Minutes of the BoS meeting held on 20-01-2014

A meeting of BoS of Economics was held in the Committee Room of the Department of Economics on 20th January 2014 at 3.00 p.m., in which all the members were present except Prof Shahid Ashraf and Dr Saba Ismail, due to their preoccupations. The following Agenda Items were taken up for discussion and resolution:

Agenda Items:
1. Confirmation of the Minutes of the last BoS meeting;
2. Regarding the Implementation of the Judgment Case Titled “Jitender Kumar Vs Jamia Millia Islamia and others”;
3. SAP: Upgradation/Continuation from DRS-I to DRS-II.
4. Optional paper(s) to be offered by Department of Mathematics.
5. Any other item with permission to the chair.

1. **Confirmation of the Minutes of the last BoS meeting**

The minutes of the meeting of BoS of Economics held on 19-12-13 were confirmed.

2. **Regarding the Implementation of the Judgment Case Titled “Jitender Kumar Vs Jamia Millia Islamia and others”**

The chairperson briefed the members about the judgment and explained the details of meetings and discussions that has taken place so far in this regard amongst the officer of the University for its smooth implementation. The court has set-aside the cancellation order issued by the Dean, FoSS, questioning the validity and rationality of the reason – communication gap, of request for change of supervisor after one and a half year, thereby nullified the request itself. The court even has gone to suggest that the University may admit Mr Jitender Kumar under the same Supervisor.

Members of the BoS were also of the opinion that the matter was not properly handled by legal cell with desired proper understanding of the minutes and related documents. Prof Akhtar Hussain and Prof Bhatt were of the opinion that Legal Cell should have gone to higher bench after careful study of the minutes and the related documents.

However, BoS found a better solution with the help of magnanimity shown by two Senior Professors, viz., Professor M S Bhatt and Professor N A Azad willing to Supervise Mr Jitender Kumar, so the assigning the scholars again to the same Supervisor be avoided. Therefore, BoS has appointed Professor M S Bhatt as Supervisor and Professor N A Azad as Co-Supervisor for Mr Jitender Kumar with immediate effect. It will be a special case to honour the court decision and should not be a bearing on intake of PhD admission of Prof Bhatt next year. The Chairperson/HoD may inform it to all the concerned.
3. **SAP: Upgradation/Continuation from DRS-I to DRS-II**

The chairperson congratulated and greeted the team of the Department for getting sanction from DRS-I to DRS-II to the tune of Rs 60,00000/-. However, an unprecedented change is noted in the document received from the UGC, where the name of the coordinator has been change without the knowledge of the Department without looking into the specializations. It is the prerogative of the statutory body BoS and not the UGC to appoint the Coordinator and Deputy Coordinator of such programme which needs to be based on strength of the Department, specialization of faculty members and vision of the Department. The Chairperson has also shown the copy of the proposal sent by the University to UGC bearing the signature of Registrar mentioning Professor M S Bhatt as coordinator, however, which has got changed to Professor Shahid Ahmd, strangely, when his specialization does not match with the sanctioned area of DRS II document.

The BoS unanimously resolved that the chairperson has to write back to UGC as HoD of the Department and retaining Professor M S Bhatt’s name which is consistent with the proposal posted to UGC after due approval of BoS.

4. **Optional paper(s) to be offered by Department of Mathematics**

BoS resolved that, whatever optional paper will be offered by the Department of Mathematics will be acceptable to the Department of Economics.

5. **Any other item with permission to the chair**

As regard some important inclusions in the JMI prospectus, 2014-15, the BoS resolved that the BACA programme is distinctively interdisciplinary in nature, therefore its entrance examination should be conducted separately, and not along with group.

For admission to MA in Economics, the eligibility criteria needs to be Listed as Eligibility: (i) B.A./B.A.(Hons.) in the subject concerned with not less than 50% marks in aggregate, OR (ii) B.A./B.Sc./B.Com. or /B.Sc./B.Com.(Hons.) with not less than 55% marks in aggregate. BoS also pointed out that the correction in nomenclature of BACA be made in the AC meeting.

As no further item was raised the meeting ended with vote of thanks to the chair.

To,
All the Members of BoS of Economics.

CC to:
Minutes of the Department Committee Meeting

A Department Committee (DC) meeting was held on 16-07-2015 at 2 PM. The following members attended the meeting.

1. Prof. Shahid Ahmed (Chairman)
2. Prof. N.A. Azad (Member)
3. Mr. Shakeel Ahmad (Member)
4. Mr. T.A. Farooqui (Member)
5. Dr. I.R. Chowdhary (Member)
6. Mr. Ashraf Aliyani (Member)
7. Dr. M. A. Baig (Member)

Prof. Shahid Ashraf could not attend the meeting due to his engagements being Registrar of the university. However, he discussed the issues and agenda of DC meeting and provided his inputs. He has given his consent to the DC decisions.

The meeting started with a welcome note by the new Head of the department (HOD) Prof. Shahid Ahmed in which he welcomed all the members of the department. The faculty members also welcomed the HOD whole heartedly and wished him for successful tenure as it was first departmental committee meeting under his chairmanship.

The following decisions were taken the DC Meeting:

1. The agenda of restructuring of M.A., B.A. (Hons) & B.A.C.A. Programmes in the light of new guidelines of the university was discussed and deliberated. The HOD presented first M.A. programme as per new guidelines of 80 credit programme and other proposed changes. The course structure is now divided into core courses, choice based courses, skill enhancement courses and ability enhancement courses. With some minor modification, the revised structure was approved by the members of the committee unanimously. Similarly, the revised course structure of B.A.(Hons.) & B.A.C.A was also discussed and duly approved by the members to be placed before BOS for its approval (annexure-I, II &III).

The meeting was urgently convened by the HOD in order to get the approval of the departmental committee for the revised courses structure so that it could be sent before 22 July 2015 for necessary approval of competent authorities/ bodies.

2. Under any other item, the HOD brought to the notice of the members about the research scholars drawing fellowship but some time found out of station without any intimation to the office. To streamline the research programme in the department, it
was resolved that research scholar must attend department everyday as per fellowship rules applicable. If there is a need for leave for research purpose or otherwise, the scholar should submit leave application with the recommendation of Ph.D. supervisor to the office of HOD for necessary sanctions.

The meeting came to an end at 3.45PM with thanks to the chair.

[Signature]

Prof. Shahid Ahmed
Head of the Department
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**Optional Papers:**

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<td>• Econometrics - II</td>
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<td>• Regional Economics</td>
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<td>• Game Theory Applications</td>
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Each paper is of 4 credits. The students have to take a total of 20 papers for a total of 80 credits. From the optional papers in Semesters V and VI, the students have to opt 4 papers, 2 in each semester.

The Honours students have to take any one subsidiary subject from the following: Mathematics, Geography, Political Science, Sociology and History.

The students will take a total of 6 papers from any one of the Subsidiary subjects for a total of 24 credits.
The distribution of the subsidiary papers will be one each in Semesters I and II, and 2 papers each in Semesters III and IV.

Further there will be 8 compulsory papers of 2 credit each for a total of 16 credits.

Thus, the total credits in the programme will be 120 credits.

MICROECONOMICS-I

Unit-1: Introduction
Nature and scope of economics, Methodology in Economics, Theory of consumer behavior, Cardinal approach and its critique, Indifference curve approach, Consumer’s equilibrium, Income, Substitution and Price effects (Hicks and Slutsky, approaches), Giffen goods, Elasticity of demand and its measurement, Consumer’s surplus-Marshallian and Hicksian approaches.

Unit-2: Theory of Production and Costs
Production Function, law of variable proportions, Isoquants, factor substitution, Equilibrium of the firm with respect to input use, Returns to scale, Economies and Diseconomies of scale, Expansion path, Deferent concepts of cost and their inter-relationship, Short run and long run cost curves, Empirical evidence on costs.

Unit-3: Market Structure
Perfect and imperfect markets, Equilibrium of the firm and industry under perfect competition, Role of time element in the determination of value, supply curve under perfect competition, Equilibrium of the firm under monopoly, Discriminating monopoly, Conditions of equilibrium under price discrimination, Dumping.

References:
2. Pindyck, Rubinfeld and Mehta: Microeconomics, 6th Edition
5. Gravelle and Rees: Microeconomics; Pearson Education, 2nd Edition
6. Nicholson, Microeconomics

MATHEMATICAL METHODS FOR ECONOMICS- I

Unit - 1: Basic concepts, Functions and Graphs
Sets and set operations, Ordered pairs, the real numbers, natural numbers, integers, rational and irrational numbers; absolute value and intervals; inequalities.
The general concept of function, types of function (linear, quadratic, power, exponential, inverse); graphs of functions; Applications in Economics

Unit-2: Limits, Continuity and Single variable Differential Calculus
Limits, continuity and differentiability, rules of differentiation (simple differentiation, sums, products, and quotients); Second and higher order derivatives, power rule, chain rule, implicit differentiation; Linear approximation and differentials; Quadratic approximations, Elasticities the Intermediate-value Theorem; the Extreme-value Theorem; The Mean-value Theorem; Indeterminate forms and L’Hopital’s rule; Applications in Economics

Unit-3: Single variable optimization and Integral Calculus
Stationary points of a function, Maxima and Minima(local and global); Convexity and Concavity of functions; Points of inflection; Optimization of economic functions Rules of integration, integration by parts, integration by substitution, indefinite integral, Definite Integral, Proper and Improper integral; Areas under curves and economic application of integration.

References:
1. Knut Sydsaeter and Peter J. Hammond (2005), Mathematics for Economic Analysis. Pearson Educational Asia: Delhi, 4th Indian reprint

MICROECONOMICS-II

**Unit-1: Market Structure-II**
Monopolistic Competition-Equilibrium of firm under monopolistic competition (selling cost excluded), Group equilibrium, Excess capacity, Oligopoly-Coumot solution, Paul Sweezy’s kinked demand curve solution.

**Unit-2: Factor Pricing**
Marginal productivity theory of distribution, Ricardian & Modern Theories of rent, Quasi-rent, Wage determination under perfect and imperfect competition, wages and collective bargaining, Theories of interest-Classical, Neoclassical and Keynesian theories of interest, Theories of profit-Dynamic theory, Risk and uncertainty theory and Schumpeterian theory of profit.

**Unit-3: Welfare Economics**
Problems of measuring welfare, Marshallian and Pigovian approaches, Pareto’s welfare criteria, Concept of Social welfare function.

**References:**
1. Chaudhary, Kalyanjit, Roy Microeconomics.
2. Koutsyansis, A. Modern Microeconomics, Macmillan.
7. Stonier and Hague A Text Book of Economic Theory.

MATHEMATICAL METHODS FOR ECONOMICS- II

Unit - 1: Linear Algebra
System of linear equations, vectors, vector operations, linear combinations of vectors, length of vectors and orthogonality, Matrices and its types, matrix operations(row and column), Echelon and Reduced echelon forms, determinants and its properties, singularity of a matrix, inverse of a matrix, linear independence and rank of a matrix, solution of a system of linear equations (by Cramer’s Rule, Matrix Inversion); Solution of Homogeneous Equation System; Leontief Input-Output models (Open and Closed), Applications in Economics

Unit - 2: Calculus of Multivariate Functions
Partial derivatives (two variables and many variables) and its economic relevance, Total derivatives, Derivatives of functions using chain rule, Derivative of functions defined implicitly, Homogeneous and Homothetic functions, Multivariable optimization, local and global extreme, Stationary points of a function, first and second order condition using Hessian, Point of Inflection, Saddle point, Constraint Optimization (using Lagrangean
multiplier), sufficient condition (using Bordered Hessian), Optimization of economic functions, Applications in Economics

Unit -3: Dynamic Analysis
Continuous time: First order linear differential equations (homogeneous and non homogeneous case) with constant coefficient and constant term; with variable coefficient and variable term; Dynamics of market price; Exact differential equations. Discrete Time: First order Difference equations, the stability analysis of the equilibrium (oscillatory and non-oscillatory, divergent and convergent time paths); The Cobweb model, Applications in Economics

References:
1. Knut Sydsaeter and Peter J. Hammond (2005), Mathematics for Economic Analysis. Pearson Educational Asia: Delhi, 4th Indian reprint

MACROECONOMICS-I

Unit-I: National Income Analysis
Unit-2: Classical Theory of Output & Employment
Says law of markets and quantity theory of money, classical model without saving in labour supply. Change in labor demand, Rigid money wage, Monetary policy and full employment, Classical theory with saving and investment, Criticism and evaluation.

Unit-3: Keynesian Theory of Income and Employment

References:
5. William Branson: Macro Economic Theory and Policy

STATISTICAL METHODS - I

Unit-1: Basic Concepts and Descriptive Methods
Definition and Role of Statistics; Graphical Presentation of Data – Straight Lines, Curves and Semi-logarithmic Graphs – Examples from Economics and Business Measures of location – Median, Mode, Mean (AM, GM, HM), simple and weighted averages, group averages, moving averages Measures of dispersion – Range, Variance and Standard Deviation, Mean Deviation, Quartile Deviation, Computation of S.D. from grouped data, simple and weighted averages, group averages, moving averages Measures of skewness and kurtosis; Measures of economic inequality
Unit-2: Probability and Probability distributions
Random experiment, sample space and events; permutations and combinations; classical, empirical and axiomatic definitions of probability; addition and multiplication theorems; conditional probability, independent events and Baye’s rule Random variable and probability function (pdf, pmf, cdf); mathematical expectation - mean and variance of a random variable Binomial, Poisson and Normal distributions

Unit-3: Index Numbers and Time Series Analysis
Index Numbers: Concept, use and examples; Laspeyres, Paasche's and Fisher's index numbers; time reversal, factor reversal and circular tests; chain base index; problems in constructing index numbers; splicing, base shifting; use of index numbers for deflating other series.Time Series Analysis: Concept, use and examples; Components of time series - secular trend, seasonal, cyclical and irregular variations; Methods of semi-averages, moving averages and least squares.

References:
2. Gupta, S. P. (2005), Statistical Methods, S. Chand & Sons, New Delhi

Other Books

HISTORY OF ECONOMIC THOUGHT

Objectives: The main objectives of this course are that by the end of the course, students are expected to:

- Develop an insight and interest in situations and processes in which the subject matter has developed over time.
- Develop a chronological understanding of the development of Economic Thought
  Relate the developments in different schools of thought with contemporary issues.

Unit -1: Pre Classical and the Classical School

Unit-2: The Marxian Challenge and Marginal Revolution

Unit 3: Contemporary School of Economic Thought
Irving Fisher - The Purchasing Power of Money and its Determination and Relation to Credit Interest and Crises, John Maynard Keynes – Treatise on Money and The
General Theory of Employment, Interest and Money, Milton Friedman – Restatement of the Quantity Theory of Money, George Akerlof – Information Asymmetry

Select References:

Detailed Readings:

MACROECONOMICS-II

Unit-1: Theories of Consumption & Investment
General theories of spending behavior, Absolute income hypothesis, Relative income hypothesis, Permanent income hypothesis, Life cycle hypothesis, Motivation for investment, Marginal efficiency of capital, Supply price, Expected income streams, Marginal efficiency of capital and rate of interest, Principal of acceleration.

Unit-2: Money and Interest

Unit-3: Theory of Inflation and Business Cycle
Types and theories of inflation: Demand pull I cost push inflation, Wage push inflation, profit push inflation. The Philips curve trade off between inflation and unemployment, Stagnation, Concept and Phases of trade cycle, Innovation theory-criticism, Keynesian and monetary theory.

References:

3. MC Dougall & Deinberg, Macro Economics
4. Shapiro, E. Macro-Economic Analysis.
7. William Branson: Macro Economic Theory and Policy

STATISTICAL METHODS - II

Unit-I: Uni-variate and Bi-variate Analysis
Moments and moment generating function (m.g.f.), calculation of mean and variance of binomial, Poisson and normal variables by m.g.f. method , Multivariate Statistics - joint, marginal and conditional distribution; Product moment – covariance, correlation, rank correlation , Simple linear regression; method of least squares; linear and exponential trend
Unit-2: Introduction to Sampling Distributions

Population versus sample, Methods of sampling, simple random sample, sampling distribution of sample mean for normal and non-normal populations, Chebyshev’s inequality, law of large numbers, optimum size of sample, central limit theorem
Definition of z, chi-square, t and F statistics

Unit-3: Introduction to Statistical Inference

Properties of point estimator - unbiasedness, relative efficiency and consistency, Testing of Hypothesis - type I and type II errors, level of significance, power of a test, Use of z, chi-square, t and F statistics - large sample and small sample tests for mean, one tail and two tail tests for difference of means, Chi-square test for (i) goodness of fit and (ii) independence of two attributes, F-test for ratio of two variances, one-way analysis of variance, confidence intervals for mean and variance

References

Other Books

**DEVELOPMENT ECONOMICS**

**Preamble:** This paper will attempt to train students to understand the underlying substantive issues of economic transformation in a historical context. Both economic and non-economic perspectives and dimensions will form the backdrop of this paper. It is expected to help a student to master the basic requirements and capabilities for doing Masters in Growth and Development.

**Unit-1: Growth and Development**

**Unit-2: Under-Development Determinants and Theories**

**Unit-3: Determinants of Development**
State and Markets; Capital-Human, Natural and Social and Manmade., Agriculture Industry and Services;
Physical Infrastructure, Policies, Planning and Development Administration, Research and Development and Technology, Non-Economic Factors.
References:


MONEY AND BANKING
Objective:
The paper is designed to develop the competence of the student to accustom with the
evolution and the role of money in modern economies. The present banking structure
in inclusive banking strategy and the role envisaged by a central will be discussed.

