POST GRADUATE TEACHING DEPARTMENTS OF ECONOMICS

GONDWANA UNIVERSITY,GADCHIROLI

Master of Arts(M.A.)Applied Economics

Syllabus

Session 2018-2019 onwords

Submitted By

Board of Studies in Economics

Gondwana University,Gadchiroli

Board of Studies in Economics

Syllabus for

Master of Arts (M.A.) Applied Economics

Semester – I,II.III,IV

Session 2018-2019 onward

Syllabus Committee

S.N.	Name of Committee member	Designation
1	Dr.ShriramS.Kawale	Dean of Humanities
2	Dr.JanardhanM.Kakde	Member
3	Dr.PrakashB.Titre	Member
4	Dr.Manishkumark.Kayarkar	Member
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12	Dr. S.B.Ambore	Member

M.A. Applied Economics
Regulations for the Masters Programme in Economics

1.1 **Eligibility :** For admission to the M.A. in Applied Economics programme shall bebachelor's Degree in Economics with 55% in Part III (Economic and subsidiary) or 60% with B.Com, B.B.M with economics as one of the subject or B.Sc. Mathematics or Statistics with 65% marks.

1.2 Candidates who have appeared in the Final Year Degree Examination but awaiting results are permitted to seek provisional admission to the course. Such candidates required to provide evidence of the minimum academic qualification prescribed on or before their enrolment to the first semester M.A, in Applied Economics examination of CUSAT tobe held for the same batch of students. If they fail to do so they shall be removed from the rolls.

1.3 Admission to the M.A. in Applied Economics shall be based on the scores obtained by the candidate in the CAT conducted by the University. The questions for the CAT areof multiple choices from Economics (50%), mathematics and Statistics (30%) remaining general awareness.

1.4 There Shall be 20 seats of which five shall be reserved for foreign candidates recommended by the Government of India. If such Candidates are not available the seats can be allotted to NRI who qualify the entrance test and satisfy the other qualifications prescribed for the degree. If NRI candidates not available these seats can be converted to general merit on the basis of the recommendations of the head of the Department.

1.5 Reservation rules applicable to nonprofessional courses in Maharashtra as laid down by the State Government from time are applicable in the case of admission to the degree.

1.6 Payment of fees : Fees for the programme must be paid as prescribed by the University.

1.7 Re-admission to the programme shall be permitted only if the candidate satisfies the conditions laid down by the University and with permission of the Registrar.

2.1 **Course Study :** The course work for the M.A. in Applied Economics degree shall be in accordance with the schemes of examination and syllabus prescribed. The course shall extend over a period of two academic years comprising of four semesters. Each semester shall extend over a period of 16-18 weeks.

2.2 The minimum attendance required by the candidate shall be 75 percentage of the total number of working days.

3.1 **Scheme of Studies :** A minimum of 20 (Twenty) credits shall be offered in each semester. In the fourth semester there shall be a project report and comprehensive viva voce. The Project Report is equivalent to 1 (four) credits. The Viva Voce examination is based on a presentation made by candidate in the department with an external expert.

GONDWANA UNIVERSITY,GADCHIROLI

Master of Arts(M.A.)Applied Economics

Syllabus

SEMESTER –I

Course code	Title of Paper	Core Elective	Credits	Contact Hours/ Week	Continuous evaluation Marks	External Evaluation Marks	Total Marks
ECO2101	ADVANCED MICROECONOMICS	C	4		20	80	100
ECO2102	ADVANCED STATISTICS	C	4		20	80	100
ECO2103	Optional	E	4		20	80	100
ECO2104	Optional	E	4		20	80	100

Optional papers :-

1) HISTORY OF ECONOMIC THOUGHT

2) ECONOMICS OF DEVELOPMENT

3) RURAL AND AGRICULTURAL ECONOMICS

4) URBAN AND INFRASTRUCTURE ECONOMICS

SEMESTER –II

Course code	Title of Paper	Core Elective	Credits	Contact Hours/ Week	Continuous evaluation Marks	External Evaluation Marks	Total Marks
ECO2201	ADVANCED MACROECONOMICS	C	4		20	80	100
ECO2202	RESEARCH METHODOLOGY	C	4		20	80	100
ECO2203	Optional	E	4		20	80	100
ECO2204	Optional	E	4		20	80	100

Optional papers :-

1)ECONOMETRICS

2) ENVIRONMENTAL AND ECOLOGICAL ECONOMICS

3)ECONOMICS OF TECHNOLOGY AND INNOVATION

4)POLITICAL ECONOMY & DEVELOPMENT

SEMESTER –III

Course code	Title of Paper	Core/ Elective	Credits	Contact Hours/ Week	Continuous evaluation Marks	External Evaluation Marks	Total Marks
ECO2101	FRONTIERS OF INTERNATIONAL ECONOMICS	C	4		20	80	100
ECO2102	ECONOMIC DATA ANALYTICS	C	4		20	80	100
ECO2103	Optional	E	4		20	80	100
ECO2104	Optional	E	4		20	80	100

Optional papers :-

1)PUBLIC ECONOMICS

2) FINANCIAL ECONOMICS

3)Institutional Economics

4)ECONOMICS OF INSURANCE

SEMESTER –IV

Course code	Title of Paper	Core/ Elective	Credits	Contact Hours/ Week	Continuous evaluation Marks	External Evaluation Marks	Total Marks
ECO2201	PROJECT REPORT AND VIVA VOCE	C	4		20	80	100
ECO2202	INDIAN ECONOMIC DEVELOPMENT	C	4		20	80	100
ECO2203	Optional	E	4		20	80	100
ECO2204	Optional	E	4		20	80	100

Optional papers :-

1)INDUSTRIAL ECONOMICS

2) ECONOMICS OF GOVERNANCE AND PUBLIC POLICY

3)OPTIMIZATION AND FORECASTING MODELS

4)BEHAVIORAL AND EXPERIMENTAL ECONOMICS

M. A. Applied Economics

Semester - I

ADVANCED MICROECONOMICS (Compulsory Paper)

Course Contents: (5 Credits and 65 Classes)

1. **Utility, Consumer, and Production: (18 Classes)**
   a. *Utility*:Utility Function – Expected Utility Theorem – Monetary Lottery and Risk Aversion–Arrow Pratt Measure of Absolute Risk Aversion –Applications: Insurance and Portfolio Choice – Comparing Risk: First and Second Order Stochastic Dominance – Modern Utility Analysis of Choices Involving Risk or Uncertainty–Bernoulli, Neumann Morgenstern, Friedman Savage and Markowitz Hypotheses–Lancaster's Demand Theory–Bandwagon Effect-Veblen Effect – Cobweb Theorem.

   b. *Theory of Consumer Behaviour*:Opportunity Sets – Optimum Choices – Indirect Utility Demand Functions – Income and Substitution Effects – Slutsky Equation – Normal Versus Inferior Goods – Types of Demand Functions – Inverse Demand Functions – Elasticity – Welfare Evaluation – Consumer Surplus – Equivalent Variation and Compensating Variation – Revealed Preference (Weak and Strong Axioms) – Roy's Identity – Labour Leisure Trade off – Revision of Demand Theory by Hicks – Logical Ordering – Recent Developments in Demand Theory – Pragmatic Approach (CES Demand Function – Dynamic Demand Function).

   c. *Theory of Production and Cost*:Production Functions – Types of Production Functions (Cobb-Douglas, CES Etc.) – Marginal Products – Rate of Technical Substitution – Technical Progress – Cost Functions – Average and Marginal Costs – Short Run Versus Long Run Costs – Economies of Scale and Scope – Profit Maximization – Cost Minimization – Derivation of Input Demand – Hotelling's Lemma – Shephard Lemma.

