital flows and the colonial economy – changes and continuities; Government and fiscal policy

Reading List:

L. Subramaniam, History of India 1707-1857, Ch. 4, pp 129-179.

C. A. Bayly, Indian Society and the Making of the British Empire, The New Cambridge Eco History of India. Orient Longman, 1987, Conclusion, pp 200-206.

A.K. Bagchi, “Deindustrialisation in India in the Nineteenth Century: Some theoretical implications”, Journal of Development Studies, 1976 (pp. 135-145)

[This reading should be used as an essential background to P. Parthasarathy's article in Section 4.]

Environmental Economics
(C-18)

Course code: EC7.CC18A
Credit:4

Course Description

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. Economic implications of environmental policy are also addressed as well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments. Selected topics on international environmental problems are also discussed.

Unit –I: Introduction

Environmental economics: meaning, definition, nature and scope and limitation. Economy and Environment linkages, population and environment linkages.

Unit –II: Theories of externality

Pareto optimality and market failure in the presence of externalities, property rights and Coase Theorem, public goods and public bads market failure.

Unit – III: Evolution and implementation of environmental policy

Evolution of environmental regulation, environmental legislation/policies in India. Instruments for Pollution control. Command and control policy versus market-based instruments.

Unit – IV: Environmental valuation methods and Applications

Total economic valuation of environmental goods, concept of willingness to pay (WTP) and willingness to Accept (WTA). Stated preference methods and Revealed preference methods

Unit –V: Sustainable Development

Evolution, concept, definitions, indicators, measurements, perspective from Indian experience.

Readings list

Roger Perman, Yue Ma, Michael Common, David Maddison and James McGilvray, “Natural Resource and Environmental Economics”, Pearson Education/Addison Wesley, 4th edition, 2011.

Charles Kolstad, “Intermediate Environmental Economics”, Oxford University Press, 2nd edition, 2010.

Robert N. Stavins (ed.), “Economics of the Environment: Selected Readings”, W.W. Norton, 6th edition, 2012.

Robert Solow , “An Almost Practical Step toward Sustainability,” Resources for the Future 40th anniversary lecture,1992.

Kenneth Arrow et al. , “Are We Consuming Too Much?” Journal of Economic Perspectives, 18(3): 147-172, 2004.

IPCC (Intergovernmental Panel on Climate Change), Fifth Assessment Report (forthcoming 2014).

Development Economics – II
(C -18)

Course code: EC7.CC18B
Credit: 4

Course Description

This is the second module of the economic development sequence. It begins with basic demographic concepts and their evolution during the process of development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. The course ends with reflections on the role of globalization and increased international dependence on the process of development.

Unit – I: Poverty and Inequality

Concept and Measures of poverty- Head count ratio, Sen's Index, HPI, MPI, Inequality measures- Gini Coefficient and Lorenz Curve, PQLI, HDI, GDI, GEM, Connections between inequality and development, Mechanisms that generate poverty traps and path dependence of growth processes.

Unit – II: Dualism and Economic Development

Dualism – geographic, social and technological Myrdal's theory of cumulative causation. The regional inequalities in the context of economic development, Inverted U relationship between spatial inequality and economic development; the centre periphery thesis.

Unit – III: Financing Economic Development

Saving, capital formation and economic development; Financial sector and economic development; Micro credit and economic development; Taxation, public borrowing and economic development.

Unit – IV: Environment and Sustainable Development

Development and Environment inter-linkage, Environment-Development Kuznet's U shape relationship, Economic activity and climate change, environmental externalities and state regulations of the environment, Concept of Green GDP and Sustainable development

Unit – V: Globalisation

Globalisation in historical perspective, the economics and the politics of multilateral agreements, trade, production patterns and world inequality; financial instability in the globalised world

Reading List

Debraj Ray, *Development Economics*, Oxford University Press, 2009.

Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007.

Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University

Press, 2006.

Thomas Schelling, *Micromotives and Macrobehavior*, W. W. Norton, 1978.

Albert O. Hirschman, *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*, Harvard University Press, 1970.

Raghuram Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, 2010.

Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, 1990.

Dani Rodrik, *The Globalization Paradox: Why Global Markets, States and Democracy Can't Coexist*, Oxford University Press, 2011.

Michael D. Bordo, Alan M. Taylor and Jeffrey G. Williamson (ed.), *Globalization in Historical Perspective*, University of Chicago Press, 2003.