Unit- 1: Money and Evolution
Money an overview, Theories of Demand for Money -- Various approaches- Fisher,
Cambridge, Keynes, Friedman , Measures of Money, Money Multiplier analysis

Unit-2: Financial Markets
Banking System, Central Bank's – Role, Functions, Credit Control Methods,
Monetary Policy, Monetary policy in India, Financial sector reforms in India

Unit- 3: Commercial Banks
Commercial Banking- functions, Credit creation, Social banking, Role of Private
Banks and a comparison, foreign banks Role

References:
1. Chandler, L.V. The Economics of Money and Banking, S. Chand & Company Ltd.,
    New Delhi
2. Chandler, L.V., The Monetary and Financial System
3. M.K. Lewis (2000), Monetary Economics, OUP
    (Indian Edition)
6. L.M. Bhole (1999), Financial Institutions and Markets, Tata Mcgraw Hill
ECONOMETRICS - I

Unit- 1: Simple Linear Regression Analysis
Introduction to Econometrics, Two- variable regression analysis - Population Regression Function and Sample Regression Function, Significance of Stochastic Disturbance Term, Problem of Estimation of Two variable regression model – CLRM assumptions, Method of OLS estimation, Goodness of Fit, Desirable properties of OLS estimators- Gauss Markov Theorem, Interval Estimation and Hypothesis Testing, Extension of Two Variable Regression Model.

Unit- 2: Multiple Regression Analysis
Multiple Regression Equation, OLS estimation of Partial Regression Coefficients, Multiple Coefficient of Determination (R²) and Adjusted R², Multiple and Partial Correlation Coefficients, Problem of Inferences and Hypothesis Testing.

Unit- 3: Problems in OLS Estimation

References:
INTERNATIONAL TRADE

Unit 1: Introduction

Unit 2: Trade Policy
Gains from Free Trade, Protectionism versus Free Trade, Tariff Quota and Import-substitution and Export Promotion, Prebisch-Singer Hypothesis GATT/WTO UNCTAD

Unit 3: International Monetary System
Brottonrood Monetary System, World Bank (IBRD)

References:

INDIAN ECONOMY

Objectives: The main objectives of this course are that by the end of the course, students are expected to:

- have an in-depth understanding of the subject matter and development of Indian economy since independence
- critically examine the government policies adopted during the Five Year Plans
- Evaluate the pre and post reforms progress of India.

Unit-1: Concept of Developed and Developing Economies
Characteristics of a developing economy – basic features of Indian economy at the time of independence

Unit-2: Perspective of India’s Agricultural and Industrial Economy
Importance of Agriculture in Indian economy – trends in agriculture production and productivity, Green Revolution and Food Security, Agriculture Price Policy, Sources of Agricultural Finance and Sustainable Agricultural Growth, Industrial Policy – pre and post 1991 and trends in India’s industrial growth and productivity, Small vs. large industry, public vs. private sector industries, disinvestment strategies, Policy issues and future prospects: infrastructure, technology and regional imbalances

Unit-3: Contemporary Issues
Macro-economic stabilisation – fiscal and monetary policies, Globalisation and its impact on the Indian economy with special reference to global financial crisis, 2007-08, India and the World Economics, India’s foreign trade and investment policies,

References:

**Detailed Readings:**

PUBLIC ECONOMICS

Objective:
Public finance (also known as public economics) analyzes the impact of public policy on the allocation of resources and the distribution of income in the economy. In this course, you will learn how to use the tools of microeconomics and empirical analysis to analyze the economic effects of public expenditures and taxation.

Unit-1: Meaning and Scope of Public finance

Unit-2: Public Revenue
Sources of public revenue Taxes -Classification of Taxes - Canons of Taxation, Principles of Taxation. Ability, Benefit and cost of service- Impact, Incidence and shifting of Tax Burden — Effects of Taxation – Major Taxes in India. Value Added Tax in India The concept of goods and service tax (GST)

Unit- 3: Public Expenditure and Public Debt

References:
1. R.A Musgrave and PB Musgrave – Public finance – Tata Macgrail

ENVIRONMENTAL ECONOMICS

Preamble: The Course is designed to gradually develop the capability of a student so
that he/she masters the significance and scope of environmental economics as a separate subdiscipline of teaching, research and policy. The paper focuses on: Elements of Environmental Economics, Environment-Economy Linkages and Working of these Linkages. Basic Understanding of Micro-economics, Public Economics, Quantitative Techniques and Natural Sciences is a desirable input for efficient learning

**Unit-1: Basic Environmental Issues**

**Unit-2: Economics of Natural Resources**

**Unit-3: Economics of Environmental Regulation**
Evolution of Environmental Regulation; Environmental Legislations/ Policies in India; Instruments for Pollution Control: Command and Control Policy vs. Market Based Instruments: Taxes vs. Permits; Direct and Indirect Instruments of Pollution Control; Pollution Control System and Policy Measures in Indian Context

**References:**

OPTIONAL PAPERS

INDIA AND THE WORLD ECONOMY

UNIT-I
The changing structure of Indian Economy before and after 1991
India’s External Sector – Commodity and Regional Composition of exports and imports, Major trading partners (US, EU, West Asia) -
Balance of Payments before and after 1991 - Implications

UNIT-II
ALTERNATIVE PATHS AMONG DEVELOPING ECONOMIES
China – a model of Socialist Market Economy
Revolution and Reforms in the Mexican Economy
North & South Korea: The lingering Shadow of the Cold War
Iran: The Struggle for a New Traditional Islamic Economy
North & South Korea: The lingering Shadow of the Cold War
UNIT-III
The evolving trends of world economy – the shift of the centre of gravity from West to East and from North to South
Indian Economy and the Globalizing World – Regional Cooperation and World Economic Integration – SAARC, BRICS, ASEAN
Relevance of Global Economic Governance – World Bank, IMF, WTO

READINGS:

1. Papoala, T. S. EMERGING STRUCTURE OF INDIAN ECONOMY - Implications of Growing Inter-sectoral Imbalances (isid.org.in/pdf/presAdd_IEA05.PDF)
8. IMF (2005), World Economic Outlook, Washington D.C., International Monetary Fund.

**WEB READINGS:**

http://www.econ.yale.edu/~srinivas/IntegratingIndia.pdf


**ECONOMETRICS - II**

*Unit- 1: Simple and Multiple Regression Analysis*


*Unit- 2: Dynamic Econometric Model*
Distributed Lag Model (DLM) – Ad hoc Estimation, Koyck and Almon Approaches to DLM, Adaptive Expectation Model, Partial Adjustment Model, Auto Regressive Model, Method of Instrumental Variables, Detecting and Correcting Autocorrelation in Autoregressive Model

**Unit- 3: Simultaneous Equation Model**
Simultaneous Equation Bias, Identification Problem, Rules for Identification – Order and Rank Conditions, Indirect Least Square Methods, Two State Least Square (2SLS) Method, Application to Macro Models (Examples)

**References:**
2. Stock and Watson, Introduction to Econometrics, Pearson Publication
5. Klein L.R., Introduction to Econometrics

**REGIONAL ECONOMICS**

**Objective:**
To acclimatize to the student with the problems of regional economies and methods of analyzing them. The roles and natural resources, demographic base, location of industries and factors determining regional growth and development will be considered.

**Unit – 1: Definition and Scope of Regional Economics**
Regional Economics - Scope, Definition, Concerns of Regional Development, - Location Theories- -Weber- Christalien Losch Theory of Location and interdependence.

**Unit – 2: Region – definition**
Identification of Backward regions: Determinants of Regional Development: Natural Endowments Human Resources-Capital-Technology-Economic and Social
infrastructure; Factor and commodity mobility and Regional development; Convergence Theory.

Unit – 3: Regional Planning under alternative economic system
Historical perspectives of Indian development: Regional Development Models: Practice of Regional Planning in India, USA, Germany, Canada

References:
1. Harry N Richardson: regional Economics.
2. Hugy O. Nourse: Regional Economics,
5. Amitabh Kundu et al.: input-Output frame-work and Economic Analysis
6. B. Sarah, C.O.A.R. & J.B. Cuillingworth: Regional and Urban Studies,
7. Mark Wright: industrial Location & Regional Analysis.
10. Richardson: Regional Economics
11. Friedman and Alan (Ed): Regional Development Policy.
12. Seibert: Regional Economic Growth.

INTERNATIONAL FINANCE

Unit – I: The International Monetary System
Alternative Exchange Rate System, A Brief History of the International Monetary System
The European Monetary System and Monetary Union, Exchange Rate Policies in Emerging Markets

Unit – 2: The Foreign Exchange Market
Organization of the Foreign Exchange Market, Importance of Foreign Exchange Market Trading
Foreign Exchange Market Products and Activities, Parity conditions in International Finance
   i) Arbitrage and the Law of One price
   ii) Purchasing Power Parity
   iii) The Fisher Effect
   iv) The International Fisher Effect
   v) Interest Rate Parity Theorem

Unit -3: International Financing and Investment Decisions

References:


ECONOMICS OF EDUCATION
Objectives: The main objectives of this course are that by the end of the course, students are expected to:

- Appreciate the importance of education at individual and societal level
- Have an insight into the education-economic development linkages
- Have a clear understanding with regards to India’s education system and related concerns

Unit-1: Economics of Education

Unit-2: Education Planning and Finance
Education planning techniques, Cost – Benefit Analysis, Theories of Public Expenditure, Resource Mobilisation and Utilisation, Effects of Education on levels of earnings and value based education

Unit-3: Education in India
Indian perspective to education, Sarva Shiksha Abhiyan, Right to Education and Legislations relating to Right to Education with special reference to Constitutional provisions/Preamble. Higher Education in India: Issues, Concerns and New Directions

References:

Detailed Readings:


**HEALTH ECONOMICS**

**Unit – 1: Introduction to Health Economics**
Defining Health Economics. Importance of Health Economics – Essential Features. Concepts: Health Health Care, Birth Rate, Fertility Rate, Death Rate, IMR, CMR, MMR, Morbidity Rate (Acute and Chronic), Disability Adjusted Life Year (DALY), Quality Adjusted Life Year (QUALY), Sex Ratio.

**Unit- 2: Demand and Supply of Health Care**

**Unit- 3: Health Financing & Policy**

**References:**

Agricultural Economics

Unit-1: Introduction
Definition and scope of Agricultural Economics, Unique features of Agriculture, Role of Agriculture in Economic Development-Kuznet formulation, linkage between Agriculture and Non Agricultural sectors.

Unit-2: Agricultural Marketing and Price Policy

Unit-3: Issues in India’s Agricultural Development
Land Tenure system on the eve of independence, land reforms measures-Achievements, problems and policy- The new agricultural technology and Green Revolution-Rationale, Progress Problems and Prospects. Agricultural credit-Problems and sources, WTO and Indian Agriculture.

References:
1. GS Bhalla, Agricultural Development since Independence
2. TW Schultz, Transformation of Traditional Agriculture
3. Mellor, Agricultural Development
4. R.N. Soni, Leading Issues in Agricultural Economics
5. Sadhu and Singh, Agricultural Problems in India
6. Indian Journal of Agricultural Economics Relevant issues
INDUSTRIAL ECONOMICS

Unit- 1: The Concept of a Firm

Unit- 2: Industrial Productivity
Productivity and its measurement, Factors influencing industrial productivity, Productivity Movements in India, National Productivity Council, Size of Firm, optimum firm, Factors influencing optimum size.

Unit- 3: Industrial Pricing and Market Structure
Pricing under imperfect competition, the concept of workable competition on. Small Scale Vs Large Scale industries, Regional variations in Industrial development in India

References:
1. -R.R. Barthwal, Industrial Economics, New Age International Publisher
3. SSM Desai and Nimal Bhalerao, Industrial Economy of India: Himalaya Publishing House
4. K.V. Sivaya and VBM Das, Indian Industrial Economy;, S Chand Company
5. PK Dhar, Indian Economy- Kalyani Publisher

GAME THEORY APPLICATIONS

Unit -1: Static Games of Complete Information
Concepts: What is a Games of Strategy? How to think about strategy? Decision versus Game, Some terminology and Background Assumptions, Static versus Simultaneous Move Game, Games of Complete and Incomplete Information, Use of Game Theory, Simultaneous Move Games with Pure Strategies (Discrete Strategies) – Normal Form of Representation of Games, Solution Concepts: Dominant Strategy - Prisoners
Mixed strategy Equilibrium – Expected Utility, Best Response Analysis, Case of Domination by a Mixed Strategy

**Unit -2: Dynamic Games of Complete Information**
Extensive Form of a Game with Perfect Information - Information Sets, strategies and Outcomes, Nash Equilibrium, Backward Induction and Sub-game Perfect Equilibrium in finite Horizon Game
Extensive Game with Imperfect Information
Repeated Games and Sub-game Perfection –Finitely Repeated and Infinite Repeated Games
Games with Incomplete Information

**Unit – 3: Information**
Categories of Asymmetric Information Models – Adverse Selection, Moral Hazards, Mechanism Design in Adverse Selection and in Moral Hazards, Signaling and Screening
Principal Agent Problem - Production Game – Full Information, Sequential Move, Fixed Wage, Output based Wage under Certainty, Output based Wage under Uncertainty.
Moral Hazard –Incentive Compatibility Constraint and Participation Constraint, Monopoly Solution, Moral Hazard in Insurance Markets
Adverse Selection – The Market for Lemons, Production Game
Educational Signaling.

**References:**

FINANCIAL ECONOMICS

Unit- 1: Basics of Financial Markets

Unit- 2: Fundamental Analysis of Stocks

Unit- 3: Bond Market Analysis (Financial Income Analysis)
Allocating Resources over time: Compounding, Present Value and Discounting, Structure of Interest Rates, Bond Valuation and Yield Curves, Corporate Bonds, RBI Operations

References:
1. Bodie, Robert c Merton and David Cleaton (2009), Financial Economics, Pearson
2. Elton, Gruber Brown, Goetzmann (2007), Modern Portfolio Theory and Investment Analysis

COMPUTER APPLICATIONS

Unit- 1: Computer Fundamentals and Data
Basics in Computer - Computer hardwares and softwares, Disk operating systems, Operating system – Windows, and Introduction to MS Office – Word and Excel, Different Types of Data – Time series, cross-section and Pooled, Data Entry, Tabulation and Graphical Representation in Excel, Data Imports and Exports from/to
application software Eviews/SPSS, Data tabulation and graphical representation in Eviews/SPSS

Unit- 2: Data Analysis in Eviews/SPSS
Moments - Mean, Median and Mode, Measures of Dispersion and Skewness, Correlation and Simple Regression, Multiple Regression Analysis

Unit- 3: Introduction to Time Series Analysis in Eviews/SPSS
Stochastic Processes, Autocorrelation Functions and Correlogram, Stationarity: Unit-Root Test, Timeseries Regression Analysis – Spurious Regression, Random Walk Model and Introduction to Cointegration Analysis

References
3. Allen, R.G.D., Statistics for Economics
6. Eviews Manuals
7. SPSS Manuals
Ph.D. Programme  
Department of Economics, JMI

Syllabus for PhD in Economics, 2014-15

Paper I: Course on Research Methodology

Unit 1: Methodology of Research

• Philosophy of Research
• Research Design
• Experimental Survey and Case Studies
• Planning and Implementing Research Projects
• Methods of Data Collection and Data Processing
• Documentation - Writing the Research Thesis

Unit 2: Statistical and Mathematical Methods

• Probability Theory
• Theoretical Distributions: Discrete and Continuous
• Sampling Distribution
• Statistical Inference
• Data Mining/Filtering Techniques, ANOVA, Discriminant Analysis, Factor Analysis-Principal Component Analysis
• Linear Programming, Game Theory and Input-Output Analysis
• Exercises with Statistical/Econometric Software

Unit 3: Econometric Methods

• Methods of Analysis: Simple and Multiple Regressions
• Time Series Analysis: Stationarity and Integration Process, Cointegration & ECM, ARIMA, VAR
• Problems in Econometric Estimation
• Exercises with Statistical/Econometric Software

References

Unit 1
Kothari, C.R., “Research Methodology”
Ghosh, B.N., “Scientific Methods and Social Research”.
Foercese, D.P. and Richer, S., “Social Research Methods”.


Unit 2
A.C. Chiang and Kevin Wainwright (2005), Fundamental Methods of Mathematical Economics, Mcgraw-Hill.

Unit 3
Wojciech Charemza and Derek Deadman, “New Directions in Econometric Practice: General to Specific Modelling, Cointegration, and Vector Autoregression”, Edward Elgar Publication.

*
Paper –II: Advanced Studies in Economics

Unit 1: Microeconomics & Economic Growth

*Microeconomics:*
*Economics of Information:*
- Principal Agent Framework, Moral Hazard
- Adverse Selection,
- Network Externalities,
- Bundling

*Economics of Growth:*
- Economics of Growth—In Retrospect and Prospect;
- Major Paradigms of Growth Theories;
- Political Economy of Growth ---Linkages, Convergence, Institutions and Resources.