2. **Markets, General Equilibrium, and Welfare: (20 Classes)**
   a. *Market Structures*:Assumptions of Perfect Market – Competitive Markets – Demand and Supply – Demand and Supply Curves of Individual Firms – Short-Run Versus Long-Run – Competitive Market Equilibrium – Tax Incidence Analysis – Price-Controls and Shortages–Market Failure – Imperfect Markets – Sources of Monopoly Power – Monopoly Market Equilibrium – Price Discrimination – First, Second and Third Degree – Tax Incidence – Oligopoly – Cournot Model – Stackelberg Model – Bertrand Model – Monopolistic Competition.

b. *General Equilibrium Theory*:Absolute Versus Relative Prices – Perfectly Competitive Price and General Equilibrium Models – With and without Production – Uniqueness and Determinacy – Sonnenschein-Mantel-Debreu Theorem – Edgeworth Box – Pareto Improvement and Efficiency – Walrasian Equilibrium – Money in General Equilibrium.

c. *Welfare Economics*:Arrow-Debreu Economy – Welfare Theorems – Existence of Walrasian Equilibrium – Fixed-Point Theorem – Core and Core Convergence – General Equilibrium with Time and Uncertainty – Jensen's Inequality – Social Welfare Function – Transfer Efficiency– Kaldor-Hicks-Samuelson Criterion – Rawl's Theory of Social Justice.

3. **Market Failures and Asymmetric Information: (16 Classes)**
   a. *Market Failure*:Reasons for Market Failure – Market Imperfections – Public Goods – Externality – Macro-Economic Factors– Types of Public Goods – Theory of Public Goods – Provision and Pricing – Government Intervention – Second-Best Solution – Free Riding – Types of Externalities – Production and Consumption Externalities – Pigouvianand Coasian Solutions.

   b. *Asymmetric Information*:Moral Hazard Problem – Adverse Selection – Principal Agent Problem – Market for Lemons – Credit Market – Implications of Asymmetric Information – Market Signalling& screening – Hidden Information Modelling – Efficiency Wage Model – Information and Insurance.

4. **Game Theory and Bounded Rationality: (10 Classes)**
   a. *Game Theory*:Sequential and Simultaneous Games – Extensive Forms and Normal Forms – Dominant Strategies and Elimination of Dominated Strategies – Nash Equilibrium – Dynamic Games – Backward Induction – Sub-Game Perfect Equilibrium – Applications with Oligopoly Markets: Cournot, Bertrand, Stacklebergand Cartel –Non-Cooperative Game Theory –Representation of a Game: Normal Form – Extensive Form–Static Games of Complete Information – Prediction of an Outcome – Dominant Strategies–Iterated Elimination of Dominant Strategies–Nash Equilibrium: Pure Strategies – Mixed Strategies – Dynamic Games of Complete Information – Backward Induction and Subgame Perfect Equilibrium – Sequential Bargaining –Rubinstein Model – Repeated Games: Finite and Infinite – Static Games of Incomplete Information –Bayesian Games and Bayesian Nash Equilibrium.

   b. *Bounded Rationality and Irrational Behaviour*: Introduction – Notion of Bounded rationality – Notion of Irrational Behaviour – Applications and Theory.

Reference Books:

1. Gravelle, H and R. Rees (2004), Microeconomics, Pearson Education, 3rd Edition.
2. Henderson, M. and R.E. Quandt (1980), Microeconomic Theory: Mathematical Approach, McGraw Hill.
3. Jehle,G.A. and P.J. Reny (2000), Advanced Microeconomic Theory, Addison-Wesley Longman.
4. Koutsoyiannis, A. (2005), Modern Microeconomics, Macmillan press, London.
5. Kreps, D. M. (1998), A Course in Microeconomic Theory, Prentice Hall, India, New Delhi.
6. Pindyck, R. S. and D.L. Rubinfield (2013), Microeconomics, Prentice Hall.
7. Sen, A. (2005), Microeconomics: Theory and Application, Oxford University Press, New Delhi.
8. Varian, H. R. (2009), Microeconomic Analysis, 3rd Edition, Viva Books.

M. A. Applied Economics

Semester - I

ADVANCED STATISTICS (compulsory)

Course contents: (4 Credits and 52 Classes)

1. **Descriptive Statistics and Index Numbers: (10 Classes)**
    a. ***Descriptive Statistics***: What is Statistics? –Revision of Basic Mathematics – Types of Data – Levels of Measurement – Random Numbers and Generating them – Frequency Distributions – Frequency Polygon / Curves – Histogram – Ogive and other diagrammatic representations – Measures of Central Tendencies – Mean, Median, Mode, Geometric Mean and Harmonic Mean – Partition Values – Measures of Dispersion – Range –Inter-quartile range – Absolute and Relative Measures of Dispersion – Mean Deviation – Standard Deviation – Coefficient of Variation – Lorenz Curve – Moments – Skewness and Kurtosis – Quartiles–Deciles– Use and Mis-Use of Statistics.

    b. ***Index Numbers***: Meaning and Importance – Problems in the Construction of Index Numbers – Types of Index Numbers: Price, Quantity, Value – Construction of Price Index Numbers – Unweighted and Weighted Indices – Construction of Quantity and Value Indices – Tests of Adequacy of Index Number Formulae – Deflating Consumer Price Index Number – Meaning and Uses – Problems in the Construction of Cost of Living Index Number – Methods of Constructing Cost of Living Index – Aggregate Expenditure and Family Budget Methods – Limitations of Index Numbers – Seasonal Indices Index Numbers – Concept – Price, Quantity and Value Relations, Laspeyer's, Paasche's and Fisher's Index Numbers – Time and Factor Reversal Tests – Problems in Construction of Index Numbers – Tests for Ideal Index Numbers.