-Research Methodology
(C -19)

Course code: EC7.CC19
Credit: 4

(Note: It will be a common course for whole UG course. Individual department need not propose the course syllabus)

**Introductory Microeconomics
(Core Course 1)**

**Course code: EC1.CC1
Credit: 6
Total No. of hours: 90 Hrs.**

Core Course 1: Introductory Microeconomics

Course description:

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

UNIT – 1: Exploring the Subject Matter Of Economics

Concept, scope and methodology of economics; the basic economic problems; science of economics; role of price mechanism; economic systems

UNIT – II: Demand and Supply

Law of demand and supply; determinants of individual demand and supply; Market versus individual demand and supply; shifts in the demand and supply curves; Elasticity and its applications. Consumer and producer surplus.

UNIT – III: Consumer Theory

Utility approach – cardinal and ordinal; consumer preferences; indifference curves; the marginal rate of substitution; revealed preference- theorem and hypothesis.

UNIT – IV: Costs and Revenue

Costs and cost curves: Derivation of Short and long run cost curves and their relationships. Revenue and revenue curves under perfect and imperfect markets.

UNIT – V: Market Structure

Concept and features of Perfect and imperfect competition; the production process; Equilibrium of a firm and industry under perfect competitive market: short run and long run

Reading List

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
 2. N.Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
 3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.
-

Mathematical Methods for Economics – I
(Core Course 2)

Course code: EC1.CC2

Credit: 6

Total No. of hours: 90 Hrs.

Course description:

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Unit - I Sets and Functions

Sets – Concepts and types; Venn diagram; numbers of elements and Cartesian products. Functions – types of function and its applications; system of equations.

Unit – II: Number system

Uses of numbers; axiomatic properties of real number and completeness; complex numbers; graphical representation of complex number.

Unit –III: Analytical Geometry

Application of straight line; points and lines; slope of the line curves; distance and section formulas; parabola; circle.

Unit-IV: Differentiation

Functions and limits, Differentiation; Rules of differentiation, Marginal revenue, average revenue, total revenue, marginal cost, average cost and total cost, Maxima and Minima, profit maximisation.

Unit-V: Integration of functions

Indefinite integrals - Rules of integration; Techniques of integration- substitution rule, integration by parts and partial fraction; Applications to economic problems; Derivation of total functions from marginal functions; Definite integrals - properties of definite integrals; Application in case of consumer's surplus and producer's surplus.

Reading List:

K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.

GS Monga: *Mathematics and Statistics for Economics*.

Principles of Microeconomics–I
(Generic Elective 1)

Course code: EC1.GE1
Credit: 6
Total No. of hours: 90 Hrs.

Course description:

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

UNIT – 1: Exploring the Subject Matter of Economics

Concept, scope and methodology of economics; the basic economic problems; science of economics; role of price mechanism; economic systems

UNIT – II: Demand and Supply

Law of demand and supply; determinants of individual demand and supply; Market versus individual demand and supply; shifts in the demand and supply curves; Elasticity and its applications. Consumer and producer surplus.

UNIT – III: Consumer Theory`

Utility approach – cardinal and ordinal; consumer preferences; indifference curves; the marginal rate of substitution; revealed preference

UNIT – IV: Costs and Revenue

Costs and cost curves: Derivation of Short and long run cost curves and their relationships. Revenue and revenue curves under perfect and imperfect markets.

UNIT – V: Market Structure

Concept and features of Perfect and imperfect competition; the production process; Equilibrium of a firm and industry under perfect competitive market: short run and long run

Reading List

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
 2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
 3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.
-

**Introductory Macro Economics
(Core Course 3)**

Course code: EC2.CC3

Credit: 6

Total No. of hours: 90 Hrs.

Course Outline:

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Unit –I: Introduction to Macroeconomics

Meaning: Nature and Scope of Macroeconomics.

Concepts, definition, importance and methods of measuring National Income; difficulties in measuring National Income; Circular Flow of income; two sector and three sector model .

Unit – II: Theories of Income and Employment.

The Classical Theory of Employment (Say's Law and Pigou's Wage Cut Policy). Keynesian systems- Simple Keynesian model of income determination; Aggregate Demand and Aggregate Supply, equilibrium aggregate output. Fiscal and Monetary multipliers.

Unit – III: Money

Definition of Money-Functions of Money: Quantity Theory of Money. Money Supply: Measures of Money Supply. Credit Creation: Tools of Monetary Policy.