Unit 2: Monetary Economics, Macroeconomics & International Trade

- Issues of Monetary Economics
- Issues of Macroeconomics
- Issues of International Trade

Unit 3: Development & Contemporary Issues in Indian Economy Development

- Concept, Measurement and Indicators;
- Underdevelopment—Meaning, Measurement, Determinants and Implications;
- Approaches---From Adam Smith to Limits To Growth Paradigm
- Freedom, Justice and Development
- State, Markets and Development

*Contemporary Issues in Indian Economy*

- Monetary Policy
- Fiscal Policy
- Institutions and Governance
- Sectoral Analysis: Agriculture, Industry, Service, Infrastructure
- Social Sector: Education, Health, Environment, Gender and Livelihood
**Reading List**

**Unit 1**
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India

**Unit 2**
- Caves, Jones and Frankel (1999), World Trade and Payments, 8th edition, Addison-Wesley.
• Pecchioli, R.M., The Internationalization of Banking, OECD, Paris; 1983

Unit 3
• Aggarwal and Singh (1958): The Economics of Underdevelopment. Oxford university Press, New Delhi
• Harris. John: (1982), .Rural Development - Theories of Peasant Economy and Agrarian Change
• World Bank; Re-Energising the Agriculture Sector to Sustain Growth and Reduce Poverty – Oxford University Press, New Delhi – 2005.
• Chelliah Raja J; Fiscal Policy in under developed countries, George Allen and Unwin, London 1971
• Bhargava, R.K.; Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi – 1985
• Ashok Rudra (1965) Economics of Agricultural Production and Resource Use, Prentice Hall
• Khusro AM. (1968) Readings in Agricultural Economics, Allied, Bombay
• Schultz T.W. (1964 Transforming Traditional Agriculture, New Have, Yale University Press
• David A.M. Lea and D.P. Chaudhri (Ed), Rural Development and the State
• Harris John. (Ed). 1982, Rural Development theories of Peasant economy and agrarian change, Hutchison University library, South Africa
• Basu Kaushik, Agrarian Questions, Oxford University Press
• Bhattacharya S.N., Rural Industrialization in India
• Rao R.V., Rural Industrialization in India
• Bagchi V., Khadi and Village Industries in the Indian Economy
• Vasant Desai., Organization and Management of Small Scale Industries
• Sundaram J.B., Rural Industrial Development
• Vasant Desai, Problems and Prospects of Small Scale Industries in India
• Mehan K K , Small Industry Entrepreneurs Handbook
• Dandekar V.M. and Rath N. —poverty in India
• Government of India – evolution of community development programme in India
• Desai, Vasant – study of rural economics, Himalya Publishing Company, New Delhi
• Krishnamurthy V.T. —community development India
• Jain P.C. – Agriculture Reforms in India
• R.B.I Report on SFDA - R.B.I. Mumbai
• Government of India, Ministry of Finance, Economic Devisio Economic Survey- various issues
• Jain, P.C. Agricultural Reforms in India
Syllabus for Ph.D in Economics, JMI

(Paper I) Course on Research Methodology

Unit-1:
- Introduction to philosophy of science and research methodology
- Research Design: Need for research design, Features of a good research design, Different research design
- Experimental survey: Basic principles of experimental design
- Case studies - problems and limitations.
- Planning and implementing research projects: planning a research project, problem formulation, research strategy and methods

Unit-2:
- Methods of Data Collection: Direct method and Indirect methods
- Data collection through questionnaires and schedules
- Problems in data collection
- Data processing: Operations and Problems in data processing
- Sampling design: meaning and its applications
- Measurement and scaling techniques: Measurement Scales and Sources of errors in measurement

Unit-3:
- Analysis of Data: Measures of and analysis Central Tendency, Dispersion, Skewness and Kurtosis
- Theoretical Distributions: Normal, Poisson and Binomial
- Statistical Estimation and Testing of hypothesis.

Unit-4:
- Methods of Analysis: Simple and Multiple Regression
- Time series analysis
- Problems in econometric estimation

Unit-5:
- Documentation - writing the research thesis
- Introduction to statistical and econometric software
Readings:
Kothari, C.R., Research Methodology
Ghosh, B.N., Scientific Methods and Social Research.
Foercese, D.P. and Richer, S., Social Research Methods.
Wilkinson, T.S. and Bhandarkar, P.L., Methodology and Techniques of Social Research

(Paper II) Advanced Topics in Economics

Unit 1: Micro and Macro Economics
- Consumer Demand Theory: Choice under Certainty and Uncertainty
- Theory of Production and Cost
- Inflation and Unemployment in the Closed and Open Economy
- Macro policy options

Unit 2: International Trade, International Finance, Corporate Finance
- Modern theory of trade and trade Policy,
- Intra-Industry Trade, Free Trade versus Protection, Analysis of gains from free trade.
- Theories of Balance of Payment and exchange rate determination
- Policy Conflicts and Adjustment under Fixed and Flexible Exchange Rates
- Modern Investment Theory
- Financial Derivatives

Unit 3: Development and Growth Theory
- Theories of under-development
- Classical Growth Models
- Endogenous Growth Models
- Sustainable Development

Unit 4: Economic Issues and Policy-I
- Planning and Economic Reforms
- Financing of Infrastructure Development, Education Sector,
- PSUs, Privatization and Disinvestment,
- Fiscal and Monetary Policy Approaches
- Tax Reforms, Central Government Finances
• Financial Sector Reforms, Money and Capital market.
• Foreign Trade Liberalization, Balance of Payments, Exchange Rate
• World Trade Organization (WTO) and Indian Competition Policy.
• Patterns (structure) of India's Foreign Trade and India's Trade Policy, RTAs and FTAs.
• WTO and Effects of Trade (Liberalization and Globalization) on Poverty, Inequality, Environment, Gender, Labour Standards, Technological Transfers etc.

Unit 5: Economic Issues and Policy-II
• Poverty, Income Distribution and Justice
• Migration and Demographic Transition
• Land Reforms in India and their impact on Agrarian Structure
• The New Economic Policy and Indian Agriculture
• Nature and Problems of Rural Development in India
• Indian Industry and Structural Changes
• Rural industrialization and strategies
• Rural poverty alleviation and employment programmes

Reading List:

Unit 1
• Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India
• Kreps, David M.(1998), A Course in Microeconomic Theory, Prentice Hall, India, New Delhi (For Unit V).
• Jha, R. (1991)– Contemporary Macroeconomic Theory and Policy; (Wiley Eastern)
• Levacic, R and A. Rebman (1986) – Macroeconomics; (2nd Ed, Macmillan).
• Mankiw, N.G. and D. Romer (eds.) (1991) – New Keynesian Economics; (MIT, Cambridge)
• Davidson, Paul (1994), Post Keynesian Macroeconomic Theory, Aldershot, UK: Edward Elgar.

Unit 2
• Caves, Jones and Frankel (1999), World Trade and Payments, 8th edition, Addison-Wesley.
• Pecchioli, R.M., The Internationalization of Banking, OECD, Paris; 1983

Unit 3
• Aggarwal and Singh (1958): The Economics of Underdevelopment. Oxford university Press, New Delhi
• Harris, John: (1982), Rural Development - Theories of Peasent Economy and Agrarian change

Unit 4 and Unit 5
• World Bank; Re-Energising the Agriculture Sector to Sustain Growth and Reduce Poverty – Oxford University Press, New Delhi – 2005.
• Chelliah Raja J; Fiscal Policy in under developed countries, George Allen and Unwin, London 1971
• Bhargava, R.K.; Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi – 1985
• Ashok Rudra (1965) Economics of Agricultural Production and Resource Use, Prentice Hall
• Khusro AM. (1968) Readings in Agricultural Economics, Allied, Bombay
• Schultz T.W. (1964 Transforming Traditional Agriculture, New Have, Yale University Press
• David A.M. Lea and D.P. Chaudhri (Ed), Rural Development and the State
• Harris John. (Ed). 1982, Rural Development theories of Peasant economy and agrarian change, Hutchison University library, South Africa
• Basu Kaushik, Agrarian Questions, Oxford University Press
• Battacharya S.N., Rural Industrialization in India
• Rao R.V., Rural Industrialization in India
• Bagchi V., Khadi and Village Industries in the Indian Economy
• Vasant Desai., Organization and Management of Small Scale Industries
• Sundaram J.B., Rural Industrial Development
• Vasant Desai, Problems and Prospects of Small Scale Industries in India
• Mehan K K , Small Industry Entrepreneurs Handbook
• Dandekar V.M. and Rath .N. –poverty in India
• Government of India – evolution of community development programme in India
• Desai, Vasant – study of rural economics, Himalya Publishing Company, New Delhi
• Krishnamurthy V.T. –community development India
• Jain P.C. – Agriculture Reforms in India
• R.B.I Report on SFDA - -R.B.I. Mumbai
• Government of India, Ministry of Finance, Economic Devisison Economic Survey- various issues
• Jain ,P.C. Agricultural Reforms in India
Minutes of the BOS Meeting Held on 15 July 2016

The Meeting of the Board of Studies (BOS) was held on 15 July 2016 at 3:30 pm in the Model Class-Room-1 of the Department.

The following members attended the meeting:

1. Prof. Shahid Ahmed, Head & Chairman, BOS
2. Dr. Mirza Allim Baig, Member and Secretary, BOS
3. Prof. Asok Mittal, External Expert
4. Prof. Majid Jamil, Internal Expert
5. Mr. Shakeel Ahmed, Member
6. Mr. Taqueer Alam Farooqui, Member
7. Mr. Asheref Illyian, Member
8. Dr. Bathula Srinivasu, Member
9. Dr. Saba Ismail, Member

Agenda 1: Confirmation of the Minutes of the Last BOS Meeting

The minutes of the last BOS Meeting held on 12 May 2016 were circulated in advance and no comment or suggestions were received. The minutes of the last BOS meeting were confirmed without any change.

Agenda 2: Restructuring/ Up-dating the Syllabus

The structure and revision of the syllabus done by the Department was presented before BOS. The Codes of the Papers and Credit of the Papers were assigned in the restructuring. The BOS thoroughly discussed the Course Structure and Syllabus of all the Programmes, viz., M.A. Economics, B.A. (Hons) Economics, B.A. Programme and B.A. Subsidiary; and approved the Course Structure and the syllabus. The revised syllabus will be uploaded in the University Website. The HOD thanks the member of the Syllabus Restructure Committee for their meticulous efforts.

Agenda 3: Any Other Item with the Permission of the Chair

1. The request for change of PhD Topic was received from Ms. Kirti Gupta, duly forwarded by the Supervisor. Since the request is within one year of PhD registration, BOS granted the change of the topic. The topic – “English Language Skills and Occupational Choices” will now be read as “Foreign Capital Flows and Its Macroeconomic Impact in India”.

2. The Syllabus Restructure and Revision Committee was converted to Standing Committee for Syllabus Restructure and Revision. The Composition of the Committee is as follows:
   (a) Mr. T.A. Farooqui – Coordinator
   (b) Mr. Asheref Illyian – Member
(c) Dr. Mirza Allim Baig – Member
(d) Dr. Bathula Srinivasu – Member
(e) Dr. Saba Ismail - Member

The revision and restructure of the syllabus are continuous process. At any point of time, if any faculty member feels the need to revise the syllabus, he/she can submit the revised version to the Committee. If the Committee is satisfied, it may forward this to BOS Chairman for necessary action. The BOS authorised the Chairman to approve the Course if needed and present the same in the subsequent BOS.

3. Prof. Shahid Ahmed briefed about the status of DRS Stage II. He met the senior officials in UGC and discussed the continuation of the DRS. On the request of HOD, Honourable VC talked to UGC officials to release the grant.

4. Mr. Tauqeer Alam Farooqui proposed for plausible introduction of M.A. Economics (Evening) Programme in the Department. The justification of this Programme was to cater the huge demand for the M.A. Economics in the Department. The matter was referred to DC Meeting for its feasibility and modality.

The meeting was closed at 5:00 pm with the thanks to the Chair.

Dr. Mirza Allim Baig  
(Secretary, BOS)

Prof. Shahid Ahmed  
(Head & Chairman, BOS)
Department of Economics
Jamia Millia Islamia
New Delhi, India

Minutes of the BOS meeting held on 12th May, 2016

The Board of Studies (BOS) meeting was held on 12th May, 2016 at 3:30 p.m. in the Model
Class Room - 1 of the Department of Economics. The meeting was chaired by
Prof. Shahid Ahmed, Head, Department of Economics. The following members have
attended the meeting:

1. Prof. Shahid Ahmed, Head, Deptt. of Economics, JMI
2. Prof. Majid Jamil Deptt. of Electt. Engg., JMI
3. Prof. N.U. Khan, Deptt. Of Social Work, JMI
4. Prof. H.S. Rizvi, Deptt. of Economics, JMI
5. Mr. Shakeel Ahmad, Deptt. of Economics, JMI
6. Mr. Tauqueer Alam Farooqui – Deptt. of Economics, JMI
7. Mr. Asheref Iliyan – Deptt. of Economics, JMI
8. Dr. Mirza Allim Baig, Deptt. of Economics, JMI
9. Dr. Bathula Srinivas – Deptt. of Economics, JMI
10. Dr. Saba Ismail – Deptt. of Economics, JMI

Prof. Mohd. Shafique, Dean, FSS, JMI, Prof. Shahid Ashraf, Deptt. of Economics, JMI,
Prof. Ashok Mittal, Deptt. of Economics, AMU and Prof. Biswajit Dhar, CESP, JNU could
not attend the meeting due to their prior engagements.

At the outset, Chairman welcomed the new member of the BOS, Prof. N.U. Khan, Head,
Department of Social Work and sought his cooperation in the functioning of the department
to achieve higher academic standards. He also appreciated the contributions made by the
following outgoing members during their tenure as member of the BOS:

1. Prof. N.A. Azad; 2. Prof. M.S.Bhatt and 3. Prof. Syed Akhtart Hussain

Thereafter, following decisions were taken in the meeting:

Agenda Items:

1. **Confirmation of the Minutes of the Last BOS meeting:** Since no observation was
received from any member on the Minutes of previous meeting of BOS held on 7th
and 8th September, 2015, the BOS confirmed the said Minutes.

2. **Restructuring/updating the Syllabus:** The course structure of M.A. (Economics),
B.A. (Hons) and B.A. Programme/Subsidiary (Annexure-I, II, III) were discussed and
minor changes were suggested by the members. BOS authorized the department to
make necessary changes, if required, in course structure and design the syllabus at
Department level and place the same in next BOS as a reporting item.

3. **Ph.D. Students’ request for leave, Extension Period for Ph.D., Cancellation of
Ph.D. admissions, Change of Ph.D. topics, etc.**

   a) **Extension Period for Ph.D.:**
      - One year extension request from Ph.D. scholars, namely Mr. P. Srinivasa Rao
        and Ms. Aditi Airon Bansal was submitted through their supervisors which
        was discussed and approved.

      - One year extension request from Ph.D. scholars Ms. Jasleen Kaur was
        submitted through her supervisors which was discussed and approved. In view
of the retirement of her Supervisor Prof. M.S. Bhatt, BOS appointed Prof. Halima Sadia Rizvi as her supervisor and Prof. M.S. Bhatt as Co-supervisor on the request of the candidate.

- In view of the retirement of Prof. M.S. Bhatt, BOS appointed Prof. Shahid Ashraf as the new supervisor of Ms. Apna Sinha.

- One year extension request from Ph.D scholars Ms. Areej Aftab Siddiqui was submitted through her supervisors which was discussed and approved. In view of the retirement of her Supervisor Prof. N.A. Azad, BOS appointed Prof. Shahid Ahmed as her new supervisor.

- Application of Ms. Namita Kapoor dated 28 April 2016 seeking the extension for completing PhD work was discussed in the BOS. The scholar has not applied for extension for sixth year and seeking extension in the seventh year. As per JMI ordinance, “A candidate enrolled in the Ph.D. course will be required to submit his/her thesis not earlier than two years but not later than five years. Provided that the Board of Studies/ Committee of Studies, after the expiry of five years period, may grant an extension for a period of one year on the recommendations of the Supervisor concerned. If the candidate fails to submit his/hers Ph.D. Thesis within the extended period of one year, an extension of another year may be granted by the Vice - Chancellor on the basis of the recommendation of the Board of Studies/ Committee of Studies”.

BOS observed that she has not submitted any progress report of her research through the supervisor since 31st October, 2012. She bears a casual attitude towards research as reported by the supervisor about her irregularity. She has neither met nor reported/updated the supervisor about her research for last two years. BOS observed that her case is not fit for consideration either in word or in spirit of the existing JMI ordinances. In view of this, her application is not tenable and hence BOS not found fit to recommend the candidate for extension of time for completion of Ph.D. work.

- **Extension of Non-Net Fellowships**: One request of extension of non-net fellowship from 18/09/2015 till the date of Ph.D. thesis submission by Ms. Jaweria Hazrana through her supervisor was submitted which was discussed and approved.

b) **Cancellations of Ph.D. Admissions**: Mr. Mustafa Kocoglu through his supervisor had submitted a request for cancellation of his Ph.D. admission, BOS discussed and recommended for cancellation of his Ph.D. admission.

c) **Change of Ph.D. topics**: Following Ph.D Students have requested for a change in their Ph.D topics through their supervisors:

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<thead>
<tr>
<th>Name</th>
<th>Existing Topic</th>
<th>Proposed Topic</th>
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<tbody>
<tr>
<td>Ms. Nidhi Bagaria</td>
<td>Analysis of Structural Impact of Trade Liberalisation-A Comparative Study of China and India</td>
<td>Structure and Performance of Exports-A Comparative Study of China and India</td>
</tr>
<tr>
<td>Ms. Swatilekha Thakur</td>
<td>Dynamic of Exchange Rate Volatility, Foreign Trade and FDI in India</td>
<td>India-Africa Trade Relations: An Analysis with specific reference to African LDCs.</td>
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</tbody>
</table>
BOS discussed and approved the proposed change in Ph.D Topics.

4. Any other Item with the permission of the chair
   - The coordinator of workload allotment committee circulated the minutes of the meeting held on 27th April, 2016 which was endorsed by BOS (Annexure-IV).
   - Name of examiners/paper setters and moderators were endorsed and approved.