2. **Probability and Sampling: (12 Classes)**
    a. ***Probability***: Concepts, Theory and Distributions – Permutations-Combinations – Definitions and Axioms of Probability – Conditional Probability and Bayes' Theorem – Random Variables – Discrete and Continuous – Mass Density and Distribution Functions – Moment Generating Function – Law of Large Numbers – Distribution of Functions of Random Variables – Discrete Versus Continuous Distribution – Concept of Sampling Distribution – Definition – Types of Theoretical Distribution – Discrete Theoretical Distribution – Binomial Distribution – Poisson Distribution – Continuous Theoretical Distribution – Normal Distribution – Standard Normal Variate – Z Distribution – Other

Theoretical Distributions – Students 'T' Distribution – Chi-Square (X^2) Distribution – F-Distribution – Asymptotic Theory –Convergence In Probability –Convergence in Distribution – Central Limit Theorem.

b. ***Sampling Methods and Sampling Distributions***: Population and Sample – Parameter and Statistic– (Census Method and Sampling Method of Data Collection) – Objects of Sampling – Methods of Sampling – Determinants of Sample Size – Simple Random Sampling – With And Without Replacement – Stratified Random Sampling – Probability and Non-Probability Sampling– Statistic and Sample Moments – Sampling from Finite and Infinite Population – Finite Population Correction Factor – Sampling from Normal Population– Cluster and Multi-Stage Sampling – Systematic Sampling – Probability Proportional to Size (PPS) Sampling – Sampling Weights – Estimation of Means – Proportions and Ratios – Sampling Error and Non-Sampling Error – Efficiency Aspect in Sample Design.

3. **Statistical Inference and Hypothesis Testing: (08 Classes)**
   a. ***Statistical Inference***: Estimation of Parameters – Point Estimation – Unbiasedness and Variance of Estimator – Interval Estimation – Confidence Intervals – Methods of Estimation – Moment and Maximum Likelihood Estimator – Minimum Variance Unbiased Estimator.

   b. ***Hypothesis Testing***: Statistical Hypothesis – Simple Versus Composite Hypothesis – Critical Region – Rejection Region – Types and Size of Error – Type-I And Type-II Error – Power of a Test – P-Value – Neyman Pearson Lemma – Trinity of Classical Tests (Wald Test, Lagrange Multiplier, Likelihood Ratio) – Application of Hypothesis Testing with Known and Unknown Variances – Hypothesis About Population Mean – Proportions – Variance – Test of Goodness of Fit.

4. **Correlations and Regressions: (12 Classes)**
   a. ***Correlations***: Meaning, Types of Correlation – Methods of Studying Correlation: (Scatter Diagram Method, Graphic Method, Pearson's Product Moment Correlation, Spearman's Rank Correlation, Partial And Multiple Correlation, Concurrent Deviation Method) – Testing The Significance Of The Correlation Coefficient Partial And Multiple Correlations – Autocorrelation –Correlogram.

   b. ***Regression Models***: Concept – Simple Linear and Multiple Regression Models – Ordinary Least Squares (OLS) estimation – Two Tailed and one Tailed Tests – Computation of Test Statistic and Significance Test – Path Analysis – Step Wise Regressions –Functional Forms and Structural Change– Non-linear Regression–Non-Linear Equations Parabolic – (Exponential, Geometric, Modified Exponential, Gompertz and Logistic Curves) – Growth Rates – Dummy Variables.

5. **Multivariate Analysis and Nonparametric Tests: (10 Classes)**
   a. *Multivariate Analysis*: Cluster Analysis – Principal Component Analysis – Factor Analysis – Canonical Correlations – MANOVA & MANCOVA – Linear Discriminant Analysis.

   b. *Nonparametric Tests*: Small Sample Test-'T' – Test-X^2 – Test F Test – Large Sample Test–Z – Sign Test – Rank Based Tests – Wilcoxon Test – Spearman's Test f Significance Concerning Correlation Coefficient – The Analysis of Contingency Tables (Chi–Square Test For Testing Independence of Two Classification Criteria) – One Sample Tests – Two Sample Tests – Mann-Whitney U Test – Wilcoxon Matched Pair Test – Difference of Means – K Sample Tests: Kruskal-Wallis Test – Friedman ANOVA – Advantages and Limitations of Non-Parametric Tests.

Reference Books

1. Andy Field (2009), Discovering Statistics Using SPSS, Sage Publications, London.
2. Barrow, M. (1996), Statistics for Economics, Accounting and Business Studies, 4th Edition, Prentice Hall
3. Cochran, W.G., (1977), Sampling Techniques, John Wiley and Sons. New York.
4. Johnson, Kjell (2013), Applied Predictive Modeling, Springer.
5. Nagar, A.L. and R.K. Das (2006), Basic Statistics, Second Edition, Oxford University Press, New Delhi
6. Reinhart, Alex (2015), Statistics Done Wrong: The Woefully Complete Guide, No Starch Press, San Francisco.
7. Sandy, Roberts (1990), Statistics: For Business and Economics, McGraw–Hill, Singapore.
8. Triola, Mario F (2014) Essentials of Statistics Plus MyStatlab with Pearson e text, Pearson, Singapore.
9. Witten, Daniela et al (2013), An Introduction to Statistical Learning, Springer.
10. Wackerly, Dennis et al (2007) Mathematical Statistics with Applications, Brooks/Cole– 7th edition.

M. A. Applied Economics

Semester - I

HISTORY OF ECONOMIC THOUGHT (Elective Paper)

Course Contents: (4 Credits and 39 Classes)

1. **Pre Classical and Classical Understanding of Economy: (15 Classes)**
   a. ***Emergence Before Adam Smith*:** An Introduction to Epistemology– Methodology and The Philosophy of Science – Economic Thought in Ancient Civilizations: India, China, Rome– Hume and Cantillon– Turgot and The Physiocrats– A Postscript to Mercantilism– James Stewart – Natural Order and The Market–Quesney and Galiani– The Natural Law– Natural Rights Tradition – Kautilya's State Craft and The Islamic Contributions – Mercantilism and Cameralism – British Economic Thinking.

   b. ***Classical Thinkers And Theories*:** Smith and Ricardo on The Theory of Value – Later Subjectivist Theories of Value –Classicalists on The Determinants of Economic Growth – Classical Theories of Income Distribution – Classical Principles In Money & Banking – Classical Public Finance – Classical Economics in Theory and Practice.

   c. ***Marxist Economics*:** Theory of Class and Conflicts –Bourgeoisie – Proletariat and Petite Bourgeoise– Marx and The Labour Theory of Value – Marx's Theory of Money – Marx on Distribution – Marx's Theory of Capital Accumulation and Crises.