Unit – IV: Inflation

Inflation – meaning, types, causes and effects; demand-pull and cost-push inflation, Inflationary gap. Deflation – meaning, effects; Inflation Vs. deflation; Hyperinflation - causes of hyperinflation, costs of hyperinflation; Anti-Inflationary Measures - Monetary policy and Fiscal policy, Trade-off between Inflation and Unemployment (Philip's Curve).

Unit -V. Balance of Payments

Meaning and components of BOP; Equilibrium; causes of disequilibrium in the BOP; measures to control deficit in the BOP; BOP and BOT. Adjustment mechanisms of BOPs.

Reading List

Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition,2010.

N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition,2010.

Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition,2009.

Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition,2005.

Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education,Inc., 7th edition,2011.

Errol D'Souza, *Macroeconomics*, Pearson Education,2009.

Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

Mathematical Methods for Economics – II
(Core Course 4)

Course code: EC2.CC4
Credit: 6
Total No. of hours: 90 Hrs.

Course Outline:

This course is the second part of a compulsory two-course sequence. This part is to be taught in Semester II following the first part in Semester I. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this Syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Unit -1. Matrix Algebra

Matrix – different types and its elementary operations; Rank of Matrix, simultaneous solution; Determinants – basic operations, properties and solution, Cramer’s rule.

Unit-II. Partial and total differentiation

Partial differentiation and marginal product; Further application of partial differentiation; Second order partial differentiation; Unconstrained optimization with two variables; Total differentiation.

Unit-III. Constrained optimization (with equality constraints)

Constrained optimization by substitution; Lagrange multiplier; constrained maximization and minimization with two variables; Constrained optimization with more than two variables two variables.

Unit-IV. Unconstrained optimization

First order for maximum and minimum; second order condition for maximum and minimum
Profit maximization; Inventory control.

Unit-V. Differential and difference Equations.

Basic principles of differential equation; Solution of differential equation; first order of differential equation; Definition and Solution of Difference equation; first order of difference equation.

Reading List

Rosser Mike, 2003, Basic Mathematics for Economist, second edition, Routledge Publication.
Monga GS, 2002, Mathematics and statistics for economics, second edition, Vikas Publication.
Yamane Taro, 1998, mathematics for economist, second edition, Prentice hall India publication.

Principles of Microeconomics–II
(Generic Elective 2)

Course code: EC2.GE2
Credit: 6
Total No. of hours: 90 Hrs.

Course Description

This is a sequel to Principles of Microeconomics–I covered in the first semester. The objective of the course is the same as in Principles of Microeconomics I.

UNIT-I: Consumer Theory I

Preferences and Utility: Axioms of Rational Choice, Utility, Trades and Substitutions Indifference Curves, Utility Functions for Specific Preferences, The Many-Good case Utility Maximization and Choice: The Two-Good Case (Graphical Analysis), the n-Good Case, Indirect Utility Function, The Lump Sum Principle, Expenditure Minimization, Properties of Expenditure Function.

UNIT -II: Consumer Theory II

Income and Substitution Effects - under Normal, Inferior and Giffen goods (Hicksian and Slutsky's) Slutsky's equation, Compensated and ordinary demand curves; buying and selling; choice under risk and inter-temporal choice; revealed preference theory.

UNIT-III: Production function

Technological relationship between outputs and inputs, Basic Concepts: TP, AP, MP, Isoquant, properties of isoquant, Isoquant map, Marginal Rate of Technical Substitution, Elasticity of Substitution, Expansion path, returns to scale; Production with One Variable Input (labour) and with Two-Variable Inputs Special cases of Production Functions -Linear, Fixed Proportions, Cobb-Douglas.

UNIT-IV: Cost Theories

Traditional and modern theory of cost; recent development in cost theory; Analysis of economies of scale – real and pecuniary.

Unit-V: Labour Market

Labour markets: basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; labour demand curves; shifts in labour demand curves; competitive labour market and public policy.

Reading List:

Case, Karl E. & Ray C. Fair, *Principles of Economics*, Pearson Education, Inc., 8th edition, 2007.