The meeting came to an end at 5:30 pm with thanks to the Chairman.

[Signature]
(Prof. Shahid Ahmed)
Chairman - BOS

Dr. Shahid Ahmed
Prof. and Head
Department of Economics
Jamia Millia Islamia
New Delhi-110025
## Department of Economics

**Course: B.A.Programme /B.A. (Subsidiary)**

**Semester-Wise Paper and Credits**

*(REVISED COURSE STRUCTURE w.e.f. 2016-17)*

<table>
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<th>Semester-I</th>
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*Each paper carries 100 marks/4 credits.*
Syllabus for B.A. Programme/ B.A. Subsidiary

BES-(P/S)-101: Principles of Microeconomics

Unit- 1: Basic Concepts in Economics
Demand: Demand function, law of demand, determinants of individual demand; demand curve and demand schedule; market versus individual demand schedule; extension and contraction of demand, shifts in the demand curve.
Supply: Supply function, determinants of supply; supply schedule and supply curve; market versus individual supply; extension and contraction of supply, shifts in the supply curve.
Concepts of elasticity of demand; factors affecting elasticity of demand; elasticity of supply.

Unit- 2: Consumption, Production and Costs
Concept of utility, budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects;
Production isoquants, law of variable proportion, economic region of production, return to scale using isoquants. Cost of Production: Long run and short run costs of production, various cost concepts and shape of their curves; short run costs and output decisions; equilibrium of the firm.

Unit-3: MARKETS
Introduction to Markets
Perfect Competition: Assumptions, Equilibrium of the firm and the industry in the short and the long runs, including industry’s long run supply curve
Monopoly: features of monopoly, price and output under monopoly, nature and degree of price discrimination.

Suggested Readings:
1. Pindyck, R.S., D.L. Rubinfeld and P.L. Mehta; Microeconomics, Pearson Education.
2. N. Gregory mankiw, Principles of Micro Economics, Cengage Learning
4. Gould,J.P. and E,P.Lazear ; microeconomic Theory; All India Traveller bookseller, New Delhi.
5. Lipsey, R.G. and K.A. Chrystal; Economics, Oxford University Press.
Unit-1 Basic Concept of National Income.

Unit-2 Classical Theory of Output & Employment.
Says law of markets and Quantity theory of Money, Classical model without saving and Investment. Effects of the change in Labour supply and in Change in labour demand, on the level of output employment, Rigid money wage, monetary policy and full employment. Classical theory with saving and investment.

Unit-3 Keynesian Theory of Income and Employment.

Basic Readings:
BES-(P/S)-301: Indian Economy

Unit- 1: Concept of Developed and Developing Economies

Unit-2: Perspective of India’s Agricultural and Industrial Economy
Importance of Agriculture in Indian economy – trends in agriculture production and productivity, Green Revolution and Food Security, Agriculture Price Policy, Sources of Agricultural Finance and Sustainable Agricultural Growth, Industrial Policy – pre and post 1991 and trends in India’s industrial growth and productivity, Small vs. large industry, Policy issues and future prospects: infrastructure, and regional imbalances

Unit-3: Contemporary Issues
Macro-economic stabilization – fiscal and monetary policies, Globalisation and its impact on the Indian economy with special reference to global financial crisis, 2007-08, India and the World Economics, India’s foreign trade and investment policies,

References:

Detailed Readings:
BES-(P/S)-401: Money and Banking

Unit- 1: Money and Evolution
Money an overview- Classification of Money- Theories of Demand for Money -- Various Approaches- Fisher, Cambridge, Keynes, Friedman

Unit-2: Banking System- an overview
Banking System- Central Bank's – Role, Functions, Credit Control Methods- Commercial Banking- functions, Process of Credit Creation, Social banking

Unit- 3: Monetary Policy and Perspectives
Monetary Policy- goals and objectives of Monetary Policy- Monetary Policy in India, Fiscal Policy in India- Fiscal Policy measures in India - Financial sector reforms in India

References:
Chandler, L.V. The Economics of Money and Banking, S. Chand & Company Ltd., New Delhi
M.K. Lewis (2000), Monetary Economics, OUP
Maurice Levi (1999), International Finance, Tata Mcgraw Hill
L.M. Bhole (1999), Financial Institutions and Markets, Tata Mcgraw Hill
S.B.Gupta, Monetary Economics
Y.V. Reddy (2000), Monetary and Financial Sector Reforms in India UBSPD, New Delhi
BES-(P/S)-501: International Trade

Unit-I: Introduction to International Trade
International Trade definition, scope current scenario of trade, opportunity cost and production possibility curve, Terms of Trade, Ricardoian Theory of Trade, its criticism and application.

Unit – II: Trade Policy

Unit-III : Balance of payment and exchange rate
Balance of payment meaning and its components, exchange rate determination, fixed and flexible exchange rate, balance of payments in under liberalised trade regime, brettlor wood monetary system and its breakdown

Basic Readings:
- Ellsworth, P.T. International Economics, 1969
BES-(P/S)-601: Public Finance

Unit-I: Meaning and Scope of Public Finance:

Unit-II: Principles of Taxes

Unit-III: Public Expenditure and Public Debt:

Basic Readings:
# Department of Economics

**Course: B.A. (HONS) ECONOMICS**

Semester-Wise Paper and Credits*

*(REVISED COURSE STRUCTURE w.e.f. 2016-17)*

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*Each paper carries 100 marks/4 credits.*
Unit-1: Theories of Consumer Behaviour
- Law of demand/supply, Determinants of demand/supply, Expansion/ contraction of demand/ supply, Increase/ decrease in demand/ supply, Market demand/ supply curve, concept of equilibrium, Elasticity of demand/supply and its measurement
- Cardinal utility approach (assumptions, equilibrium and its critique)
- Ordinal utility approach (assumptions, equilibrium and its critique), Income consumption curve, Engel curve, Price consumption curve, Income effect, Substitution effect and Price effect (Hicks and Slutsky approaches)
- Revealed Preference approach
- Consumer’s surplus-Marshallian and Hicksian approaches.

Unit-2: Theory of Production and Costs
- Production Function, law of variable proportions, Isoquants, factor substitution, Equilibrium of the firm with respect to input use, Returns to scale, Economies and Diseconomies of scale, Expansion path, features of Cobb Douglas production function and elasticity of substitution
- Different concepts of cost and their inter-relationship, Short run and long run cost curves, Empirical evidence on costs, Modern theory of costs

Unit-3: Market Structure-I
- Perfect competition assumptions, features revenue curves, short & long run equilibrium of firm and industry, economic profits, Short and long run supply curve of firm and industry
- Monopoly (Features, conditions, Equilibrium of the firm, Price discrimination, Conditions of equilibrium under price discrimination.

References:
2. Pindyck, Rubinfeld and Mehta: Microeconomics, 6th Edition
4. Gravelle and Rees- Microeconomics; Pearson Education, 2nd Edition
5. Nicholson, Microeconomics
BES-C-102: MATHEMATICAL METHODS FOR ECONOMICS- I

Unit-1: Basic concepts, Functions and Graphs
- Sets and set operations, Ordered pairs, the real numbers, natural numbers, integers, rational and irrational numbers; absolute value and intervals; inequalities.
- The general concept of function, types of function (linear, quadratic, power, exponential, inverse); graphs of functions; Applications in Economics

Unit-2: Limits, Continuity and Single variable Differential Calculus
- Limits, continuity and differentiability, rules of differentiation (simple differentiation, sums, products, and quotients); Second and higher order derivatives, power rule, chain rule, implicit differentiation; Linear approximation and differentials; Quadratic approximations, Elasticities the Intermediate-value Theorem; the Extreme-value Theorem; The Mean-value Theorem; Indeterminate forms and L'Hopital’s rule; Applications in Economics

Unit-3: Single variable optimization and Integral Calculus
- Stationary points of a function, Maxima and Minima(local and global); Convexity and Concavity of functions; Points of inflection; Optimization of economic functions Rules of integration, integration by parts, integration by substitution, indefinite integral, Definite Integral, Proper and Improper integral; Areas under curves and economic application of integration.

References:
BES-CB-101: ENVIRONMENTAL ECONOMICS

Unit-1: Basic Environmental Issues:

Unit-2: Economics of Natural Resources:

Unit-3: Economics of Environmental Regulation
- Evolution of Environmental Regulation; Environmental Legislations/ Policies in India; Instruments for Pollution Control: Command and Control Policy vs. Market Based Instruments: Taxes vs. Permits; Direct and Indirect Instruments of Pollution Control; Pollution Control System and Policy Measures in Indian Context

Basic Readings:

BES-C-201: MICROECONOMICS-II

Unit-1: Market Structure
- Monopolistic Competition: Assumptions of Chamberlin’s model, Concept of product group, Equilibrium of individual firm (selling cost excluded) and Group equilibrium, Excess capacity, criticism of the model
- Oligopoly: Cournot’s duopoly model and its applicability to Oligopoly, Cournot’s equilibrium using reaction curves, Paul Sweezy’s kinked demand curve solution.

Unit-2: Factor Pricing
- Wage determination under perfect and imperfect competition, monopolistic and monopsonistic exploitation
- Theories of rent: Ricardian theory of rent (scarcity rent verses differential rent, critical evaluation of the theory), Modern Theory of rent, Quasi-rent
- Theories of interest: Classical, Neoclassical and Keynesian theories of interest
- Theories of profit: Dynamic theory, Risk and uncertainty theory and Schumpeterian theory of profit.

Unit-3: Welfare Economics
- Various approaches to social welfare
- Pareto’s welfare criteria
- Kaldor-Hicks compensation criteria
- Concept of Social welfare function, maximisation of social welfare and determination of ‘Point of Bliss’.

References:
1. Chaudhary, Kalyanjit, Roy Microeconomics.
2. Koutsyansis, A. Modern Microeconomics, Macmillan.
7. Stonier and Hague A Text Book of Economic Theory.
BES-C-202: MATHEMATICAL METHODS FOR ECONOMICS- II

Unit - 1: Linear Algebra
- System of linear equations, vectors, vector operations, linear combinations of vectors, length of vectors and orthogonality, Applications in Economics
- Matrices and its types, matrix operations (row and column), Echelon and Reduced echelon forms, determinants and its properties, singularity of a matrix, inverse of a matrix, linear independence and rank of a matrix, solution of a system of linear equations (by Cramer’s Rule, Matrix Inversion), Applications in Economics
- Solution of Homogeneous Equation System; Leontief Input-Output models (Open and Closed), Applications in Economics

Unit - 2: Calculus of Multivariate Functions
- Partial derivatives (two variables and many variables) and its economic relevance, Total derivatives, Derivatives of functions using chain rule, Derivative of functions defined implicitly, Homogeneous and Homothetic functions, Multivariable optimization, local and global extreme, Stationary points of a function, first and second order condition using Hessian, Point of Inflection, Saddle point, Constraint Optimization (using Lagrangean multiplier), sufficient condition (using Bordered Hessian), Optimization of economic functions, Applications in Economics

Unit -3: Dynamic Analysis
- Continuous time: First order linear differential equations (homogeneous and non-homogeneous case) with constant coefficient and constant term; with variable coefficient and variable term; Dynamics of market price; Exact differential equations.
- Discrete Time: First order Difference equations, the stability analysis of the equilibrium (oscillatory and non-oscillatory, divergent and convergent time paths); The Cobweb model, Applications in Economics

References:
1. Knut Sydsaeter and Peter J. Hammond (2005), Mathematics for Economic Analysis. Pearson Educational Asia: Delhi, 4th Indian reprint
BES-CB-201: AGRICULTURAL ECONOMICS

Unit- 1: Introduction
- Definition and scope of Agricultural Economics, Unique features of Agriculture, Role of Agriculture in Economic Development-Kuznet formulation, linkage between Agriculture and Non Agricultural sectors.

Unit -2: Agricultural Marketing and Price Policy

Unit- 3: Issues in India’s Agricultural Development
- Land Tenure system on the eve of independence, land reforms measures-Achievements, problems and policy- The new agricultural technology and Green Revolution-Rationale, Progress Problems and Prospects. Agricultural credit- Problems and sources, WTO and Indian Agriculture.

Readings:
1. GS Bhalla, Agricultural Development since Independence
2. TW Schultz, Transformation of Traditional Agriculture
3. Mellor, Agricultural Development
4. R.N. Soni, Leading Issues in Agricultural Economics
5. Sadhu and Singh, Agricultural Problems in India
6. Indian Journal of Agricultural Economics - Relevant issues
7. Economic Survey various issues
8. Khusro A. M., Readings in Agricultural Economics
9. Swaminathan M. S., Agriculture Cannot Wait- New Horizons in Indian Agriculture
BES-C-301: MACROECONOMICS-I

Unit-1: National Income and Methods of Measurement.

Unit-2: Classical Theory of Output and Employment.
- Says law of Market, Quantity Theory of Money, Classical model without saving and investment. Effects of a change in Labour Supply and a change in labour demand on the level output and employment, rigid money wage, monetary policy and full employment. Classical Theory with saving and investment.

Unit-3: Keynesian Theory of output and Employment.

Basic Readings:
BES-C-302: STATISTICAL METHODS – I

Unit-1: Basic Concepts and Descriptive Methods
- Definition and Role of Statistics; Measures central location – Median, Mode, Mean, Harmonic Mean, Geometric Mean (AM, GM, HM, GM), simple and weighted averages, group averages, Measures of dispersion – Range, Variance and Standard Deviation, Mean Deviation, Quartile Deviation, Measures of Skewness and kurtosis; Measures of economic inequality

Unit-2: Probability and Probability Distributions
- Random experiment, sample space and events; classical, empirical and axiomatic definitions of probability; addition and multiplication theorems; conditional probability, independent events and Baye’s rule, Random variable; mathematical expectation - mean and variance of a random variable Binomial, Poisson and Normal distributions

Unit-3: Index Numbers and Time Series Analysis
- Index Numbers: Concept and uses; Laspeyres, Paasche's and Fisher's index numbers; time reversal, factor reversal and circular tests; problems in constructing index numbers; splicing, base shifting; use of index numbers for deflating other series.
- Time Series Analysis: Concept and uses; Components of time series; Methods of moving averages and least squares

Readings:
2. Gupta, S. P. (2005), Statistical Methods, S. Chand & Sons, New Delhi

Other Books
BES-C-303: INDIAN ECONOMY

Unit-1: Concept of Developed and Developing Economies
➤ Characteristics of a developing economy – basic features of Indian economy at the time of independence Population and Economic Development - Demographic trends of India – Occupational Structure - Population policy, Employment in organised and unorganised sectors , Issues in Indian Planning – Objectives and critical evaluation of each plan. Centre-State relationship

Unit-2: Perspective of India’s Agricultural and Industrial Economy
➤ Importance of Agriculture in Indian economy – trends in agriculture production and productivity, Green Revolution and Food Security, Agriculture Price Policy, Sources of Agricultural Finance and Sustainable Agricultural Growth, Industrial Policy – pre and post 1991 and trends in India’s industrial growth and productivity, Small vs. large industry, public vs. private sector industries, disinvestment strategies, Policy issues and future prospects: infrastructure, technology and regional imbalances

Unit-3: Contemporary Issues
➤ Macro-economic stabilisation – fiscal and monetary policies, Globalisation and its impact on the Indian economy with special reference to global financial crisis, 2007-08, India and the World Economics, India’s foreign trade and investment policies,

References:

Detailed Readings:

**BES-AE-301: ECONOMICS OF EDUCATION**

**Unit- I: Economics of Education**

**Unit -2: Education Planning and Finance**
- Education planning techniques, Cost – Benefit Analysis, Theories of Public Expenditure, Resource Mobilisation and Utilisation, Effects of Education on levels of earnings and value based education

**Unit -3: Education in India**
- Indian perspective to education, Sarva Shiksha Abhiyan, Right to Education and Legislations relating to Right to Education with special reference to Constitutional provisions/Preamble. Higher Education in India: Issues, Concerns and New Directions

**References:**

**Detailed Readings:**
BES-C-401: MACROECONOMICS-II

Unit-1: Theories of Consumption & Investment
- General theories of spending behaviour, Absolute Income hypothesis, Relative income hypothesis, Permanent Income hypothesis, Life Cycle hypothesis Motivation, for investment, Marginal efficiency of capital supply price expected income streams, Marginal efficiency of capital and rate interest, acceleration principle.

Unit-2: Keynesian Theory of Money and Interest
- Keynesian Theory of Interest. Determination of rate of interest, Changes in the levels of income, speculative, Demand and Money supply and their effect on equilibrium rate of interest Liquidity trap and policy Implications. IS and LM Curve Analysis, The General Equilibrium of Product and Money Market Relative, Effectiveness of Monetary and Fiscal Policies.

Unit-3: Theory of Inflation and Business Cycle
- Types and Theories of Inflation, Demand pull and cost push inflation, The Philips curve, trade of between inflation and unemployment, Concept and Phase of Business cycle, Innovation Theory, Keynesian Theory, Monterey Theory.

Basic Readings:
7. William Branson: Macro Economic Theory and Policy
BES-C-402: STATISTICAL METHODS – II

Unit-1: Uni-variate and Bi-variate Analysis
➢ Moments and moment generating function (m.g.f.), , Multivariate Statistics - joint, marginal and conditional distribution; Product moment – covariance, correlation, rank correlation, Simple linear regression; method of least squares; linear and exponential trend

Unit-2: Introduction to Sampling Distributions
➢ Population versus sample, Methods of sampling, simple random sample, sampling distribution of sample mean for normal and non-normal populations, Chebyshev’s inequality, law of large numbers, optimum size of sample, central limit theorem, Definition of z, chi-square, t and F statistics.