2. Neoclassical Economic Thinkers: (5 Classes)
   Pre-Marginalism (French, German, and Italian Contributions) – The Marginal Revolution: Jevons, Menger, and Walras–De-Homogenized – Alfred Marshall and Neo-Classicalism – Capital Theory – Wicksell, Fisher and the Development of the Quantity Theory – Mises and Hayek: On Socialism and Business Cycles –Schumpeter, Fisher &Kalecki on Business Cycles.

3. **Keynesian Economics: (5 Classes)**
   Keynesian Principles – Say's Law – Theory of Investment and Employment – Money and Speculation – Business Cycles –Hicks–Hansen–Samuelson IS-LM Transformation Phillips Curve Debates – Friedman's Fundamental Monetarist Propositions –Critiques of Monetarism.

4. **Post Keynesian Economic Thought: (8 Classes)**
   Post Keynesian Economics–Economics of Institutions – Transaction Cost and Economic Anthropology Approaches –Evolutionary Economics: The Idea of Change as Evolution – From Schumpeter to Neo Schumpetarian Evolutionism – The Social Construction of Knowledge – Adaptation and Revolution –Samuelson– Heterodoxy Economics – Sraffa,

Chamberlin Joan Robinson– Rise of Econometrics and Statistics – Public Choice Theory – Market Conditions – Perfect-Imperfect Competition – Rational Expectations – Hyman Minsky's Financial Instability Hypothesis.

5. **New Trends: (6 Classes)**

Institutional Economics– Welfare Economics New Welfare Economists– Economics of Instability– New World Economic Order – New Experimental Economics – BehaviouralEconomics– Econometrics Walrus and Stockholm School– Trade as an Engine of Growth – Open Economy – Macro Economy.

Reference Books:

1. Backhouse, Roger E., (2004) The Ordinary Business of Life: A History of Economics From The Ancient World to The Twenty-First Century, Princeton University Press, Princeton, New Jersy.
2. Canterbury, E. Ray, (2003), The Making of Economics, 4th Ed., World Scientific Publishing Co. Ltd., Singapore.
3. Gide, Charles and Rist Charles (2007), A History of Economic Doctrines – From The Time of ThePhysiocrats to the Present Day, (1st Indian Reprint), Surjeet Publications, New Delhi.
4. Hunt, E. K And M. Lautzenheiser (2011), History of Economic Thought: A Critical Perspective, 3rd Edition, PHI.
5. Patel, A. (2009), The Collected Works of A.K. Dasgupta- Volume 1, Oxford Publications Kapp, William (1960), History of Economic Thought, Barnes and Noble.
6. Pickety, Thomas (2013). Capital, Harvard University Press.
7. Roll, Eric (1986), A History of Economic Thought, Oxford University Press.
8. Rothbard, Murray N., (1995) Economic Thought before Adam Smith: An Austrian Perspective on The History of Economic Thought (Vol. I), Edward Elgar Publishers, UK.
9. Sandmo, A. (2011), Economics Evolving: A History of Economic Thought, Princeton University Press.
10. Screpanti, Ernesto and Zamagni, Stefano (2006), An Outline Of The History Of EconomicThought (2ndedition) Oxford University Press.

M. A. Applied Economics

Semester - I

ECONOMICS OF DEVELOPMENT (Elective Paper)

Course Contents: (4 Credits and 52 Classes)

1. **Concepts, Debates and Theoretical Understanding of Development: (15 Classes)**
   a. *Evolution and Relevance of 'Economics of Development*: History of Development – Growth & Development – Debatesin Defining the Concept of Development – World View of the Concept – Classification of Countries – World Development Reports – Characteristics of LDCS – Post-War World Economic Order–Measurement Of Development– GDP Growth – Per Capita Income – Alternative Measures – Human Development– PQLI-HDI-HGI – Difficulties of Measurement and Comparability – Development Gap – Cross-Country Experiences –Underdevelopment as Coordination Failure (Theories of Murphy -Schleifer-Vishny - O-Ring).

   b. *Theoretical Understanding of Development:*Gerschenkron – Surplus Labour- Theories: (Big Push, Rosenstein- Rodan, Balanced Growth,Nurkse, Unbalanced Growth, Hirschman, Critical Minimum Effort,Leibenstein, Low Level Equilibrium Trap, Nelson'sDualism) – The Process of Cumulative Causation – Andre Gunder Frank, Gunnar Myrdal Development and Under-Development–The Vicious Circle Theory –Models (Kaldor, Mirrless, Solow Swan Model, Lukas–Uzawa and Romer) Migration–Harriss-Todaro Model and Extensions – Rural-Urban WageGap (Labour Turnover Model and Wage Efficiency Model –Extensions and Limitations) – Issues and Critics – Dependency Theory of Development – Marxian Development Paradigms – Old Theories and New Currents – Open Economy Development Model.

   c. *Growth Development Linkages*: The Stages of Growth: Rostow – Economicgrowth in Historical Perspective –Stylised Facts of Growth and Development–Growth Models– Concept of Economic Growth and Steady State–Harrodand Domar (H–D) Model– Instability in H–D Model – Models on Flexible Savings Ratio–Kaldor –Mirrlees Model– Pasenetti's Extension of Kaldor – Solow-Swan Model – Ramsey Growth Model Endogenous Growth Model– Dualism – Typologies and Influences –Dual Economy Models – Lewis, Ranis –Fei, Jorgenson, Dixit-Marglin Model – Indian Plan Models –Vakil-BrahmanadaWage Good Model –New Growth Theories – Human Capital Theory – Total

Factor Productivity – Comparative Analysis – Role of Resources – Technology and Institutions.

2. **Sector level Development Issues: (10 Classes)**
   a. *Agriculture*: The Role of Agriculture in Development – The Supply Response in Agriculture– Food Security –Agrarian Changes and Implications – Role of Resources – Price Policy History and Impact.

   b. *Land*: Interaction Between Land and Labour– Ownership and Tenancy.

   c. *Rural Credit*: The Lender's Risk Hypothesis – Market Fragmentation – Informational Asymmetries and Credit Rationing – Characteristics of Rural Credit Markets.

   d. *Labour Market*: Segmentation in Labour Market and Labour Tying – Informal Labour Market – Concept and Theories–Labour Market Discrimination.

   e. *Industry*: Role of Industry –Phases of Industrial Development – Industrialization in LDCS – The Infant Industry Argument – The Employment Argument – Export Promotion Vs. Import Substitution Strategies – The Choice of Techniques and FactorProportions – TFP.

   f. *Services Sector*: Contribution Towards Development –Linking Characteristics – Phases And Structure Of Contributions–*Informal Sector*: Concept and Role – Size and Contributions – Growth and Sustainability.

   g. *The Informal Economy*: Characterisationof Informal Sector – Theories about the Informal Sector– Inter-Linkage between Formal and Informal Sector – Theories about Informal Credit and Insurance Arrangement – Empirical Studies.