SEMESTER III
(General & Honours)
ECO-301: MACRO ECONOMICS- I

Total Marks: 100
Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	National Income and Social Accounting: Concepts and measurement of National Income, factors determining N.I, difficulties in the calculation of N.I, importance of N.I. Social accounting- Meaning, the development of National accounting ; Technique of social accounting, preparation of accounts, nature of double entry, purpose of each accounts. Flow of funds accounts, BOP account, Green accounting.	18	20
Unit II	Output and Employment: Say`s law of market and the Classical theory of employment; Keynes objection to the Classical theory; Aggregate demand and aggregate supply functions; The principle of effective demand, Keynes determination of income and employment.	15	20
Unit III	Consumption Function: Consumption. Short and Long run. Factors influencing average and marginal propensity to consume, Keynes psychological law of consumption spending and Relative Income Hypothesis.	15	20
Unit IV	Theories of Interest: Classical view on interest, Neo-Classical theories of interest, Keynesian theory of interest and Modern theory of interest.	10	20
Unit V	Investment Theory: Theory of investment- Autonomous and Induced investment; marginal efficiency of capital; General equilibrium- IS and LM curve. Investment multiplier and its effectiveness in LDCs.	10	20
Total Contact Hours and Marks		68	100

Basic Reading List:

- Branson W.A (1989), Macro Economic Theory and Policy, Harper and Row, New York.
- Gupta, R.D and A.S. Rana, Keynes and Post Keynesian Economics, Kalyani Publishers, Ludhiana.
- Maria John Kennedy.M (2011), Macroeconomic Theory, PHI Learning Pvt. Ltd, New Delhi.
- Seth, M.L and Lakshmi Narian Agarwal (2010) Macroeconomics.
- H.L. Ahuja (2010) Macroeconomics: Theory and Practices, S Chand & Co, New Delhi.
- Shapiro. E (1996), Macroeconomics Analysis, Galgodia Publications, New Delhi.
- Gregory, N. Mankiw (2000), Macro Economics, Macmillan, New Delhi.
- Gupta, S.B (1983), Monetary Economics, S Chand & Co, New Delhi.

SEMESTER III
(Honours)
ECO-302: PUBLIC FINANCE AND BANKING

Total Marks: 100

Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	Public Finance and Fiscal Policy: Meaning and scope of Public Finance, Principle of maximum advantage, fiscal policy. Objectives and role of fiscal policy.	13	20
Unit II	Public Debt and Expenditure Sources public borrowing, types, causes and effects of public borrowing, burden of public debt, and redemption of public debt. Deficit financing. Wagner's law, Wiseman-peacock hypothesis, Types, causes and effects of public expenditure.	14	20
Unit III	Taxation: Taxation-Direct and indirect taxation, impact and incidence of taxation, canons of taxation, taxable capacity, India's tax structure. Sources of public revenue.	13	20
Unit IV	Indian Public Finance: Centre-State financial relations. Revenue of the states and local bodies. India's public debt and expenditure, Finance Commission, Union Budget.	14	20
Unit V	Budget: Budget; meaning, types and techniques of budget. Requisite of Good Budget. Budgetary theory; classical and modern. Zero based budgeting.	14	20
	Total Contact Hours and Marks	68	100

Basic Reading List:

- Mithani D M (1998) Modern Public Finance, Himalaya Publishing House, Mumbai
- Musgrave, R .A and P.B. Musgrave (1976) Public Finance in Theory and Practice, MacGraw Hill, Kogakusa, Tokyo.
- Musgrave R. A (1959), The Theory of Public Finance , McGraw Hill, Kogakusa, Tokyo.
- H.L Bhatia , Public Finance, Vikas Publishing House Pvt. Ltd
- Misra, B (1997) Public Economics, Macmillan India Limited, New Delhi

SEMESTER IV
(General & Honours)
ECO-401: MACRO ECONOMICS- II

Total Marks: 100
Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	Theory of Demand for Money: Concept of money, functions; Quantity theories of money – Cash Transaction, Cash Balances Approach, Keynesian approach.	12	20
Unit II	Banking: Commercial banking – functions, Credit Creation – purpose and limitations. Central banking – functions. Instruments of Credit control.	12	20
Unit III	Supply of money: Definition, components and definition of supply of money. Money multiplier and high powered money. RBI policies and money supply.	12	20
Unit IV	Inflation: Inflation, definition, types, causes, effects of inflation on different Sectors of economy; Demand – pull inflation and cost – push inflation. Measures to control Inflation. Trade off between inflation and unemployment.	16	20
Unit V	Trade cycle: Nature and characteristics; Hawtrey’s monetary theory; Keynes view on trade cycle, Concept of accelerator; Samuelson and Hicks multiplier and accelerator interaction Model, control of trade cycle.	16	20
Total contact hours and Marks		68	100