Unit-3: Introduction to Statistical Inference
➢ Properties of point estimator - unbiasedness, relative efficiency and consistency, Testing of Hypothesis - type I and type II errors, level of significance, power of a test, Use of z, chi-square, t and F statistics - large sample and small sample tests for mean, one tail and two tail tests for difference of means, Chi-square test for (i) Independence of two attributes, F-test for ratio of two variances, one-way analysis of variance.

Readings:
6. Pitman, Australia

Other Books
BES-C-403: MONEY AND BANKING

Unit- 1: Money and Evolution

Unit-2: Banking Sector- An overview
- Banking: Meaning and definition- Functions of Central Bank, Credit Control Methods by RBI, Reserve Money/High powered Money
- Functions of Commercial Banks - Concept of Credit Creation-Functions of RBI -, Role of Private Banks and a comparison- Role of Foreign Banks
- Recent developments in Banking Sectors- Social banking, Alternative Banking Strategy- Inclusive Banking

Unit- 3: Monetary Management
- International Monetary System- Monetary Policy in India- Instruments of Monetary policy in India- Fiscal Policy in India- Instruments of Fiscal Policy in India- Financial Sector Reforms in India, The Narasimhan Committee Report

References:
1. Chandler, L.V. The Monetary and Financial System
2. M.K. Lewis (2000), Monetary Economics, OUP
5. L.M. Bhole (1999), Financial Institutions and Markets, Tata Mcgraw Hill
10. S.B.Gupta, Monetary Economics
11. Y.V. Reddy (2000), Monetary and Financial Sector Reforms in India UBSPD, New Delhi
BES-CB-401: INTERNATIONAL FINANCE

Unit 1: The Foreign Exchange Market
- Foreign Exchange Market – Structure and Functions
- Foreign Exchange Market Products
- Foreign Exchange Market Trading
- Efficiency of Foreign Exchange Market
- Foreign Exchange Market in India

Unit 2: Balance of Payment and Exchange Rate Determination
- Balance of Trade and Balance of payment
- Fixed Exchange Rate System
- Flexible Exchange Rate System
- Floating Exchange Rate System
- Theories of Balance of Payment and Exchange Determination- PPP, Elasticity Approach, Income Absorption Approach, Monetary Approach

Unit 3: The International Monetary System
- Overview of the International Financial Market
- A Brief History of the International Monetary System
- The European Monetary System and Monetary Union
- Alternative Exchange Rate System
- Exchange Rate System and Policies in India

References:
BES-C-501: DEVELOPMENT ECONOMICS

Unit-1: Growth and Development

Unit-2: Under-Development Determinants and Theories

Unit-3: Determinants of Development
- State and Markets; Capital-Human, Natural and Social and Manmade., Agriculture Industry and Services; Physical Infrastructure, Policies, Planning and Development Administration, Research and Development and Technology, Non-Economic Factors.

References:

BES-C-502: ECONOMETRICS – I

Unit 1: Simple Linear Regression Analysis
➢ Introduction to Econometrics; Two variable regression analysis- Population Regression function and Sample Regression Function; Significance of Stochastic Disturbance Term; Simple Classical Linear Regression Model (CLRM)- Assumptions, OLS estimation; Desirable Properties of OLS Estimators- Guass Markov Theorem; Hypothesis Testing, Goodness of Fit.

Unit 2: Multiple Regression Analysis
➢ Multiple Regression Equation; OLS estimation of Partial Regression Coefficients; Multiple Coefficient of Determination (R\(^2\)) and Adjusted R\(^2\); Multiple and Partial Correlation Coefficients; Problem of Inferences and Hypothesis Testing.

Unit 3: Problems in OLS Estimation
➢ Problems in OLS Methods: Analysis of Residuals – Heteroschedasticity and Autocorrelation Problems – Consequences of applying OLS under Heteroscedasticity and Autocorrelation – tests and remedial measures for removal of Heteroscedasticity and autocorrelation; Multicollinearity-consequences, tests and remedial measures.

References:
BES-C-503: INTERNATIONAL TRADE

Unit-1: Introduction to International Trade

- International trade, domestic, regional and intra regional trade, forces for and against economic integration need for separate theory of inter natural trade, production possibility curve, Offer curve terms of trade. Pure theory of international trade, Ricardo’s comparative cost advantage Heckscher Ohlin trade model, Criticism Leontif Paradox.

Unit-2: International Trade Policies

- Free trade and economic protection, Tariff, Economic effects of tariff, partial and general equilibrium, import quota, Import substitution vs export promotion, Prebisch Singer Hypothesis General Agreement on Tariff and Trade (GATT), various rounds of trade negotiations and new issues under Uruguay Round issues under Doha Development Round.

Unit-3: Balance of Payment and International Monetary System

- Balance of payment, exchange rate determination, exchange rate liberalisation, disequilibrium in the balance of payments, adjustment mechanism, Bretton Wood monetary system and its break down and current scenario, world bank, organisation, function and its role in the development of developing countries.

Basic Readings:
Unit 1: Introduction to Financial Markets
- Financial Markets – Role and Functions
- Types of Financial Markets - Primary and Secondary Markets
- Financial Markets – Instruments and Transaction Mechanism in Spot Market
- Introduction to Derivatives Market – Forward, Futures and Options
- Transactions Mechanism in Derivative Markets
- Indian Financial Markets – Equity Market, Bond Market, Mutual Funds and Commodity Market
- Role of Stock Exchanges (NSE/BSE)
- Regulations of Indian Financial Markets and Role of SEBI

Unit 2: Stocks Market Analysis
- Fundamental Analysis of Stocks and Investment – Qualitative and Quantitative Analysis
- Different Types of Stocks and Valuation of Stocks
- Concept of Market Efficiency and Forms of Market Efficiency
- Modern Theory of Investment - Capital Asset Pricing Model
- Portfolio Diversification and Simple Portfolio Diversification Problem

Unit- 3: Bond Market Analysis
- Time Value of Money – Present Value and Future Value
- Annuity and Perpetuity, Compounding and Discounting
- Types of Bond – Pure Discount Bond, Coupon Bond, Consols
- Valuation of Bond
- Relationship between Government Bond and Corporate Bond
- Bond Price and Interest Rate
- Term Structure of Interest Rates and Yield Curve

References
1. Bodie, Robert c Merton and David Cleaton (2009), Financial Economics, Pearson
2. Elton, Gruber Brown, Goetzmann (2007), Modern Portfolio Theory and Investment Analysis
Unit -1: Pre Classical and the Classical School

Unit-2: The Marxian Challenge and Marginal Revolution

Unit 3: Contemporary School of Economic Thought

Select References:

Detailed Readings:
BES-C-602: PUBLIC ECONOMICS

Unit-1: Meaning and Scope of Public finance

Unit-2: Public Revenue and Taxes
- Sources of Public Revenue- Division of Tax Burden-Taxes – Objectives of Taxation- Classification of Taxes - Canons of Taxation, Principles of Taxation. Ability, Benefit and cost of service- Impact, Incidence and shifting of Tax Burden- Theories of Tax Shifting- Effects of Taxation – Major Taxes in India. Value Added Tax in India -The concept of Goods and Service Tax (GST), Double Taxation,

Unit-3: Public Expenditure and Public Debt

References:
1. R.A Musgrave and PB Musgrave – Public finance – Tata Macgrail
BES-C-603: ECONOMETRICS – II

Unit 1: Review of Regression Analysis and Dummy Variable Regression Model
- Review of Simple and Multiple Regression Analysis
- Reviews of Violation of CLRM Assumptions
- Model Specification Problems and Model Selection - t – test, F-ratio, R², D-W Statistics
- Dummy Variable Regression Model – Model Specification and Applications

Unit- 2: Dynamic Econometric Model
- Distributed Lag Model (DLM) – Ad hoc Estimation
- Koyck Transformation and DLM
- Almon Approach to DLM
- Adaptive Expectation Model
- Partial (Stock) Adjustment Model
- Auto Regressive (AR) Model - Estimation
- Detecting and Correcting Autocorrelation Problem in AR Model

Unit- 3: Simultaneous Equation Model
- Simultaneous Equation Bias
- Identification Problem and Rules for Identification – Order and Rank Conditions
- Instrumental Variables Method (IVM)
- Indirect Least Square (ILS) Methods
- Two Stage Least Square (2SLS) Method
- Application to Macro Models (Examples)

References:
- Stock and Watson, Introduction to Econometrics, Pearson Publication
- Klein L.R., Introduction to Econometrics
- Wallis K.F., Topics in Applied Econometrics.
UNIT 1: COMPUTER FUNDAMENTALS AND DATA
- Basics in Computer, Operating Systems and MS Office
- Disk operating systems, Operating system – Windows,
- Nature and Types of Data
- Tabulation and Graphical Representation of Data
- Descriptive Analysis of Data
- Introduction to Statistical Softwares - Eviews/SPSS

UNIT 2: DATA ANALYSIS IN EVIEW/SPSS
- Measures of Central Tendency - Mean, Median and Mode
- Measures of Dispersion – Mean Deviation, Standard Deviation and Variance
- Measures of Skewness and Kourtosis
- Simple and Partial Correlation
- Analysis of Variance

UNIT 3: REGRESSION ANALYSIS IN EVIEW/SPSS
- Hypothesis Testing – t-test, F-test, Chi-Square Test
- Simple and Multiple Regression Analysis
- Dummy Variable Regression Analysis
- Auto-Regressive Model
- Simple Simultaneous Equation Model Estimation

REFERENCES
3. Allen, R.G.D., Statistics for Economics
6. Eviews Manuals
7. SPSS Manuals
B.A. (Hons.) Syllabi for the Subsidiary Papers on Environmental Studies

Semester - I

Paper -I

Introduction to Environmental Studies

Part-I:  Ecosystem and Economy

Definition, types and Functions of Ecosystem, Linkage between Economy and Ecosystem, Degradation of Ecosystem, Need for Conservation of Ecosystems, Present state of Eco-systems with special reference to India.

Part-II:  Natural Resources

I) Definition, classification and types of Renewable and Non-Renewable Natural resources: Forest Resources, Water resources, Mineral resources, Land resources, Energy resources; II) Common Property resources (CPRs), Destruction of CPRs and its Impact on Human Welfare; III) Scarcity of Natural Resources, Concept and Management.

Part-III:  Environmental Pollution

I) Concept and Classification; II) types of Environmental Pollution: Air Pollution, Water Pollution, Soil Pollution, Marine Pollution, Noise Pollution, Nuclear Pollution, Thermal Pollution; III) Causes of Pollution and Measures of Pollution Control.

Basic Reading List:


Semester –II

Paper –II
Environmental Thought and Environmentalism

UNIT-I: Evolution of Environmental Thought and Environmentalism

Introduction to Environmental thought, the origin of modern environmental thought, Evolution of Environmentalism in the West, Western Environmentalism, Environmentalism in Developing Countries.

UNIT-II: History of Environmentalism in India


UNIT-III: Environmental Regulatory Bodies and Important Legislations/Policies in India

Role of Ministry of Environment and Forest (MoEF), Government of India; Central Pollution Control Board (CPCB); Environmental Legislations/ Policies: National Environmental Policy (NEP)-2006; Indian Forest Act-1865; Wildlife Protection Act-1972; Environment (Protection) Act-1986; Biological Diversities Act-2002.

Basic Reading List:


8- www.envfor.nic.in

9- www.cpcb.nic.in

Semester –III

Paper –III
Environmental and Economics Development

Part-I: Basic Theory of Environmental Economics


Part-II: Economics of Pollution Control

Instruments of Pollution Control: Command and Control Measures Vs Market Based Instruments; Taxes Vs Permits; Direct and Indirect Instruments of Pollution Control; Pollution Control System and Policy Measures in Indian context Concept of Optimum Pollution.

Part-III: Economics of Sustainable Development

Definition and Concepts of Sustainable Development, Indicators of Sustainable Development, Environmental Kuznets Hypothesis (EKh) and Millennium Development Goals (MDGs)

Basic Reading List:


2- Bhattacharyya, Rabindra N. (2001), “Environmental Economics- An India Perspective”, Oxford University Press, New Delhi,

3- J. E. De Steiquier,(2006), "The origins of Modern Environmental thoughts", university of Arizona Press


8-www.envfor.nic.in
9-www.cpcb.nic.in

Semester-III

Paper-V

International Environmental Issues and Challenges

UNIT-1: Global Environmental Issues

Climate Change: Reasons for Climate Change, Historical Trends, Climate Change and Its Effect on: Agriculture, Availability of Fresh Water and Change of River Ecosystem, Sea-Level Rising and Loss of Human Interest, Ozon Layer Depletion, Deforestation and Desertification.

UNIT-II: Climate Change and Policy Adapted

Causes, Consequences and Solution of Climate Change, Determinants of Climate Change, Major Indicator of Climate Change, Policy adapted by the International Community to cope up with the Climate Change, Role of states, civil society and international organization to come out with the problem of climate change.

UNIT-3: Loss of Biodiversity

Definition, Types and Value of Biodiversity, Loss of Biodiversity and Its Major Causes, Mega-Diversity Countries, IUCN Red List, Needs for Conservation of Biodiversity.

Basic Reading List:


8- www.envfor.nic.in

9- www.cpcb.nic.in

10- www.iucn.org

11- www.unep.org

12- www.wwf.org

13- www.ramsar.org

14- www.ipcc.ch

Semester-IV

Paper-IV

Human Environment Relationship and Economic Valuation

1- A Brief History of Human and Environment Relationship

Historical Progress, Adaptation, Ecosystem- Concepts, Structure and Functions, Environmental Problems in Tropical, Temperate and Polar Ecosystems, Environmental Programmes and Policies- Global, National and Local Levels.

2-Distribution of Various Environmental Resources
Problems of Distribution, Utilisation, and Management of Environmental Resources, Appraisal and Conservation of Natural Resources.

3-Methods for Valuation of Environment

Economic Values of Environment-A Brief Introduction of, Use Value (UV) nad Non-Use Value (NUV), Direct and Indirect Methods of Valuation, Environmental Valuation Using Contingent Valuation Method (CVM) and Travel Cost Method (TCM).

Basic Readings List:


8-www.envfor.nic.in

9-www.cpcb.nic.in

Semester –IV

Paper –VI

International Environmental Institutions and Negotiation/Agreement

Part-I: Major International Environmental Negotiation/Agreement

Agenda 21, Earth Summit, Convention on Biological Diversity (CBD), Ramsar Convention, Kyoto Protocol, Bali Road Map
Part-II: Global/Regional Environmental Organisation

(a) IUCN-International Union for the Conservation of Nature

(b) UNEP-United Nations Environment Programme

(c) WWF-World Wide Fund

(d) IPCC-International Panel on Climate Change

(e) Ramsar Convention on Wetlands of International Importance

Part-III: International Environmental Law

A Brief History of International Law, Distinguishing National Law from International Law, Means of Implementing and Enforcing International Environmental Law, Distinguishing between Hard and Soft International Law, Jurisdiction for Disputes: Courts, Parties and Enforcement

References:


8-www.envfor.nic.in

9-www.cpcb.nic.in

10-www.iucn.org
11- www.unep.org
12- www.wwf.org
13- www.ramsar.org
14- www.ipcc.ch
Economics of Population and Demographic Analysis

Unit – I:
Development of the discipline, Population Studies and Demography, Population studies in India subject matter, Importance & scope, Sources of demographic data, Population Census, Definition, Features, Procedures, census operation in India, vital events registration system, sample surveys, sample registration system in India.

Unit – II:

Unit – III:
Fertility, basic concepts, measures of fertility, reproduction rate, fertility transition, reasons for high fertility in developing countries, economic theories of fertility, mortality, concepts, measures of mortality, life expectancy, sex and age pattern of mortality, mortality in India, life table, age sex structure, sex ratio, factors, affecting sex ratio, age structure, aging of population, factors determine, age structure, population growth and population policy in India.

Suggested Readings
- Coale A.J. and L.M. Hoover; Population growth and economic development in Low income Countries: A Case Study of India’s prospects, Princeton University Press 1958
- Cox, Peter R. Demography.
- John C. Caldwell, Toward a Restatement of Demographic transition theory, Population And Development Review vol. 2 No. 3-4 September and December 1976
- Choubey, P.K.; Population Policy in India, Kaniska Publications New Delhi 2000
- Srinivasan, K; Basic Demographic techniques and application, Sage New Delhi 1968
- Srinivasan, K and A. Sharif; India: Towards population and Demographic goals, oxford university press New Delhi 1998
- Bose, A; India's basic Demographic Statistics, B.R. publishing corporation New Delhi 1996
- Peterson Williom; Population, Macmillon 1975.
M.A. Economics Syllabus

Semester I (Compulsory Papers)

1. MICRO ECONOMICS

Unit 1: Theory of Consumer Behavior
- Demand Theory: Preference Based Approach under Choice under Certainty
- Revealed Preference Theory
- Welfare Analysis and Aggregate Demand
- Consumer Demand Theory: Choice Under Uncertainty

Unit 2: Theory of Firm Production and Cost
- Theory of Production
- Theory of Cost
- Profit Function
- Homogeneous, Homothetic, CES, Cobb Douglas, Translog Production Function

Unit 3: Market Structure
- Monopoly
- Monopolistic Competition
- Oligopoly – Price Competition
- Oligopoly – Quantity Competition

Reading List:
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India

2. MACRO ECONOMICS

Unit 1: Classical Approach, Keynesian Approach and Monetarism
- Determination of Price, Output and Employment
- Is-Lm Analysis-Aggregate Demand and Supply;
- Is-Lm and the Neoclassical Synthesis
- The Short Run and Long Run Phillips Curve;
- Expectation, Interest Rates and Inflation;
- The Trade-off Between Inflation and Unemployment,
- The Natural Rate of Unemployment (NRU),
- NRU and Full Employment,
- Macroeconomic Policy.