3. **Political Economy of Development and Underdevelopment**: (8 Classes)
   Elementary Idea of Political Economy– Phases of Political Economic Development in the World and in India – Experience of the World Economies through Ideologies – Liberalism and Neo-Liberalism – Role Of State – Typologies and Interventions – Welfare State –Market Failures – Government Failures – Political Economy ofCorruption–Discrimination and Development – Gender and Development– Policy and Economic Consequences – Different Modes of Governance and their Implications– Information Asymmetries– Land Market, Credit Market, Labour Market –Role and Emergence of Institutions –Contributions and Applications of 'New Institutional Economics' to Development Economics.

4. **Contemporary Issues in Indian Development: (10 Classes)**

a. ***Poverty–Inequality in the Context of Development*:** Poverty and Development – Measurement of Poverty and Under-Nutrition – Functional Effects –Inequality – Conceptual Issues and Measurement– Functional Issues Poverty & Growth (Kuznet's Inverted U Hypothesis) – Poverty &Unemployment –Alternative Theories – Inequality as a Constraint to Growth (Kalecki, Galore-Zeira) – Poverty and Labour Markets – The Interconnection of Growth– Inequality and Poverty – Assessment of Policies Geared Towards Poverty Alleviation.

b. **Population and Development:** Population and Development – Theories and Evidence Demographic Transition – Fertility Choice at the Micro Level – Malthusian Theory– Role of Fertility – Malthus-Boserup Argument – Health and Education in Explaining Development Outcomes –Urbanisationand Rural-Urban Migration – Theories and Empirical Evidence – Rural- Urban Linkages (Production-Consumption) – Migration and Urban Unemployment– Rural-Urban Wage Gap – International Labour Mobility –Labour Turnover Model – Wage Productivity Model –Issue Labour Exploitation &Child Labour– DevelopmentContext for Less Developed Countries.

c. **Development and Environment**: Market Based Approach to Environmental Analysis – Harvesting of Renewable &Non-Renewable Resources– Measuring Environmental Values – Economic Growth and Environment – Sustainable Development – Policy Measures – Ill Effects of Rain Forest Destruction – Climate Change and IPCC Reports – Global Warming – Greenhouse Gases and Impact on Development Policy Options in Developing and Underdeveloped Countries.

5. **Development: A World View: (09 Classes)**

The International Trends in Economic Development – World Development Reports – Trends and Issues– World Bank Development Symposiums – Various Economic Policy Operational Strategies – East Asian Miracle & Crisis – Latin American Economic Development – Measurement of PPP (Purchasing Power Parity) – Summer-Heston's Work –India in World Economic Scenario – China's Economic Development and Reforms – Towards Open Economy Model – Capital Formation – FDI Flows and Policies –Trade & Peace – WTO and the Ministerial Rounds –Trade and Developing Countries – The Determinants of Private Capital Flows (FDI, Bank Lending, Bonds and Equity).

Reference Books:
1. Arrow, Kenneth J and Intriligator (2010). Handbook of Development Economics, Elsevier.
2. Basu, Kaushik (2003).*Analytical Development Economics,* MIT Press
3. Chenery, Hollis and T N Srinivasan (1988). Handbook of Development Economics, Elsevier
4. Gasper, Des (2004). Ethics of Development, Vistar – Sage, New Delhi.
5. Hayami, Y. (1997). Development Economics: From the Poverty to the Wealth of Nations, Oxford, Clarendon Press.
6. Mariano (2008).Experienced Poverty and Income Poverty in Mexico: A Subjective Well– Being Approach, World Development, Vol. 36(6), 1078–1093.
7. Naqvi, Syed NawabHaider (2002). Development Economics – Nature and Significance, Sage, New Delhi.
8. Panagariya, Arvind (2008). India the Emerging Giant, Oxford University Press.

9. Ray, D., (1998). Development Economics, Princeton University Press.
10. Sen, Amartya (1999). Development As Freedom, Oxford University Press.
11. Todaro, M.P. and S.C.Smith, (2003), Economic Development (8th Edition), Pearson

M. A. Applied Economics

Semester - I

RURAL AND AGRICULTURAL ECONOMICS (Elective Paper)

Course Contents: (4 Credits and 39 Classes)

1. **Introduction to Economics of Agriculture and Rural Development: (10 Classes)**
    a. *Basic Concepts in Agricultural and Rural Economics*: History of Rural and Agricultural Development in the World – Importance of Agriculture in Rural Economy in Overall Economic Development – Nature and Scope of Agricultural Economics – National Resource Base of Indian Agriculture – India's Position in World Agriculture – Agricultural Growth in India During Pre and Post Independence Period – Nature and Cropping Pattern–Production and Productivity Trends.

    b. **Agricultural Inputs & Land:** Labour and Capital Inputs– Agrarian Structure and Dynamics– Land Reforms – Theory and Implications– Theory of Land Tenancy– Experiences and Contemporary Relevance – Important Production Relationships.

    c. *Agricultural/Rural Labour*: Rural Labour Market – Widening Disparity Between Agriculture and Non-Agriculture – Agricultural Diversification – Farm-Nonfarm Linkages and Diversification of Rural Economic Activities (Pluri-Activity) – Sustainable Rural Livelihoods – Migration and Rural Economy: Forced Migration, Seasonal Migration and Remittance – Employment and Unemployment in Agriculture and its Measurement – Agricultural Wages in India – Reforming Agriculture – Constraints and Scope – Education and Other Socio–Economic Overheads – Its Effect on Agriculture.

2. **Theoretical Developments: (08 Classes)**
    a. *Production Functions*: Theory and Applications – Allocative and Technical Efficiency – Factor Combination and Resource Substitution – Cost and Supply Curves – Technical Change and Agricultural Productivity– Concept and Measurement – Total Factor Productivity – Resource Use and Technological Changes in Agriculture – Resource and Efficiency in Traditional/Modern Agriculture – Economics of Input and Product Substitution – Instability.

    b. *Transformation of Traditional Agriculture*: Schultz and Mellor's Analysis – Agriculture and Dual Models: Fei-Ranis and Arthur Lewis – Kuznets's Formulations.
3. **Current Issues in Agriculture and Rural Development: (08 Classes)**

a. *Water*: Problems of Water Utilization– Over Exploitation, Contamination, Distribution, Mismatch in Availability and Use – Issues Related to Large and Small Irrigation Works.

b. *Supply of Farm Products*: Characteristics of Supply of Farm Products – Issues Relating to Specification of Supply Response Function (Distributed Lags, Acreage Vs. Production Response Etc.) – Supply Response in Indian Agriculture.

c. *Price Vs. Non–Price Factors in Inducing Aggregate Supply Growth*: Farm Prices – Trends in Relative Prices of Farm Products – Agricultural Industry Linkages – Terms of Trade – Agricultural Subsidies – Sources of Price Variability and Income Instability – Rationale for and Types of Government Intervention for Price Support and Reduction in Instability.

d. *Issues on the Mechanization of Agriculture*: GM Crops in Agriculture – Bio Technology – Economic Aspects of Irrigation and Fertilizer Use – Live Stock Management – Dairy Farming – Fisheries Sector – Contract Farming – Value Addition: Processing Industry – Emerging Trends in Agricultural Technology – (Irrigation, Seeds, Fertilizers, Plant Protection Technology)– Green Revolution.