Basic Reading List:

- Branson W.A (1989), Macro Economic Theory and Policy, Harper and Row, New York.
- Gupta, R.D and A.S. Rana, Keynes and Post Keynesian Economics, Kalyani Publishers, Ludhiana.
- Maria John Kennedy.M (2011), Macroeconomic Theory, PHI Learning Pvt.Ltd, New Delhi.
- Seth, M.L and Lakshmi Narian Agarwal (2010) Macroeconomics.
- H.L. Ahuja (2010) Macroeconomics: Theory and Practices, Advance Analysis, S Chand & Co, New Delhi.
- Shapiro. E (1996), Macroeconomics Analysis, Galgodia Publications, New Delhi.
- Gregory, N. Mankiw (2000), Macro Economics, Macmillan, New Delhi.
- Gupta, S.B (1983), Monetary Economics, S Chand & Co, New Delhi.

**SEMESTER IV
(Honours)
ECO-402: INTERNATIONAL ECONOMICS**

**Total Marks: 100
Credit: 4**

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	Theories of Trade: Absolute advantage, Comparative advantage and Opportunity Cost. Heckscher-Ohlin theorem and Leontief Paradox.	14	20
Unit II	Tariff: Effects of tariff (Partial and General equilibrium analysis). Theories of Optimum Tariff, Optimum tariff formula and Import Quota.	13	20
Unit III	Balance of Payment: Concept and components of Balance of Trade and Payment. Equilibrium and disequilibrium in the Balance of Payment.	13	20
Unit IV	Multilateral Financial Institutions: IMF, ADB, International Finance Corporation (IFC), International Development Association (IDA) and World Bank.	14	20
Unit V	Trading Blocks: UNCTAD. WTO. EU. ASEAN and SAFTA	14	20
	Total Contact Hours and Marks	68	100

Basic Reading List:

- Salvatore, D.L (1997), International Economics, Prentice Hall, Upper Saddle River, N.J
- Sodersten, Bo (1991), International Economics, Macmillan Press Ltd., London
- Mannur, H. G (1998) International Economics, Vikas Publication, Delhi.
- R.R. Paul, Monetary Economics.

SEMESTER V
(General & Honours)
ECO-501: INDIAN ECONOMY-I

Total marks: 100
Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	Structure of the Indian Economy : Basic feature; Natural resources; Population-size and growth rates, sex composition, rural-Urban migration, occupational distribution, population policy.	13	20
Unit II	Areas of Concern: Poverty and inequality, unemployment, prices and inflation.	13	20
Unit III	National Income: Growth performance, measures for growth performance, National income by industrial origin and occupational structure.	13	20
Unit IV	Planning in India: Objectives, strategy broad achievements and failures, current five year plan- objectives, allocation and targets. Planning commission/NITI Aayog. New economic reforms - liberalization, privatization, rational behind economic reforms; progress of privatization and globalization.	16	20
Unit V	Banking in India: Growth and performance of nationalized banks, Reserve bank and monetary regulation in India.	13	20
	Total Contact Hours and Marks	68	100

Basic Reading List:

- Agarwal, A.N, Indian Economy, Vikas Publishers, New Delhi.
- Datt,R. and K.P.M.Sundaram , Indian Economy, S.Chand and company Ltd, New Delhi.
- Misra,S.K and V.K .Puri, Indian economy-Its Development and experience, Himalaya publishing house, Mumbai.
- Kapila Uma, Indian Economy, Academic Foundation, New Delhi.
- Gupta, S.B (1983), Monetary Economics, S Chand & Co, New Delhi.
- Dhingra, I.C (2001). Indian Economy: Environment and Policy, Sultan Chand & Sons, New Delhi.