**Unit 2: New Classical Macroeconomics and New Keynesianism:**
- Main Features of the New Classical Macroeconomics,
- Efficient Market Hypothesis,
- Rational Expectation Model,
- Lucas Supply Function,
- Okun’s Law and Phillips Curve,
- Reh and its Critique,
- Keynesian Reappraisal School (Clower, Leijonhufvud and Malinvaud)

**Unit 3: Imperfect Completion Approach**
- Inflation and Employment - Non Accelerating Inflation Rate of Unemployment (NAIRU) and Natural Rate of Unemployment,
- Policy to Shift the Equilibrium Rate of Unemployment;
- Supply Side Fiscal and Income Policies,
- The Effect of Policy on Actual Employment,
- Crowding out Effect

**Reading List:**
- Wendy Carlin and David Soskice (1996) - Macroeconomics and The Wage Bargain; Oxford University Press
- Mankiw, N.G. and D. Romer (Eds.) (1991) – New Keynesian Economics; (Mit, Cambridge)

**3. STATISTICS**

**Unit 1: Probability and Probability Distributions**
- Introduction O Probability–Classical,Empirical and Axiomatic Definitions; Random Experiments – Sample Space, Sigma Field and Probability Measure; Methods of
Counting - Permutations and Combinations; Rules of Probability – Addition, Multiplication, Conditional, Independence, Bayes’ Theorem; Numerical Examples.

- Random Variable – Discrete and Continuous; Probability Distribution - Pdf, Pmf and Cdf; Mathematical Expectation of Random Variables and Their Functions; Mean and Variance, Moment Generating Function and Characteristic Function; Numerical Examples.
- Discrete Distributions – Uniform, Bernoulli, Binomial, Poisson, Negative Binomial, Geometric; Hypergeometric, Multinomial; Use of Tables and Numerical Examples.
- Continuous Distributions – Uniform, Exponential, Normal, Lognormal, Gamma, Beta; Use of Tables and Numerical Examples.
- Multivariate Distributions – Bivariate Pdf and Cdf, Covariance, Marginal Distributions, Correlation, Partial and Multiple Correlation, Normal Bivariate, Multivariate Hypergeometric, Numerical Examples.

Unit 2: Sampling and Sampling Distributions
- Population Versus Sample, Iid Random Variables, Sampling Errors; Non-Random or Judgement Sampling, Methods of Random Sampling – Simple Random, Cluster, Stratified, Systematic; Sample Statistic – Sample Mean and Sample Variance; Standard Error.
- Z Chi-Square, T and F Distributions.
- Chebyshev’s Inequality, Law of Large Numbers, Central Limit Theorem, Sampling Distribution of Sample Mean, Sampling Distribution of Sample Variance.
- Sampling from Finite and Infinite Population, Finite Population Correction Factor, Sampling from Normal Population.

Unit 3: Methods of Statistical inference
- Introduction To Linear and Non-Linear Regression.
- Introduction To Nonparametric Methods, Principal Components and Factor Analysis, Analysis of Variance – One Way.
Reading List:

- S. Ross (1976), A First Course in Probability, Macmillan.

4. MATHEMATICS FOR ECONOMICS

Unit 1: Functions and Calculus

- Types of Function; Differentiability; Rules of Differentiation; Derivative Versus Differential, Interpretation of Revenue, Cost, Demand, Supply Functions; Elasticities and Their Types; Higher-order Derivatives. Convex and Concave Functions. Multivariable Functions; Types of Production Functions, Homogeneous and Homothetic Functions.
- Partial Differentiation - Interpretation; Problems of Maxima and Minima in Single and Multivariable Functions; Unconstrained and Constrained Optimization; Simple Problems in Market Equilibrium; the Implicit Function Theorem; the Envelope Theorem (Unconstrained Case).
• Integration; Rules of Integration; Taylor Series Formula, Application to Consumer's Surplus and Producer's Surplus; Growth Rates and Simple Properties of Time Path of Continuous Variables.

Unit 2: Matrix, Determinant and Differential Equations
• Vectors, Matrices, Determinants – Types and Properties. Solution of Simultaneous Equations Through inversion and Cramer's Rule
• Concept of Quadratic Forms – Eigen Roots and Eigen Vectors;
• Difference Equations – Solution of First order and Second order Difference Equations; Applications in Trade Cycle Models; Growth Models and Lagged Market Equilibrium Models.

Unit 3: Linear Programming, Game Theory and Input-Output Analysis
• Linear Programming – Formulation of a Linear Programming Problem, Solution of Linear Programming Through Graphical and Simplex Methods;
• Formulation of The Dual of a Linear Programme and its Interpretation; Shadow Prices and Their uses; Concept of Duality and Statement of Duality Theorems;
• Concept of A Game; Strategies – Simple and Mixed; Value of a Game; Saddle Point Solution; Simple Applications.
• Introduction to input-Output Analysis

Reading List:
• A.C. Chiang and Kevin Wainwright (2005), Fundamental Methods of Mathematical Economics, Mcgraw-Hill.
• Sydsaeter, Knut, Peter Hammond (2002), Essential Mathematics for Economic Analysis, Prentice Hall.
• Pemberton M. and N. Rau (2001), Mathematics for Economists, Manchester University Press.


Yamane, Taro (1975), Mathematics for Economists, Prentice Hall of India, New Delhi.


Semester II (Compulsory Papers)

1. OPEN ECONOMY MACROECONOMICS

Unit 1: The Open Economy
- IS-LM Analysis in Open Economy
- LM Curve and the Balance of Trade: Zero Capital Mobility
- Implication of Capital Mobility for Macro Policy
- Mundell–Fleming Model
- Marshall–Lerner Condition
- Interest-Rate Differentials
- The Mundell–Fleming Model With a Changing Price Level

Unit 2: Inflation and Unemployment in the Open Economy
- Inflation and Unemployment in the open Economy
- Equilibrium Rates of Unemployment and Sustainable Unemployment
- Fiscal Expansion, Exchange Rate and inflation
- Supply Side and Demand side in the Open Economy
- Open Economy Equilibria

Unit 3: Further Open Economy Topics
- Floating Exchange Rates with Zero Capital Mobility
- Floating Exchange Rates and Perfect Capital Mobility: Exchange Rate Expectations
- Rational Exchange Rate Expectations; Dornbusch’s Overshooting Model
- Policy Interdependence and The World Equilibrium Rate of Unemployment

Reading List:

2. GENERAL EQUILIBRIUM & WELFARE ECONOMICS

Unit 1: Partial Equilibrium and General Equilibrium Analysis
- Pareto Optimality and Competitive Equilibria
- Partial Equilibrium Competitive Analysis
- The Fundamental Welfare Theorems in a Partial Equilibrium Context
- Pure Exchange: Edgeworth Box
- One consumer one producer Economy, 2x2 Production Model
- General versus Partial Equilibrium Theory
- Pareto Optimality with Social Optima
- Existence of Walrasian Equilibrium
- Core and Equilibria in Competitive Economies

Unit 2: Social Choice & Welfare
- The Nature of the Problem
- Social Preference Relation
- Social Choice and Arrows Impossibility Theorem
- Measurability, Comparability of Social Welfare Function –
- Rawlsian Social Welfare Functions, Utilitarian Social Welfare Function

Unit 3: Market Failure
- Public Goods
- Private Provision of Public Goods
- Comparison with Private Goods
- Free Rider Problem
- Demand Revelation
- A Simple Bilateral Externalities
- Multilateral Externalities
- Coase Theorem
- Private Information and Second Best Solutions
Readings List:
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India

Additional Readings:
- Mukherji, A. (1990), Walrasian and Non- Walrasian Equilibria

Semester III (Compulsory Papers)

1. INDIAN ECONOMIC POLICY

Unit 1: Development Concept and Issues in Governance
- Development Concept, State and Market, Institutions,
- Panchayati Raj Institutions – (PRIs) Non Government Organizations (NGOs),
- Sustainable Development,
- Governance
- Economic Reforms, Plans After Reforms

Unit 2: Sectoral Development and Policy Reforms
- Financing of Infrastructure Development, Education Sector,
- Migration,
- Poverty, Inequality and Growth
- Current Status of Agriculture Input Pricing , Subsidies and Land Reforms
- Industrial Policy and Development after 1991, Public Sector Under-Takings (PSUs), Privatization and Disinvestment,
Unit 3: Policy Approaches in Fiscal, Financial and External Sector

- Fiscal and Monetary Policy Approaches, Fiscal Federalism,
- Tax Reforms, Central Government Finances
- Foreign Trade Liberalization, Balance of Payments, Exchange Rate Policy,
- World Trade organization (WTO) and Indian Competition Policy.

Readings List:

2. DEVELOPMENT AND GROWTH THEORY

Unit 1: Economic of Growth and Development
- Evolution of Development of Economics;
- Concept, Measurement and Methodology;
- Historical Experiences – Gdp Per-Capita To Sustainable Development;
- Theories of Under-Development, Hirschman, Rostow, Lewis, Gunder Frank, Myrdal, Harris-Tadaro.

Unit 2: Economic Growth- Theory and Practice
- Historical Trends and Patterns;
- Growth Theories-- Classical, Neo-Classical, Keynesian, Post-Keynesian and New Growth-Theories;
- State, Market and Institutions;
- Role of Natural Resource-from Classical Economists To Thermodynamics School.

Unit 3: Poverty, Income Distribution and Justice
- Commodities, Characteristics, Functioning and Well-Being;
- Poverty- Concept, Measurement and incidence;
- Justice- Concept, Measurement and Approaches, (Lock To Sen);
- Food, Famine and Entitlements;
- Ecology- Economy and Poverty;
- Migration, Demographic Transition and Poverty.

Readings List:
- Aggarwal and Singh (1958): The Economics of Underdevelopment. Oxford University Press, New Delhi
• Harris. John: (1982), Rural Development - Theories of Peasant Economy and Agrarian Change

Semester IV (Compulsory Papers)

1. INTERNATIONAL TRADE

Unit 1: Trade Theories 1 (Classical and Neo-Classical)
• Notion of Comparative Advantage (Static Versus Dynamic, Natural Versus Acquired, Theoretical Versus Empirical, Etc); Sources of Comparative Advantage (Technology, Resource Endowments, Demand Patterns, Economies of Scale, Government Policies Etc).
• Classical Model (Smith, Ricardo, and Haberler): Assumptions, Implications and Limitations; Extension of Ricardian Model: The Specific Factor Model.
• Standard Model: Analysis of Gains from Free Trade.
• Neo-Classical Model: Assumptions and Their Implications, Factor Substitution, One-to-One Relationship Between Factor-Prices, Commodity-Prices and Factor-Intensities; Heckscher-Ohlin, Stolper-Samuelson, Rybczynski and Factor Price Equalization Theorems; Empirical Evidence - the Leontief Paradox.

Unit 2: Trade Theories 2 (Modern Theories and Trade Policy)
• Intra-Industry Trade - Trade Under The Assumptions of Imperfect Competition and Economies of Scale, Linder’s Hypothesis; Dynamic Explanations (Change of Technologies) - Product-Cycle and Technology-Gap Models; Strategic Trade Policy (Management) - The Diamond Model (Michael Porter).
• Free Trade Versus Protection - Need For Protection, Tariff and Non-Tariff instruments of Trade Policy, Comparison of Tariff and Quota, Learner's Symmetry, Aggregate Measures of Protection, Nominal and Effective Rate of Protection.
- Effects of Tariff for Small and Large Countries (Partial Equilibrium Analysis), Effects of Tariff on Distribution of Gains from Trade (General Equilibrium Analysis), the Optimum Tariff, Metzler’s Paradox, Domestic Distortions, Trade Distorting Tariffs.

**Unit 3: India and the World Economy**
- Patterns (Structure) of India's Foreign Trade - Volume, Trends, Composition, Direction, etc., Export Performance and Export Competitiveness.
- India's Trade Policy: Review of Pre- and Post-Liberalization - Exim Policies, Export Promotion Policies, SEZs; Tariff Structure, RTAs and FTAs.
- India and WTO: Uruguay Round, Highlights of Ministerial Meetings: Singapore to Hong Kong, Concerns of Advanced Countries (Acs) and Developing Countries (Dcs), the Doha Development Agenda (DDA) and Concerns of India.
- Effects of Trade (Liberalization and Globalization) on Poverty, Inequality, Environment, Gender, Labour Standards, Technological Transfers Etc.

**Readings List:**

**Additional Readings:**

Articles:

2. ENVIRONMENTAL ECONOMICS - I

Unit 1: Environmental Economics: Setting and Scope
• Meaning and Central Themes of Environmental Economics;
• Ecology- Environment and Economy Perspectives;
• Environment and Economy Linkages;
• Different Perspectives on Development - Limits to Growth, Thermodynamics School and Simon Julian’s Thesis of “Ultimate Resource”;
• Current State of Environment;
• Sustainable Development: Basic Issues, Concepts, Definitions Approaches, Rules and Indicators.

Unit 2: Eco-System and Natural Resources
• Definition, Functions of Ecosystem, Food-Chains, Food Webs and Ecological Succession, Net Productivity of an Eco-System;
• Geo-Ecological Cycles;
• Ecosystem Productivity and Relevance of Different Kinds of Eco-Systems;
• Natural Resources and the Economy, Natural Resource Scarcity—a Historical Perspective, Classification of Natural Resources,
• Economics of Natural Resource Exploitation: Economic Analysis of Non-Renewable Renewable Natural Resources;

Unit 3: Environmental Capital—Theory, Practice and Evaluation
• Taxonomy of Individual and Public Choices,
• Externality, Market Failures and Missing Markets.
• Theory of Environmental Valuation, and Introduction to Methods of Valuation.
• Theory of Regulation and instruments of Regulation.
• Application of Cost and Benefits Analysis to Environmental Analysis.

Reading List:
• Bhattacharya, R.N. Edt. (2001), Environmental Economics - an Indian Perspective (Oup).
• Dasgupta, Kristrom and Maler (1997), Poverty, institutions and Environmental Resource Base, in J. Berhman & T. N. Srinivasan (Eds.), Handbook of Development Economics, Vol. IIIA.
• Sengupta, Ramprasad (2002): Ecology & Economics: an Approach to Sustainable Development, Oup, India (Ch. 5, 6, & 7).
• Shankar, U. (2001), Environmental Economics (Ed.) Oup, Last Chapter
World Commission on Environment & Development (Wced), 1987, Our Common Future, Oup.

Additional Readings:

Useful Links:
Www.Evri.Ca
Www.Wri.org
Www.Rff.org
Www.Undp.org
Www.Worldwatch.org
Www.Ecologicaleconomics.org
Semester I (Optional Papers)

No Optional Papers

Semester II (Optional Papers)

1. ECONOMETRICS

Unit 1: Regression Analysis and Violations of Basic Assumptions
- Simple and General Linear Regression Model – Assumptions.
- Estimation (Through OLS Approach) and Properties of Estimators;
- Gauss-Markov Theorem;
- Maximum Likelihood Method,
- Multiple Linear Regression, Partial and Multiple Correlation Coefficient, Hypothesis Testing.
- Nature, Test, Consequence and Remedial Steps of Problems of Heteroscedasticity; Multicollinearity and Auto-Correlation; Problems of Speciation Error; Errors of Measurement.

Unit 2: Regression with Qualitative and Lagged Variables
- Dummy Variable Techniques.
- Testing Structural Stability of Regression Models; Comparing Two Regressions, Interaction Effects, Seasonal Analysis, Piecewise Linear Regression, Use of Dummy Variables. Regression With Dummy Dependent Variables; the LPM, Logit, Probit and Tobit Models.
- Autoregressive and Distributed Lag Models- Koyck Model, Partial Adjustment Model, Adaptive Expectations; Instrumental Variables; Problem of Auto-Correlation-Application; Almon Approach to Distributed - Lag Models.

Unit 3: Simultaneous Equation Models
- The Simultaneous Equation Bias and Inconsistency of OLS Estimators;
- The Identification Problem; Rules, of Identification-order and Rank Condition;
- Method of Estimating Simultaneous Equation System; Recursive Method and OLS; Indirect Least Square (ILS); 2SLS; 3SLS – Applications.

Reading List:
- J. Johnston, Econometrics Methods, Mcgraw Hill (Fourth Edition)
Maddala, G.S: (Ed.) (1993), Econometric Methods and Application (2 Volumes)

2. PUBLIC ECONOMICS

Unit 1: Public Economics - Concept, Scope, Provisions of Public Goods
- Information Asymmetry, Externalities,
- Public Goods, Nonrival Consumption and Non Excludability,
- Demand and Supply of Public Goods,
- Local Public Goods and Decentralization Theorem,
- Problems of Preference Revealation, Voting Rule, Characteristic of Majority Voting Rule, Rent Seeking

Unit 2: Taxes, Public Expenditure, Debt and Budgeting
- Public Expenditure, Structure and Growth, Wagner’s Law,
- Peacock– Hypothesis,
- Cost Benefit Analysis, Shadow Pricing, Discount Rate,
- Budgeting, Public Borrowing Public Debt, Budgeting and Zero Based
- Benefits and Ability to Pay Approaches to Taxes Allocative and Equity Aspects of Taxes,
- Deadweight Losses, Excess Burden, Trade off Between Equity and Efficiency.