4. **Demand and Markets: (09 Classes)**
   a. *Demand for Farm Products*: Characteristics of Demand for Farm Products – Concept and Measurement of Own Price Cross – Price and Income Elasticities of Demand and their Interrelationship – Quantity and Quality Components of Demand for Food – Growth in Demand for Food in Developing and Developed Countries.

   b. *Forecasting of Demand for Food Products*: The Integration of Different Markets in India and the Structure of Marketing Agencies – Cooperative Marketing – Organized Retailing – Contract Farming – Price Spread – Issues with Respect to Marketed Surplus – Marketing Channels – Price Spread – Producers Share in Consumer's Rupee – Value Chain – Demand for Food In International Markets – Towards Free Trade in Agricultural Commodities.

   c. *Rural Money Markets*: Reorganization of Rural Credit – Formal and Informal Credit Markets – Role of NABARD– Recent Policy Changes in Regard to Farm Credit and their Implications – Imperfections in Rural Credit Markets in India – Risk and Insurance – Efficient Risk Sharing Formal and Informal Insurance.

5. **The State and Policy Environment in Agriculture:(04 Classes)**
   a. *Economic and Agricultural Situation During Plan Periods and Policy Implications*: Agriculture Pricing Policy – Price Distortions of Policy Interventions in Agricultural Economics – Food Security in India and Public Distribution System Food Security and Other Social Welfare Programmes on Rural Population – Panchayati Raj and other Rural Institutions in Agriculture and Rural Development.

   b. *Policies Related to Major Agricultural Commodities*: Energy Needs for Agricultural/Rural Development – Subsidies to Expand Farm Output and Income Distribution – Labour Mobility and Agricultural Wage Policy – Infrastructural Support for Agriculture: (Transport, Storage And Markets/Capital Formation) – Agriculture and International Trade – Trade Policies, Negotiations and Agreements – Agriculture and the Macroeconomy – WTO and Indian Agriculture – Problems

of Agricultural Subsidies – Quantitative Restrictions (QRS) and Non Tariff Barriers – Impact of WTO on Indian Agriculture.

Reference Books:

1. Acharya A.S. and N.L.Agarwal, (2012) Agricultural Marketing in India, Oxford IBH new Delhi
2. Barkley Andrew , Barkley Paul W. (2016), Principles of Agricultural Economics, Routledge.
3. Basu, Kaushik, (1990), Agrarian Structure and Underdevelopment, Harwood.
4. Bhalla, G.S., (2007) Indian Agriculture Since Independence, National Book Trust, New Delhi.
5. Drummond H., Goodwin John (2013) Agricultural Economics: Pearson New International Edition, Pearson.
6. Frank Ellis, (2000) Rural Livelihoods and Diversity in Developing Countries, Oxford University Press, New York.
7. MartiinCarin (2013), The World of Agricultural Economics: An Introduction, Routledge.
8. Moss Charles B. (2013), Agricultural Finance, Routledge
9. Norton George W.**,** Alwang Jeffrey**,** Master William A. (2014), Economics of Agricultural Development: World Food Systems and Resource Use, Routledge.
10. Penson John, Capps Oral, Rosson C., Woodward Richard (2015), Introduction to Agricultural Economics, Pearson.
11. PranabBardhan, (1998) The Economic Theory of Agrarian Institutions, Clarendon Press, New York.
12. Rao, C. H. Hanumantha, (2005) Agriculture, Food Security, Poverty and Environment: Essays on Post – Reform India, Oxford University Press, New Delhi.
13. Schultz T.W.(1969) Transforming Traditional Agriculture, Yale University
14. Vaidyanathan, A., (2010) Agricultural Growth in India: The Role of Technology, Incentives and Institutions, 2nd edition, Oxford University Press, New Delhi.

M. A. Applied Economics

Semester - I

URBAN AND INFRASTRUCTURE ECONOMICS(Elective Paper)

Course Contents: (4 Credits and 39 Classes)

1. **Economics of Urbanization:(10 Classes)**
   Concepts in Urban Economics – Characteristics & Theoretical Issues – Urban Morphology– Classical Models– Urban and Regional Growth Theories– Macro-Economic Approach and Cumulative Causation Theory – Urban Hierarchy– Urban Size Distribution and Optimum City Size Debate – Weberian Location Theory – Location of Residential and Industrial Activities – Urban Planning – Land Use & Market – Decentralization and Impact – Geographical Information System and Use – Urban Informal Sector– Metropolitan/Mega Cities– Trends Worldwide– Indian Situation – Environment and Urbanization.

2. **Economics of Infrastructure Development:(10 Classes)**
   a. *Basic Concepts*:Infrastructure and Economic Development– Infrastructure as a Public Good–Social and Physical Infrastructure – Infrastructure Financing and Planning – Public Private Partnership – The Peak-Load&Off-Load Problem– Dual Principle Controversy– Economies of Scale of Joint Supply– Marginal Cost Pricing Vs. Other Methods of Pricing in Public Utilities– Cross-Subsidization – Equity and Efficiency.

   b. *Rural Infrastructure*: Rural – Urban Differences in Infrastructure Development – Components of Rural Infrastructure – Characteristics and Growth – Rural Industries – Sustainable Development and Infrastructure – Rural Transport Issues – Rural Markets.

3. **Energy, Power, Water, and Sanitation in India: (8 Classes)**
   Energy and Economic Development – Energy Demand –Supply and Shortages – Growth and Present Status– Commercial and Non-Commercial Energy Resources– Energy Efficiency Computation – Conventional &Non-Conventional Sources – Growth and Present Status– Power Sector in India Structure and Growth – Relative Economics of Hydel-Thermal and

Nuclear Power Plants– Electrification in India – Problems &Prospects– Power Pricing and Subsidy – Water Supply and Sanitation Sector in India– Overview and Present Scenario.

4. **Road, Rail, Air, and Ports in India: (7 Classes)**
The Structure of Transport Costs and Location of Economic Activities– Demand for Transport– Models of Freight and Passenger Demand– Cost Functions in Transport Sector– PricingPrinciple – Special Problems of Modes of Transport – Network Analysis – Equilibrium – Public Policy in Transportation.

5. **Telecommunications in India: (4 Classes)**
Characteristics and Problems – Pricing Principles –Decreasing Costs in Telephone Industry – Telecommunication Policy Changes – Privatization &Competitiveness.