SEMESTER V
(Honours)
ECO-502: ECONOMICS OF GROWTH AND DEVELOPMENT

Total Marks: 100

Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGH TAGE
Unit I	Economic Growth and Development: Development and underdevelopment. Perpetuation of underdevelopment. Measurement of economic development. Factors affecting economic growth. Importance of Agriculture, Industry and Infrastructure.	10	20
Unit II	Theories of Economic Development: Classical theories of development- Smith, Ricardo, Malthus, Mills, Karl Marx and Schumpeter.	15	20
Unit III	Theories of Economic Growth: Harrod and Domar, Solow, Joan Robinson, Kaldor and New Growth theory (Paul Romer).	15	20
Unit IV	Partial Theories of Growth and Development: Circular causation, Rostow's stages of Growth, Big push, Balanced versus Unbalanced growth.	13	20
Unit V	Investment and Planning: Meaning and need for planning. Types of planning. Investment Criterion, Cost-Benefit analysis, Choice of technique in LDCs.	15	20
	Total Contact Hours and Marks	68	100

Basic Reading List:

- R.C. Agarwal -Lakshmi Narain Agrawal, Economics of Development and Planning (Theory and Practice)
- Higgins, B, Economic Development, Norton, New York.
- Lekhi, R.K (1990), The Economics of Development and Planning, Kalyani Publishers, Ludhiana.
- Mishra and Puri (2010), Economic Development and Planning.
- Taneja and Myer (2010), Economic Development and Planning and Methods, Vishal Publishing Co, Jhalandhar.
- Todaro, M.P , Economic Development in Third World Countries, Longman, New York.
- Todaro, M.P (1974), Development Planning: Models and Methods, Oxford University Press, Oxford.
- Thirlwall, A.P, Growth and Development, Palgrave, Macmillan.
- Hayami, Y, Development Economics, Oxford University Press, India.

SEMESTER VI
(General & Honours)
ECO-601: INDIAN ECONOMY II

Total Marks: 100
Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	Agriculture: Nature and importance ;trends in agricultural production and productivity, factors determining productivity, Land reforms, Green Revolution, Rural credit, agricultural marketing.	13	20
Unit II	Industry: Industrial development during the planning period; Industrial policies. Industrial licensing policies- MRTP Act, FERA and FEMA. Growth and problems of small scale industries; Role of public sector enterprises.	16	20
Unit III	Public Debt and Expenditure: Sources of public debt; causes of high public debt and meaning to reduce public debt. Trend in public debt and expenditure in India. Items of public expenditure.	13	20
Unit IV	External sector: Role of foreign trade, trends in exports and imports, composition and direction of India's foreign trade, BOP crisis and the new economic reforms - export promotion measures and the new trade policies. Foreign capital - FDI and MNC.	13	20
Unit V	Economy of Nagaland: Population, structural composition, Infrastructure, Agriculture and Industrial sector; problems and prospects.	13	20
	Total Contact Hours and Marks	68	100

Basic Reading List:

- Agarwal, A.N, Indian Economy, Vikas Publishers, New Delhi.
- Datt,R. and K.P.M.Sundaram , Indian Economy, S.Chand and company Ltd, New Delhi.
- Misra,S.K and V.K .Puri, Indian Economy-Its Development and Experience, Himalaya Publishing House, Mumbai.
- Gupta, S.B (1983), Monetary Economics, S Chand & Co, New Delhi.
- Dhingra, I.C (2001). Indian Economy: Environment and Policy, Sultan Chand & Sons, New Delhi.
- Joshua Thomas & Gurudas Das (eds 2002), Dimensions of Development in Nagaland, Regency Publications, New Delhi.
- Joshua Thomas & Gurudas Das (eds), Structural change in North East India: Resource Industry Linkages, Akansha Publishing house, New Delhi.
- Borthagur, Dharendra Nath (1992), Agricultural Development of North East Region with special reference to hill agriculture, Bee Cee Prakashen, Guwahati.
- NUTA, Economic Development in Nagaland: Prospects and Constraints.
- Statistical Hand Books, GON; Economic Surveys (Various Issues), Government of India

SEMESTER VI
(Honours)
ECO-602: ECONOMICS OF ENVIRONMENT

Total Marks: 100

Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGH TAGE
Unit I	Environment and Ecology: Meaning and elements of ecology, the environment and economic linkages; entropy laws, population environment linkage; environment as a public good; market failure for environmental goods.	14	20
Unit II	Basic Concepts: Pareto optimality and competitive equilibrium; fundamental theories of welfare economics, renewable and non renewable resources, common property resources, social cost-benefit analysis.	12	20
Unit III	The Common problems: Property right approach to environmental problems; concepts and indicators of sustainable development; international trade and the environment. Common property resources.	12	20
Unit IV	Valuation of Environmental Goods: Total economic valuation of environmental goods, valuation of environmental damages/ benefits (willingness to pay and accept), indirect methods (Household production theory) and direct methods (contingent valuation theory)	15	20
Unit V	Environment Regulation Instruments: Prevention, control and abatement of pollution; command and control; market based instruments; Evaluation of environment legislation and institutions in India.	15	20
Total Contact Hours and Marks		68	100