Unit 3: Fiscal Federalism and Fiscal Reforms in India
- Fiscal Federalism. Assignment of Function, Constitutional
- Provisions, and Sources of Revenue.
- Resource Transfer from Centre to State
- Principles of Multi Unit Finance
- Direct and Indirect Taxes,
- Budget Deficit and Its Implications.

Reading List:
- Chelliah Raja J; Fiscal Policy in Under Developed Countries, George Allen and Unwin, London 1971
• Bhargava, R.K.; Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi – 1985

3. FINANCIAL ECONOMICS

Unit 1: Financial Markets
• Financial Markets and Financial Instruments
• Real Assets and Financial Assets
• Stocks, Rate of Interest, Exchange Rates
• Indian Financial Markets, Regulations and SEBI

Unit 2: Modern investment Theory
• Securities Markets Operational Efficiency and Efficient Market Hypothesis (Emh)
• Modern View of Security Analysis, Performance of Securities Market, Price / Earning Ratios.
• The Determinants of Equity Prices, Estimating Fair Value, Capital Asset Pricing Models (CAPM), Arbitrage Pricing Theories (APT), Multifactor Models
• Fixed Income Securities, Bond Valuation and Analysis, Bond Portfolio Management

Unit 3: Financial Derivatives
• Derivatives Forward Markets and Future Markets.
• Options and Option Pricing, the Payoffs from Buying and Selling Options, Put-Call Ratio and Parity.
• Mechanics and Properties of Stock Options.

Reading List:
• Chandra, P. (1999), Financial Management: Theory and Practice, Galgotia Publishers
• Z. Bodie, Robert Merton and David Cleeton (2009), Financial Economics, Pearson
• Z. Bodie, A. Kane and A. Marcus(2008), Investments, McGraw-Hill

4. AGRICULTURAL ECONOMICS

Unit 1: Agriculture and Economic Development-Introduction
• Nature and Scope of Agricultural Economics
• Peculiar Characteristics of Agriculture
• Transformation of Traditional Agriculture-Schultz and Mellor’s Analysis
• Agriculture and Dual Models: Fei- Ranis and Arthur Lewis
• Agriculture and Its Contribution-Kuznets’s Formulations

Unit 2: Economics of Agricultural Production
• Production Function in Agriculture and forms of Production Functions-Cobb Douglas, Spill Man
• Factor Factor Relationship in Agriculture
• Rational and Irrational Production Stages of Production
• Risk and Uncertainty in Agriculture
• Crop insurance

Unit 3: Issues in India’s Agricultural Development
• Land Reforms in India and Their Impact on Agrarian Structure
• The New Agricultural Strategy
• The New Economic Policy and Indian Agriculture
• Wto and its Implication for Indian Agriculture
• Agricultural Price Policy in India

Reading List:
• Ashok Rudra (1965) Economics of Agricultural Production and Resource use, Prentice Hal
• A.S. Kahlon and D.S. Tyagi, Agricultural Price Policy in India, Heritage Publishers
• Dantwala, M.L. Et Al (1991) Indian Agricultural Development Since Independence, Oxfordand IPH, New Delhi
• Hanumantha Rao (1964)" Agricultural Production Functions: Cost ant Return in"India" Asia Publishing House, Bombay
• Kahlon .As. and D.S. Tyagi(1983)Agriculture Price Policy in India, Allied Publishers Ltd, New Delhi
• Krishna Raj (1963) Farm Supply Response in India-Pakistan: a Study of the Punjab Region, Economics J.I Sep
• Khusro AM. (1968) Readings in Agricultural Economics, Allied, Bombay
• Lewis, W.A (1955) Economic Development with Unlimited Supplies of Labour, Manchester School of Economic and Social Study, May
• Mellor J. (1966) the Economics of Agriculture Development, Yom and Company, Bombay.
• Motra A (1977) Terms of Trade and Class Relation, P. P Baghch Ad Company Culcutta
• Rao (Ed)(1988) Studies in Indian Agriculture, Oup
• Rath, N.K. (1985) Price" Costs of Production and Terms of Trade of Indian Agriculture, IJAE, Oct-Dec
• R.K Sampanth (1980) Economic Efficiency in Indian Agriculture
• Reins G and John Ch Fei (1961) Theory of Economic Development
• Sakhyan Pl (1988) Introduction to Economics of Agricultural Production, Prentice Hall India Ltd, New Delhi
• S.A.R. Bilgrami(L996) a Introduction to Agricultural Economics, Himalayan Publishing House, Bombay.
• Schultz T.W. (1964 Transforming Traditional Agriculture, New Have, Yale Univesity Press
• Y.Haymi and V.Rutan (1971) Agricultural Development-an International Perspective, Jhon Hopkins

Semester III (Optional Papers)

1. ECONOMICS OF EDUCATION

Unit 1: Economics of Education, Human Development and Economic Development
• Economics of Education, Nature, Definition and Scope of study.
• Education and Human Development and Human Capital Accumulation.
• Aspects, Indicators and Measures of Economic Development.

Unit 2: Cost Benefit Analysis and Financing of Education
• Production and Cost Functions of Education.
• Theories of Public Expenditure on Education, Models and Methodologies.
• Linkages between Education, Skills and Jobs.
• Wastages in Education. Non-participation, Dropouts and Brain Drain.

Unit 3: Problems and Prospects of Education in India:
• Indian Perspective to Education,
• Literacy and Education Programmes of Government of India.
• Education planning, need based and Value based education planning in India.
• Public Expenditure on Education in India.
• Need and Scope for External Participation in Education in India.

Reading List:
• GovIndia R (Ed) (2000). India Education Report. a Profile of Basic Education National institute of Educational Planning and Administration, Oxford University Press. New Delhi

Additional Readings:
• Prez, Jeon and Geeta Kingdon (2001), School Participation in Rural India, Review of Development Economics.

Journal:
- National Human Development Reports Various Issues- Planning Commission GOI, New Delhi
- Human Development Reports, Undp.

2. TIME SERIES ANALYSIS

Unit 1: Introduction of Time Series
- Stochastic Processes
- Correlation and Autocorrelation Functions
- Stationarity: Unit-Root Test
- Arima Models

Unit 2: Conditional Heteroscedastic Models
- Characteristics of Volatility
- Structure of A Model
- The Arch Model
- The Garch Models: M-Garch, E-Garch and T-Garch

Unit 3: Vector Autoregression Model, Co-Integration and Forecasting
- Introduction to Var Analysis
- Causality in Time Series: Granger Causality Test and Toda and Yamamoto Causality Tests
- Co-Integration and error Correction Model
- Testing for CoIntegration – Engle – Granger Methodology – Johansen Methodology
- Time Series Forecasting

Reading List:
- Brockwell P.J. and Davis R.A : “Introduction to Time Series and Forecasting”, 2002
Stewart, K. G.: "Introduction to Applied Econometrics", 2005

3. INTERNATIONAL FINANCE AND BANKING

Unit 1: The International Monetary and Financial System
- Changing Role of Monetary System
- Organization of the Foreign Exchange Market- The Spot and the Forward Market.
- Parity Conditions in International Finance - Purchasing Power Parity, Fisher Effect & International Fisher Effect, Interest Rate Parity Theory
- Exchange Rate Regime and Foreign Exchange Market in India.

Unit 2: International Financing and Investment Decision.
- Overview of the International Financial Market. Official and Private Sources
- National Capital Markets as International Financial Centers
- The Euro-Currency Market and International Banks.
- International Equities: FDI and Portfolio investment
- Evaluation and Management of Political Risk

Unit 3: Financial and Debt Management
- Roles and Functions of External Debt in Developing Countries
- Budget Deficits and Public External Debt
- Episodes of financial Crisis
- Four Generation Models of Currency crisis
- Interrelationship between Currency, Banking and Financial Crisis
- Proposals to Resolve the Debt Crisis
- Prevention of Financial crisis
- New International Financial architecture

Reading List:
- Brain Tew. the Evolution of International Monetary’ System, Hutchinson, 1985
• J Dunning (1981), Multinational Enterprises.
• IMF: Recent Multilateral Debt Restructuring with official and Bank Credits, Washington, December 1983.
• Moris Goldstein, the Asian Financial Crises; Causes, Cures and Systemic Implication Washington Dc, June 1998.
• Pecchioli, R.M., the Internationalization of Banking, Oecd, Paris; 1983.
• Sachs, J and Radelet, Steven 1998. “The East Asian Financial Crisis; Diagnosis, Causes and Cures, institute of International Devolvement, Us, April. Also, Published in Banking Papers on Economy Activity, 1998.
• The Banker, Third World Debt, September, 1987.

4. QUANTITATIVE FINANCE

Unit 1: Time Value of Money in Finance
• Time Value of Money – Annuity, Perpetuity, Consols
• Returns and Risks – Mathematical Expectations, Variance, Marginal, Conditional and Joint Distribution of Returns
• Mean Variance Model and Utility Function
• Log-Normality and Jensen’s inequality
• Calculation of NPV, DPV and IRR, and Optimum Investment Decisions
• Efficient Market and Financing Decisions

Unit 2: Capital Market Theory and Estimation
• Efficient Market Model and Testing For Market Efficiency
• Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (Apt) – Estimation Problems
• Factor Models – one Factor Model and Multifactor Model
• Estimating Factor Models and Implications
• Portfolio Analysis – Portfolio Selection Problem and Diversification

Unit 3: Modelling the Behaviour of Stock Prices and Options
• Stochastic Process and Deterministic Process
Markov Process and Weiner Process
Non-Stationarity and Integrated Process
Co-Integration and error Correction Models
Markov Switching Models
Dividend Valuation Models
Binomial Trees and Risk-Neutral Valuation Models
Geometric Brownian Motion Model
Black-Scholes Model for options

Reading List:

5. RURAL ECONOMICS

Unit 1 Rural Development and Introductory Aspects
- Concept of Rural Development
- Scope and Importance of Rural Development
- Different Approaches to Rural Development
- Nature and Problems of Rural Development
- Rural Development - Indian Perspective

Unit 2: Dimensions of Rural Development in India
- Agriculture
- Rural Industrialization
- Human Resources
- Physical Infrastructure

Unit 3: Programmes/ Strategies of Rural Development
- Growth Targeted Strategies
- Rural Development Strategies
- Target oriented Rural Poverty Alleviation Programmes
- Target oriented Rural Employment Programmes
Reading List:
- David A.M. Lea and D.P. Chaudhri (Ed), Rural Development and the State
- Harris John. (Ed). 1982, Rural Development Theories of Peasant Economy and Agrarian Change, Hutchison University Library, South Africa
- Chambers Robert (1985), Rural Development Putting the Last First, Longman
- Basu Kaushik, Agrarian Questions, Oxford University Press
- Battacharya S.N., Rural Industrialization in India
- Rao R.V., Rural Industrialization in India
- Bagchi V., Khadi and Village Industries in the Indian Economy
- Vasant Desai., Organization and Management of Small Scale Industries
- Sundaram J.B., Rural Industrial Development
- Vasant Desai, Problems and Prospects of Small Scale Industries in India
- Mehan K K , Small Industry Entrepreneurs Handbook
- Dandekar V.M. and Rath .N. –Poverty in India
- Government of India – Evolution of Community Development Programme in India
- Desai, Vasant – Study of Rural Economics, Himalya Publishing Company, New Delhi
- Krishnamurthy V.T. –Community Development India
- Jain P.C. – Agricultural Reforms in India
- Maheshwari S. - -Rural Development in India
- Mishra Puri – Indian Economy, Himalya Publishing House, Mumbai
- Datt, Sundaram – Indian Economy, S. Chand and Company, New Delhi
- Government of India, Ministry of Finance, Economic Division Economic Survey- Various Issues
- Jain ,P.C. Agricultural Reforms in India

Semester IV (Optional Papers)

1. MONETARY ECONOMICS

Unit 1: Demand for Money
- Overview of Development of Monetary Theory and Major Issues
- Friedman, New Monetarism and its Critique.

Unit 2: Supply of Money
- Monetary Aggregates, Liquidity Aggregates and Divisia Index
- H-Theory of Money Supply
- Money Multiplier Process and Factors Affecting H
• Exogeneity of Money Supply
• Money Supply in India: its Components and Trends

Unit 3: Monetary Management and Monetary Policy
• Monetary Management – Rules vs. Discretion
• Price Targeting vs inflation Targeting vs Exchange Rate Targeting
• Monetary Policy – Challenges before Reserve Bank of India.
• Difficulties of Controlling Money Supply in an open Economy
• Further Issues of Monetary Policy and Monetary Management in India

Reading List:
• Jadhav N., Monetary Economics for India, Macmillan India Ltd., 1994
• Gupta S.B., Monetary Economics: Institutions, Theory and Policy, 1982
• Goldfeld S.M. and L.V. Chandler, the Economics of Money and Banking, Harper and Row, 1981
• Handa J., Monetary Economics, Routledge, New York, 2000

2. ENVIRONMENTAL ECONOMICS - II

Unit 1: Modeling Environment: Non-Market Valuation Techniques
• Theory of Environmental Policy;
• Empirical Models of Non-Market Valuation;
• Revealed Preference Methods: Hedonic Models, Travel Cost Models;
• Stated Preference: Contingent Valuation Method;
• Choice Experiments: Conjoint Analysis;
• Environmental Accounting.

Unit 2: Environmental Issues and Legislation in India
• Environmental Issues in India: Pollution- Types, Causes and Effects;
• Environmental Jurisdiction and Environmental Legislation: Constitutional Provision;
• Institutions, Instruments, Regulation and Conservation;
• Environmental Federalism, Inter-Jurisdictional Competition, Environmental Justice;
• Environmental Movements in India.

Unit 3: Global Environmental Issues and Governance
• Transboundary Pollution, Global Warming, Climate Change, Ozone Depletion,
• Climate Change & Sustainable Development, CDM & Sustainable Development;
International Trade & Environmental;
Environmental Conflict Management: institutional & Legal instruments, Multilateral Environmental Agreements;
Major Environmental Organization & Events: Green Peace Movement, the World Conservation Union, The Nature Conservancy, Sierra Club, WWF, UNEP, UNCED;

Readings List:
- Bhattacharya, R.N., (2001) (Ed.) Environmental Economics - an Indian Perspective (Oup),
- Kadekodi, Gopal K., 2004: Common Property Resource Management: Reflection on Theory & the Indian Experience, Oup
- Kolstad, C.D, (2004), Environmental Economics, Oxford University Press,
- Markandya, Anil & Kirsten Halsnaes (Eds.), 2002 Climate Change & Sustainable Development: Prospects for Developing Countries, Earthscan, Uk, Usa, (Ch.1, 2, 6-8).
- Shankar, U. (2001), Environmental Economics (Ed.) Oup, Last Chapter
World Commission on Environment & Development (Wced), 1987, Our Common Future, Oup.

Additional Readings:
Available at: http://www.darp.noaa.gov/library/pdf/cvblue.pdf
Centre for Science & Environment: State of Environment Report
Websites on of Some International Environmental Conventions:
Convention on Biological Diversity @ http://www.biodiv.org/
Convention on Climate Change @ http://unfccc.int/
The Convention Concerning the Protection of the World Cultural and Natural Heritage (The World Heritage Convention) @ http://whc.unesco.org/nwhc/pages/sites/main.htm
Convention on Wetlands of International Importance (Especially as Waterfowl Habitat) @ http://www.ramsar.org/
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes @ http://www.basel.int/index.html
Convention On International Trade in Endangered Species of Wild Fauna and Flora (cites) @ http://www.cites.org/eng/disc/what.shtml
Convention on Migratory Species @ http://www.wcmc.org.uk/cms/
Conventions on Ozone Layer Protection the Convention for the Protection of the Ozone Layer the Montreal Protocol on Substances That Deplete the Ozone Layer @ http://www.unep.org/ozone/aboutsec.shtml
Convention Regional Seas @ http://www.unep.ch/seas/
Rotterdam Convention On Voluntary Prior informed Consent Procedure About Hazardous Import and Export @ http://www.pic.int/index.html
Convention to Combat Desertification. Website @ http://www.unccd.int/main.php
Northern American Free Trade Agreement (NAFTA) and Free Trade Agreement of America FTAA. (Environmental Relating Issues and institutional System)
Center For Environmental Cooperation For NFTA @ www.cec.org
3. INDUSTRIAL ORGANIZATION

Unit 1: Oligopoly: Homogeneous and Differentiated Product Market Structure
- Cournot Competition – Duopoly Cournot Vs Collusion
- Sequential Moves- Leader Follower Model
- Bertrand Market Structure, Capacity ConstraInt- Edgeworth Paradox, Collusion, Entry Barriers,
- Differentiated Products (Cournot & Bertrand), Location Models

Unit 2: Economics of R&D Licenceing & Innovations
- Model of The innovation Process.
- Patent Race,
- Market Structure and innovation Efforts.