Reference Books:

1. 3i Network (2010), India Infrastructure Report, Oxford University Press, New Delhi.
2. Button,K.J. (2003), Transport Economics, Edward Elgar.
3. Crew, M.A. and Paul R. Kleindorfer (1986), The Economics of Public Utility Regulation, MIT Press.
4. Evans, A.W. (1984), Urban Economics, Basil Blackwell.
5. Mills, E. and Charles Baker (1988), India's Urban Development, Oxford University Press.
6. O'Sullivan, A. (2002), Urban Economics, McGraw-Hill Irwin.
7. Michael A Crew and Paul R Klendorfer (1986), The Economics of Public Utility Regulation, MIT Press.
8. Parry, L.J. (1980), Urban Economics: A Set Approach, Arnold Heineman.
9. Picot, A., Florio, M., Grove, N., and JhannKranz (eds) (2015), The Economics of Infrastructure Provisioning: The Changing Role of the State, MIT Press.
10. Ramachandran, R. (1989), Urban Economics and Urban Systems in India, Oxford University Press.
11. Shukla, V. (1996), Urbanization and Economic Growth, Himalaya Publishers.

M. A. Applied Economics

Semester - II

ADVANCED MACROECONOMICS (Compulsory Paper)

Course Contents: (4 Credits and 52 Classes)

1. **National Income Accounts: (7 Classes)**
   Key Concepts –A Brief History of Macro-Economic Thought – National Accounts Methodologyand Critique – Data sources for Macroeconomics – Gross Domestic Product – Circular Flow of Income and its Measurement: Expenditure – Income andvalue Added Methods – Balance of Payments – Savings and Investment under Closed and Open Economy – Measuring the Cost of Living: Price Level and Inflation – Measuring Joblessness: Labor Force and Unemployment Rate – Overview of Data on Broad Empirical Patterns.

2. **Behavioral Foundations**: **(8 Classes)**
   Consumption: Keynes Psychological Law – Kuznet's Consumption Puzzle – Fisher's Inter-Temporal Choice Model – Permanent Income Hypothesis – Life Cycle Hypothesis and Relative Income Hypothesis – Consumption Theory and Hall's Random WalkInvestment – Neo-Classical Theory of Investment – Stock Market and Tobin's Q-Ratio – Accelerator Theory of Investment (Simple and Flexible Acceleration Models).

3. **Macroeconomic Theories: (17 Classes)**
   a. *Keynesian and Classical*:Simple Keynesian Model – IS-LM and Aggregate Demand Framework – Aggregate Supply and Trade off Between Unemployment and Inflation– Role of Government in Terms of Monetary and Fiscal Policy – Stabilization Policy – Say's Law – Price Flexibility and Full Employment – Classical Dichotomy and Neutrality of Money – Natural Rate of Unemployment – Synthesis Between Classical Models and Keynesian Models – Interpretation and Policy Analysis – Equilibrium Concept in Classical Model.

b. ***Economic Growth***:Harrod-Domar Model - Exogenous Technical Progress (Solow Model) and the Neo-Classical Model of Growth – Endogenous Growth (The Human Capital Model and the R&D Model).

c. ***New-Keynesian Macroeconomics***: From Classical Synthesis to New-Keynesianism – Staggered Wage – Rational Expectation and the Failure of the Policy Irrelevance Result – Models of Menu Cost and Disciplinary Unemployment – Dynamic Stochastic General Equilibrium Model.

4. **Macroeconomics of Money and Banking:(10 Classes)**
   a. ***Basics***:Money – Banking Structure – New Trends in Banking – Financial Intermediation – Quantity Theory of Money – Classical and Keynesian Demand for Money – Role of Expectation – Hyperinflation – Inflation and Monetary Policy – Clower'sand Patinkin's Money Demand Functions – Wicksell Policy Rule – Friedman's K-Percent Rule and Taylor Rule.

   b. ***Role of Expectations***: Adaptive and Rational Expectations Hypothesis – Lucas Supply Curve & Lucas Critique – Rules Versus Discretion – Time Inconsistency and the Policy Irrelevance Results.

   c. ***Real Business Cycle***:Overlapping Generation Model and the Ricardian Equivalence – Exposition of Real Business Cycle in an Overlapping Generation Model – Integration Between Trend and Cycle– Inter-temporal Labor-Leisure Substitution and its Critique.

5. **Open Economy:(10 Classes)**
   Closed and Open Economy- Balance of Payment – Devaluation and Depreciation – Inter-Temporal Trade and Current Account Balance – Foreign Exchange Market – Devaluation And Depreciation – Real and Nominal Exchange Rate – Factors Affecting Exchange Rate – Mundell-Fleming Model (IS-LM-BP) – Asset Markets – Expectations and Exchange Rates – Process of Adjustment and Exchange Rate Overshooting– An Alternative Formulation of the Process of Adjustment and Divergent Paths – Financial Crisis in Mundell-Fleming Model – Fixed Versus Floating Exchange Rate – Price Adjustment – Impact of Fiscal and Monetary Policies Under Individual Exchange Rate Regimes – Purchasing Power Parity.

Reference Books:

1. Bhaduri, A. (1986), Macroeconomics: The Dynamics of Commodity Production, Palgrave Macmillan.
2. Blanchard, O. and Fisher, S. (2013), Lectures on Macroeconomics, PHI Learning.
3. Carlin, W. and Soskice, D. (2005),Macroeconomics: Imperfections, Institutions and Policies, Oxford University Press.
4. D'Souza, E. (2012), Macroeconomics, Dorling Kindersley.
5. Dornbusch, R., Fischer, S., and Startz, R. (2010), Macroeconomics, Tata McGraw Hill.
6. Heijdra, B.J. (2009), Foundations of Modern Macroeconomics, Oxford University Press.

7. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern.
8. Mankiw, G. N. (2012), Macroeconomics, Worth Publishers.
9. Patnaik, P.(ed.) (1995), Macroeconomics, Oxford University Press.
10. Phelps, E. (1990), Seven Schools of Macroeconomic Thought, Oxford University Press, Oxford
11. Romer, D. (2012), Advanced Macroeconomics, McGraw-Hill, Fourth Edition
12. Snowdon, B., Howard A. V., and Wynarczyk,P.(1994), A Modern Guide to Macroeconomics: An Introduction to Competing Schools of Thought,Edwad Elgar Publishers.