Basic Reading List:

- Bhattacharya, R.N (Ed) (2001), Environmental Economics: An Indian Perspective, Oxford University Press.
- Kolstad, C.D.(2000),Environmental Economics, Oxford University Press, Oxford
- Sengupta, R.P. (Ed.) (2001), Ecology and economics: An Approach to sustainable development, Oxford University Press, New Delhi.
- Woodhall, M,(1992),Cost-Benefit analysis in Educational Planning, UNESCO, Paris.
- Nick Hanley, Jason F, Shogren and Ben White, Environmental Economics in Theory and Practice, Macmillan India Ltd.
- Pearce, D.W and R.K. Turner, (1991), Ecology and Economics: An Approach to Sustainable Development, Oxford University Press.
- Shankar, U, (2001), Environmental Economics, Oxford University Press, New Delhi.

SEMESTER V (Honours)
OPTIONAL - I
ECO-503 (a): AGRICULTURAL ECONOMICS

Total Marks: 100
Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	Development of Agriculture: Role and importance of agriculture in Economic development, changing nature of linkages, agricultural resources in India, land utilization and cropping pattern, irrigation in India, command and development and flood control.	17	20
Unit II	Technological Changes in Agriculture: Traditional techniques and practices, HYV seeds-fertilizers, Green revolution, sustainable agriculture, emerging trends in agricultural technology. Dry land farming, use of bio- technology techniques	17	20
Unit III	Agricultural Marketing and Finance: Markets and functions, channels of distribution of commodities, regulated markets and co-operatives, Role of rural finance, sources of finance-NABARD	10	20
Unit IV	Agricultural Price Policy(APP): Nature of demand and supply of agricultural products; need for state intervention, objectives of the APP, instruments and evaluation, food security and public distribution in India.	12	20
Unit V	Agriculture and Allied Activities: Fisheries, horticulture, floriculture, and forestry - Growth, problems and state policies. Agro based industries and food processing industries, development of rural infrastructure.	12	20
Total Contact Hours and Marks		68	100

Basic Reading List:

- Sadhu, AN and Singh J., Agricultural problems in India- Himalaya Publishing House, Mumbai.
- Sadhu, AN and Singh J., An Introduction to Agricultural Economics, Himalaya Publishing House, Mumbai.
- R.N. Soni ., Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.
- Bilgrami, S.A.R., An Introduction to Agricultural Economics, Himalaya Publishing House, Mumbai.
- John B. Penson Jr., Oral Capps (et al), Introduction to Agricultural Economics, Prentice Hall.
- R.G Desai, Agricultural Economics, Indus books, New Delhi.
- Lekhi, R.K. and Joginder Singh, Agricultural Economics: An Indian Perspective, Kalyani Publishers, Ludiana.

SEMESTER V (Honours)
OPTIONAL - I
PAPER- XIII (b)
ECO-503 (b): MATHEMATICAL ECONOMICS

Total Marks: 100

Credit: 4

UNITS	TOPICS	CONTACT HOURS	WEIGH TAGE
Unit I	Differentiation and Difference Equation: Constrained and unconstrained optimisation, partial differentiation and difference equation.	13	20
Unit II	Quadratic equations and solution to differential equations.	13	20
Unit III	Consumer Theory: Utility function, budget line, consumer equilibrium, marginal rate of substitution and price effects-Slutsky equation, derivatives of demand curves, elasticity of demand and consumer surplus.	14	20
Unit IV	Theory of Production: Constant product curves, constrained profit maximisation, Homogeneous and Non-Homogeneous production function, Cobb-Douglas and CES production function; returns to scale, derivation of cost curves, and equilibrium conditions for producers, adding up theorem.	14	20
Unit V	Market Structure and Prices: Market equilibrium under perfect competition, monopoly, price discrimination, monopolistic competition, prices, subsidies and taxes; Cobweb model.	14	20
	Total Contact Hours and Marks	68	100

Basic Reading List:

- Mike Rosser, Basic Mathematics for Economists, Routledge Taylor and Francis Group, 29 west 35th street, New York, NY 10001.
- Suranjan Saha, Mathematics and Statistics [for C.A Professional Education (course)- I], New Central Book agency (P) Ltd, 9/1 Chintamani Das Lane, Kolkata 700009.
- Frank Werner and Yuri N. Sotskov, Mathematics of Economics and Business, Routledge, 270 Madison Ave, New York, NY 10016.
- GS Monga, Mathematics and Statistics for Economics, Vikas Publication.
- Mehta and Madnani, Mathematics for economists, Sultan Chand and Sons.
- Taro Yamane, Mathematics for economist, Prentice-Hall of India

SEMESTER VI (Honours)
Optional –II
Eco-603 (b): FINANCIAL INSTITUTIONS AND MARKETS

Total Marks: 100

Credit: 5

UNITS	TOPICS	CONTACT HOURS	WEIGHTAGE
Unit I	Financial system: Structure, role and functions. Growth of the Indian Financial System since 1960. Review of the recent Financial and Banking Sectors reforms and its impact.	15	20
Unit II	Banks and Non-Banks: Commercial Banks- Functions and Role. Credit Creation and its limiting factors. Bank Nationalization-rational and review. Definition and Types of Non-Bank Financial Institutions-Role and Functions. Development Banks-Role and Functions. Distinction between Banks and Non-Banks Financial Institutions.	20	20
Unit III	Central Bank: Functions and Role in Developed and Developing Economics. Goals, Target and Constraints of Monetary policy. Instruments of Monetary Regulation.	15	20
Unit IV	Financial Markets: Regulated and Unregulated credit markets. Capital and Money market. Features of Developed and Undeveloped money and capital market with special reference to India.	15	20
Unit V	Foreign Exchange Markets: Nature, organization and participants. Exchange Rates-Determination, types and system. Determination of exchange rates under fixed and flexible exchange rate regimes. Role of hedging in the determination of exchange rates.	20	20
Total Contact Hours and Marks		85	100

Basic Reading List:

- Bhole, L.M. (2000), Indian Financial System, Chugh Publication, Allahabad.
- Datt, R and K.P.M Sunderam, Indian Economy, S. Chand and Company Ltd, New Delhi.
- Gupta, S.B. (1983), Monetary Economics, S. Chand and Company Ltd, New Delhi.
- Gupta, S.B. (1995), Monetary Economics, Institutions, Theory and Policy, S. Chand and Company Ltd, New Delhi.
- Mitra, S. (1970), Money and Banking, Random House, New York.
- Misra, S.K and V.K Puri, Indian Economy- Its Development and Experience, Himalaya Publishing House, Mumbai.
- Uppal, R.K. (2011). Money, Banking and Finance in India. *Evolution and Present Structure*, New Century Publications, New Delhi.

SEMESTER VI (Honours)

SEMESTER VI (Honours)
OPTIONAL - I
ECO-603 (e): PROJECT

Total Marks: 100
Credit: 5

Objective: To let the students get familiarize with the empirical aspects of the subject and develop research aptitude.

	Steps	WEIGHTAGE
Step I	Formulation of project work (theory) Identification of problems, objectives and hypothesis of study, analysis, report writing and presentation	
Step II	Data collection Primary (Field survey) and secondary data collection	
Step III	Data Analysis	
Step IV	Report writing	75
Step V	Presentation	25
	Total Marks	100

ED – 66: ENTRENEURSHIP DEVELOPMENT

Course Rationale: To provide an opportunity to the student to develop entrepreneurial attitude and skills required for establishing and managing his own business venture to earn his livelihood and also to provide employment to the unemployed.

UNIT – I: INTRODUCTION

The entrepreneur – definition, theories of entrepreneurship, entrepreneurship and economic development

UNIT – II: ATTITUDE AND PSYCHOLOGY OF THE ENTREPRENEUR

Entrepreneurship development programme (EDP), Salesmanship, marketing

UNIT – III: ESTABLISHMENT OF NEW VENTURE

Documentation, raising resources, physical arrangements, promotion of ventures

UNIT – IV: THE PRODUCT

Choice of products, export and import policies, and procedures

UNIT – V: RESPONSIBILITY OF ENTREPRENEURSHIP

Role of entrepreneurship in economic development of a country, social responsibility of business enterprise

Suggested Readings:

1. Aggarwal, R.C. Fundamentals of Entrepreneurship, Laxmi Narain Agarwal, 5th Edition, Agra 2009
2. Gunachandra, R.F, Entrepreneurship Development, Imakhol Publication, Imphal, 2005