Unit 3: Barriers to Entry and Exit and Network Externalities
- Entry Barrier- Limit Pricing, Capacity Constraints,
- Judo Economics- Gelman and Salop Model,
- Low Price As Signalling Device – Milogram and Roberts Model,
- Reaction To Partial Entry, Predatory Pricing,
- Predation in Learning and Network Industries

Reading List:
- Economides, Nicholas, the Economics of Networks, 1996, International Journal of Industrial Organization(14), 673-699.
- Tirole J., 1988, the Theory of Industrial organization, the MIT Press

4. GAMES AND INFORMATION

Unit 1: Game Theory under Complete information
- Static Game of Complete Information.
• Dynamic Games of Complete information
• Dynamic Games of Complete But Imperfect information
• Economic Applications

Unit 2: Game Theory Under incomplete information
• Static Games of incomplete information – Bayesian Nash Equilibrium.
• Dynamic Game of Incomplete Information – Perfect Bayesian Equilibrium, Trembling Hand Perfection.
• Economic Applications

Unit 3: Economics of Information
• Types of Asymmetric Information - Moral Hazards, Adverse Selection, Signaling, Market for Lemons,
• Principal Agent Problem,
• Efficiency of Market Outcomes under Asymmetric Information

Reading List:
• Gibbons, Robert (1992), a Primer in Game Theory, Harvester Wheatsheaf, Newyork, London.
• Fudenberg, Drew, and Jean Tirole, Game Theory, ANE Books, New Delhi, 2005.
• Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India

5. COMPUTER APPLICATIONS IN ECONOMICS

Unit-I: Fundamental of Database Management
• Concepts of Data
• Information
• Record, File
• Database, DBMS, RDBMS
• Function of DBMS
• Components of DBMS, Database Designer
• Database Administrator
• DBMS Availability
• MS Excel, MS Access, MS Word, MS Powerpoint

Unit-II: Cross Section & Panel Data Techniques and Methods using SPSS/STATA/any other Software

• Series, Groups, Tables, Graphs and Objects.
• Descriptive Statistics
• One Way Tabulation
• Cross Tables
• One Sample T Test
• Independent Sample Test
• Paired Sample T Test
• One Way ANOVA
• Correlation-Bivariate Partial
• Regression-Least Square, Binary & LogisticRegression
• 2 Stage Least Square, Factor Analysis, Principal Component, Panel Regression Analysis.

Unit-III: Simultaneous Equation and Series Modeling, Using Eviews/Gempack/any other Software.

• Introduction of Econometric Software. Creating a work file, Entering Data into a work file, Creating a group, Graphing, Generating new Variables.
• Getting Data
• Importing Data
• Exporting Data
• Unit Root Test
• Cross Correlations and Correlograms
• Granger Causality
• Cointegration

Reading List:
• Eviews- Manual
• SPSS- Manual
• Cramer, J.S., Empirical Econometrics.
• Deaton, A.S., the Analysis of Household Surveys: a Micro-Econometric Approach to Development Policy.
• Pollak, R.A. and T.J. Wales, Demand System Specification and Estimation.
• Klein, L.R.: (A) Introduction to Econometrics, (B) Text Book of Econometrics.
- Krishna, K.L. (Ed.), Econometric Applications in India.
- Wallis, K.F., Topics in Applied Econometrics.
Department of Economics

Course Structure and Syllabus of M.Phil./Ph.D. Economics

Semester-I

MPhil/PhD-ECO- C101: Research Methodology in Economics
MPhil/PhD-ECO-C102: Advance Studies in Economics
MPhil/PhD-ECO-C103: Selected Issues in India and World Economy
MPhil/PhD-ECO-C104: Term Paper

Note: Each Paper carries the weights of 100 Marks/ 4 Credits.

The evaluation will be based on both internal and final assessment.
The internal assessment and the final assessment carry the weightage of 25 and 75 marks, respectively.
Paper-1 Research Methodology in Economics

Unit-I Introduction to research methodology
- Objective of and types of research.
- Problem formulation.
- Types of data and its collection method
- Data Sources and sampling techniques.
- Thesis writing and its components

Unit-II Statistics and Mathematical Methods
- Theoretical distribution-Normal distribution, T-distribution, Chi-square distribution, F distribution.
- Statistical analysis of data-ANOVA, Factor Analysis
- Mathematical analysis of data -Input-Output Methods, SAM, etc.
- Exercise in statistical/mathematical softwares.

Unit -III Econometrics and Its Applications
- Simple and multiple regression
- Problems in econometric estimation
- Introduction to simultaneous equation model.
- Time series analysis: concept of stationarity, co-integration and VAR.
- Exercises with econometrics software.

References
• Stock and Watson. *Introduction to Econometrics*, Pearson Publication.
• Wojciech Charemza and Derek Deadman. *New Directions in Econometric Practice: General to Specific Modeling, Cointegration, and Vector Autoregression*, Edward Elgar Publication.
Paper-2 Advance Studies in Economics

Unit-I Micro and Macro Economics theories

- Advances in consumer theory
- Advances in theory of firm
- Selected issues in open-economy macroeconomics
- Fiscalism vs Monetarism
- Role of Expectations-AEH and REH

Unit-II Growth and Development

- Concept, measurement and indicators of growth and development
- Classical view of growth and development
- Neo classical growth theories
- New growth theories
- State, market and development

Unit-III Trade and Public Finance

- Modern trade theory
- Empirical testing of trade theories
- Trade policy theories and its implication
- Public debt and Ricardian equivalence
- EMH (Efficient Market hypothesis) and its implications

References

Paper-3 Selected Issues in India and World Economy

Unit I Issues in Indian Economy

- Growth performances since 1991
- Poverty, unemployment, inequality
- Institution and governance
- Environment and development
- Financial sector reforms

Unit-II Issues in world economy

- Globalization- concept, trend and its future
- Globalization and developing countries
- Multilateralism and regionalism
- Global economic governance
- Financial market integration

Unit III India and World Economy- Linkages

- WTO and India
- Technology transfer
- Capital flows and FDI
- Multilateral financial institutional, India and developing countries
- Climate change and its economic implications

References


Paper-4 Term Paper

General Guidelines for Preparation of Term Paper

The Term Paper will have following components:

1. **Title of the Paper:** The selected topic will be related to the broad area of specialisation of the MPhil/ PhD work.

2. **Introduction/ Background of the Study:** It is expected to cover the background of the study and introduce the research topic.

3. **Statement about the Problem:** It is important to define the research problem correctly. The research problem/ issue should bridge the gap in the literature. It should be very clear in terms of nature, size and scope of the study.

4. **Objectives of the Study:** The objective of the study should be well defined and correctly specified. The students are expected to select only one researchable issue which can be completed in the given timeframe.

5. **Data & Methodology:** The students can carry out research on both primary and/or secondary data. The secondary data source should be authentic and original wherever possible. In case of primary survey, it is important to explain the criterion for the selection of sample size. The criterion should be scientific. Given the timeframe, the sample size should be small, may be around 50. The methods to analyse the data should be clearly identified and mentioned. In case, the questionnaire/ schedule method is adopted for data collection, it should be attached with the Term Paper. The questionnaire should be very simple, focussed and ideal. The statistical/ econometric/ mathematical methods to be used in the study must be simple and at the comfortable level of the research scholar.

6. **Outcome of the Study:** The outcome of the research should have some value addition to the existing literature.

General Format of the Term Paper

The Term Paper should cover the following:

1. Table of Contents
2. Preface and Acknowledgement
3. Chapter Plan
   - Chapter I: Introduction of the Problem
   - Chapter II: Theoretical Perspective and Review of Literature
   - Chapter III: Data and Methodology of the Study
   - Chapter IV: Analysis of Data and Discussion of Results
   - Chapter V: Conclusion and Policy Implications
4. References
The References should be listed in alphabetic order and may be split into two separate lists, one for the books and other for the journal articles. The bibliography should be written in APA style of references.

**General Rules/ Guidelines**

1. The Term Paper needs to be approved by RAC.
2. The suggestions in the research work needs to be included in consultation with the supervisor.

**Evaluation of Term Paper**

*Internal Assessment*

The internal assessment is of 25 marks and will be done by the respective supervisors.

*Final Assessment*

The final assessment is of 75 marks. The scholar has to prepare the Term Paper under the guidance of the supervisor and submit the term paper to the supervisor. The final assessment would be based on the presentation of seminar on the research work before the department, and the evaluation will be done by RAC.
Department of Economics

Course Structure and Syllabus of Integrated M.Phil./Ph.D. Economics

Semester-I

MPhil/PhD-ECO-C101: Research Methodology in Economics
MPhil/PhD-ECO-C102: Advance Studies in Economics
MPhil/PhD-ECO-C103: Selected Issues in India and World Economy
MPhil/PhD-ECO-C104: Term Paper

Note: Each Paper carries the weights of 100 Marks/ 4 Credits.
The evaluation will be based on both internal and final assessment.
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Paper-1 Research Methodology in Economics

Unit-I Introduction to research methodology

- Objective of and types of research.
- Problem formulation.
- Types of data and its collection method
- Data Sources and sampling techniques.
- Thesis writing and its components

Unit-II Statistics and Mathematical Methods

- Theoretical distribution-Normal distribution, T-distribution, Chi-square distribution, F distribution.
- Statistical analysis of data-ANOVA, Factor Analysis
- Mathematical analysis of data-Input-Output Methods, SAM, etc.
- Exercise in statistical/mathematical softwares.

Unit -III Econometrics and Its Applications

- Simple and multiple regression
- Problems in econometric estimation
- Introduction to simultaneous equation model.
- Time series analysis: concept of stationarity, co-integration and VAR.
- Exercises with econometrics software.

References

• Stock and Watson. *Introduction to Econometrics*, Pearson Publication.
• Wojciech Charemza and Derek Deadman. *New Directions in Econometric Practice: General to Specific Modeling, Cointegration, and Vector Autoregression*, Edward Elgar Publication.
Paper-2 Advance Studies in Economics

Unit-I Micro and Macro Economics theories

- Advances in consumer theory
- Advances in theory of firm
- Selected issues in open-economy macroeconomics
- Fiscalism vs Monetarism
- Role of Expectations-AEH and REH

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- Concept, measurement and indicators of growth and development
- Classical view of growth and development
- Neo classical growth theories
- New growth theories
- State, market and development

Unit-III Trade and Public Finance

- Modern trade theory
- Empirical testing of trade theories
- Trade policy theories and its implication
- Public debt and Ricardian equivalence
- EMH (Efficient Market hypothesis) and its implications

References

Paper-3 Selected Issues in India and World Economy

Unit I Issues in Indian Economy

- Growth performances since 1991
- Poverty, unemployment, inequality
- Institution and governance
- Environment and development
- Financial sector reforms

Unit II Issues in world economy

- Globalization- concept, trend and its future
- Globalization and developing countries
- Multilateralism and regionalism
- Global economic governance
- Financial market integration

Unit III India and World Economy- Linkages

- WTO and India
- Technology transfer
- Capital flows and FDI
- Multilateral financial institutional, India and developing countries
- Climate change and its economic implications

References

Paper-4 Term Paper

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   - Chapter IV: Analysis of Data and Discussion of Results
   - Chapter V: Conclusion and Policy Implications
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**Evaluation of Term Paper**

*Internal Assessment*

The internal assessment is of 25 marks and will be done by the respective supervisors.

*Final Assessment*

The final assessment is of 75 marks. The scholar has to prepare the Term Paper under the guidance of the supervisor and submit the term paper to the supervisor. The final assessment would be based on the presentation of seminar on the research work before the department, and the evaluation will be done by RAC.
Teaching Schedule of PhD Economics, 2017-18
(January 2017 – May 2018)

Paper-1 Research Methodology in Economics (40 Lectures)

Unit-I Introduction to research methodology (14 Lectures)

- Objective of and types of research.
- Problem formulation.
- Types of data and its collection method
- Data Sources and sampling techniques.
- Thesis writing and its components

Course Teachers & Class Schedule:

- Dr. B. Srinivasu (January: 23, 24, 29, 30, 31; February: 5, 6, 7, 12)
- Dr. Mirza Allim Baig (February 13, 19, 20, 21, 26)

Unit-II Statistics and Mathematical Methods (13 Lectures)

- Theoretical distribution-Normal distribution, T-distribution, Chi-square distribution, F distribution.
- Statistical analysis of data-ANOVA, Factor Analysis
- Mathematical analysis of data -Input-Output Methods, SAM, etc.
- Exercise in statistical/mathematical softwares

Course Teachers & Class Schedule:

- Dr. Abdul Quadir (February: 27, 28; March: 5, 6, 7, 12)
- Mr. Asheref Illiyan (March: 13, 14, 19, 20, 21, 26, 27)

Unit -III Econometrics and Its Applications (13 Lectures)

- Simple and multiple regression
- Problems in econometric estimation
- Introduction to simultaneous equation model
- Time series analysis: concept of stationarity, co-integration and VAR
- Exercises with econometrics software

Course Teachers & Class Schedule:

- Dr. Mirza Allim Baig (March: 28, April: 2, 3, 4)
- Dr. Saba Ismail (April: 9, 10, 11, 16, 17, 18, 23)
- Mr. Asheref Illiyan (April: 24, 25)

*Class Timings: Monday – Wednesday, 9:20-10:10 am
Paper-2 Advance Studies in Economics (40 Lectures)

Unit-I Micro and Macro Economics theories (14 Lectures)

- Advances in consumer theory
- Advances in theory of firm
- Selected issues in open-economy macroeconomics
- Fiscalism vs Monetarism
- Role of Expectations-AEH and REH

Course Teachers & Class Schedule:
- Dr. Abdul Quadir (January: 25(2); February: 1 (2), 2, 8(2), 9)
- Prof. Shahid Ahmed (February 15(2), 16, 22(2), 23)

Unit-II Growth and Development (13 Lectures)

- Concept, measurement and indicators of growth and development
- Classical view of growth and development
- Neo classical growth theories
- New growth theories
- State, market and development

Course Teachers & Class Schedule:
- Dr. Saba Ismail (March: 8(2), 9(2), 15(2), 16(1))
- Mr. T.A. Farooqui (March: 16 (1), 22(2), 23 (2), April: 5(1))

Unit-III Trade and Public Finance (13 Lectures)

- Modern trade theory
- Empirical testing of trade theories
- Trade policy theories and its implication
- Public debt and Ricardian equivalence
- EMH (Efficient Market hypothesis) and its implications

Course Teachers & Class Schedule:
- Mr. T.A. Farooqui (April: 5(1), 6(1))
- Prof. Shahid Ahmed (April: 6(1), 12(2), 13(2))
- Dr. B. Srinivasu (April: 19(2), 20(1))
- Dr. Mirza Allim Baig (April: 20 (1), 26(2))

*Class Timings: Thursday: 9:20-10:10 am & 2:00-2:50 pm;
   Friday: 9:20-10:10 am (Jan 25-March 23); 9:20-11:00 (April)
Paper-3 Selected Issues in India and World Economy (40 Lectures)

Unit I Issues in Indian Economy (14 Lectures)
- Growth performances since 1991
- Poverty, unemployment, inequality
- Institution and governance
- Environment and development
- Financial sector reforms

Course Teachers & Class Schedule:
- Prof. Shahid Ashraf (January: 23, 24, 29, 30; February: 5, 6, 7, 12, 13)
- Dr. Mohanty (February: 19, 20, 21)
- Dr. B. Srinivasu (26)

Unit II Issues in world economy (13 Lectures)
- Globalization- concept, trend and its future
- Globalization and developing countries
- Multilateralism and regionalism
- Global economic governance
- Financial market integration

Course Teachers & Class Schedule:
- Mr. T.A. Farooqui (February: 27, 28; March: 5, 6)
- Prof. Shahid Ashraf (March: 7, 12, 13, 14)
- GF (March: 19, 20, 21)
- Dr. M.A. Baig (March: 26, 27)

Unit III India and World Economy- Linkages (13 Lectures)
- WTO and India
- Technology transfer
- Capital flows and FDI
- Multilateral financial institutional, India and developing countries
- Climate change and its economic implications

Course Teachers & Class Schedule:
- Prof. Shahid Ahmed (March: 28, April: 2, 3, 4, 9, 10)
- Mr. Asheref Iliyan (April: 11, 16, 17, 18, 23)
- GF (24, 25)

*Class Timings: Monday – Wednesday, 2:00-2:50 pm
**Important Deadlines and Information for PhD Course Work, 2016-17**

- **Deadlines**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation for the Students</td>
<td>17 November 2016</td>
</tr>
<tr>
<td>Commencement of Classes</td>
<td>01 December 2016</td>
</tr>
<tr>
<td>Last Date of Teaching</td>
<td>06 March 2017</td>
</tr>
<tr>
<td>Completion of Internal Assessment</td>
<td>15 March 2017</td>
</tr>
<tr>
<td>Submission of Annotated Bibliography</td>
<td>21 March 2017</td>
</tr>
<tr>
<td>End Semester Examination</td>
<td>Third/ Last Week of March 2017</td>
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</table>

- **Information**

The PhD course work consists of 2 papers, namely (1) Paper 1: Course on Research Methodology; (2) Paper 2: Advanced Studies in Economics. The course work shall comprise of an internal assessment of 25 marks and end semester examination of 75 marks for each paper. Each paper is of credit of 4. A candidate having obtained a minimum of 50 percent of marks in aggregate of internal assessment and end semester examination shall be declared to have successfully qualified the course work.

In addition, students have to develop an annotated bibliography/ reviewing of research papers. The maximum marks for developing annotated bibliography/ reviewing of research papers will be 50 and is of credit of 2. The candidates will be required to secure at least 50 percent of marks in this component separately in order to become successful in the examination. The annotated bibliography should contain preferably the reviews of both books and journal articles around the research topic. The annotated bibliography/ reviewing of research papers will be evaluated by the respective supervisor.

The total Credit of the PhD Course work is 10.

For other details, please refer to Ordinance 9(IX), which exclusively deals with PhD Programme of the University.

**Notes on PhD Course Work:**

- The prescribed syllabus will be followed for the PhD Course work.
- Students are advised to be in touch with the concerned teachers for the classes.
- Annotated Bibliography will be submitted to Coordinator of the PhD Programme on or before due date.
- Students are free to provide any suggestions, comments and feedbacks in the improvement of the PhD Course work to the Coordinator of the PhD Programme.

**Dr. Mirza Allim Baig**
**Coordinator, PhD Programme**