M. A. Applied Economics

Semester – II

RESEARCH METHODOLOGY(Compulsory Paper)

Course Contents (4 Credits and 65 Classes)

1. **Introduction to Research and Research Methods:(21 Classes)**
    a. *The Nature of Knowledge and Theory*: Positivist and Empiricist Theories of Knowledge – Philosophy of Social Research – Ways of Knowing and Understanding the World and the Research Process – Relevance of Economics Research – Use of Concept and Boundary in Economics Research – Objectivity and Values in Economics.

    b. *Logic of Scientific Investigation*: Understanding Theory in Economics – Construction of Theory – Meaning of Rigor and Proof in Economics – Approaches to Research in Economics – Theoretical, Applied and Action Research– Ethical Issues in Research Economics: Non–Sexist Approach in Social Sciences**.**

    c. *Research Process & Design*: Review of Literature – Identification of Research Gaps – Research Needs – Identification, Selection and Formulation of Research Problem – Hypotheses/Propositions/Issues – Conceptualizing Research Problem.

2. **Qualitative and Quantitative Research Methods:(08 Classes)**
    An Overview –Uni-disciplinary, inter-disciplinary & multi–disciplinary Methodologies – Historical method – Case Study Method – Action Research – Monitoring and Evaluation – Triangulation (including mixing qualitative and quantitative methods)

3. **Sources of Information**: **(08 Classes)**

   Secondary and Primary – Using and Integrating Secondary and Primary Information – Information Needs and Use in Social Sciences – Quantitative Data – Kinds and Quality of data: (Demography, Labour Force, Agriculture, Industry, Human Resoruces, Education, Health, Housing, GIS Cartography, Rural Data Base, Population, Employment)– Qualitative:(Survey Reports, Research Studies)– Objectivity, Reliability and Validity of the Data – Statistical Systems – International, National and Local – Historical Data Tools – Surveys and Questionnaires: Questionnaire, Schedule Design and Construction – Sample Surveys – Survey Administration.

4. **Observation Methods: (20 Classes)**

   Structured and Unstructured – Recording and Interpretation of Observations, Ethnography– Interviews: Nature of the Interview Process – Structured and Unstructured Interviews, Focus Groups – Focused Group Discussions (FGD) – Practical and on Field Experience.

5. **Introductory Analysis and Interpretation of Data**: **(08 Classes)**

   Analysis of Quantitative and Qualitative Data – Data Analysis – Quantitative/Qualitative – Choice of Statistical and Processing Techniques – Interpretative, Narrative Methods – Theory of the Testing of Hypothesis. Presentation of Research Findings– Products of Research, Factors Conducive to Research Utilization. Research Writing.

Reference Books:

1. Black, Thomas, R. (1998), Doing Quantitative Research in Social Sciences, Sage, London.
2. BlaugM.,(1980), The Methodology of Economics: Or How Economists Explain, Cambridge University Press, Cambridge.
3. Bryman, A. (1988), Quantity and Quality in Social Research, London: Unwin Hyman.
4. Converse, J.M. and Presser, S., (1986), Survey Questions, Handcrafting the Standardised Questionnaire, Beverly Hills, CA: Sage.
5. Creswell, John W. (1998), Qualitative Inquiry and Research Design, Sage Publications, Thousand Oaks.
6. Denicolo, Pam and Lucinda Becker (2012), Developing Research Proposal, Sage South sia Edition, New Delhi.
7. Denzin, K. Norman and Yvonne S. Lincoln, (1998), Collecting and Interpreting Qualitative Materials, Sage, London.
8. Einspruch, Eric, (1998), An Introductory Guide to SPSS for Windows, Sage, London.
9. Fontana, A., and J.H. Frey. (1994), Interviewing: The Art of Science, in *Handbook of Qualitative Research,* eds. N.K. Denzin, and Y.S. Lincoln. Thousand Oaks: Sage.
10. Foster, Jeremy J., (1998), Data Analysis Using SPSS for Windows, Sage, London.

M. A. Applied Economics

Semester - II

ECONOMETRICS (Elective Paper)

Course Contents: (4 Credits and 52 Classes)

1. **Introduction to Econometrics:(06 Classes)**

   Statistical and Deterministic Relationships– Understanding Regression – Correlation and Causation.

2. **Two Variable and Multiple Regression Models:(20 Classes)**

   a. ***Simple Regression Model*:** Geographical Interpretation –Specification–OLS Method– Assumptions of CLRM(Classical Linear Regression Model) – BLUE –Gauss Markov Theorem–Hypothesis Testing and Goodness of Fit – Extensions of Simple Regression Model: Various Functional Forms of Regression Model. Regression and Correlation.

   b. ***Multiple Regression Analysis*:**Estimation– Partial Regression Coefficients– Multiple Coefficients of Determination– Normality Assumption – Testing Individual Regression Coefficients– Testing Overall Significance– Testing Equality of Two Regression Coefficients.

   c. ***Test for Correlation*:**Kolmograv Smirnov Test – KruskalWallis Test of One Way ANOVA - Mann Whitney U Test–Sign Test–Kendall's Coefficient of Concordance –Turkey's HSD Tests–Duncan's Multi-Range Test– Friedman Test – Rao-Blackwell Theorem–Cramer-Rao Identity–Chebyshev's Inequality– Parametric and Non Parametric Tests – ANOVA Interaction Effects– Multivariate Analysis of Variance (MANOVA) – Analysis of Covariance (MANCOVA).

3. **Relaxation of the Assumptions of CLRM:(20 Classes)**

Nature, Consequences, Detection and Remedial Measures – General Criteria for Model Selection –Types of Specification Errors and Testing Model Specification – Errors of Measurement – Method of Maximum Likelihood and its Properties (Including Consistency) – Wald Test – Lagrange Multiplier – Likelihood Ratio – Consequences, Detection and Remedial Measures of Multicollinearity– Heteroscedasticity (WLS–MLE) and Autocorrelation (GLS) – Specification Error (Omitted Variable – Inclusion of Irrelevant Variables – Measurement Error in Dependent and Independent Variables) – Method of Moments (IV Method).

4. Regression Using Dummy Variables:(06 Classes)
Nature of Dummy Variables– Variables with Two or More Categories– Interaction Effects– Seasonal Effects – Structural Change–Chow Test–Piecewise Linear Regression.

Reference Books

1. Goldberger,A.S. (1991), A Course in Econometrics– Harvard University Press– Cambridge.
2. Greene, W. (2008), Econometrics Analysis– Pearson.
3. Gujarati, D. (2009),Basic Econometrics–Mcgraw Hill.
4. Hatekar, Niraj (2011), Principles of Econometrics through R, Sage.
5. Johnston, J. and John Dinardo (1997), Econometric Methods–Mcgraw-Hill.
6. Kennedy,P. (2003), A Guide to Econometrics–MIT Press.
7. Koutsoyannis,A.(2006), Theory of Econometrics–Ane Books.
8. Maddala, G.S.(1992), Introduction to Econometrics– Macmillan.
9. Nachane,D. M. (2006), Econometrics: Theoretical Foundations and Empirical Perspectives,Oxford University Press.
10. Pindyck,R.S. and Daniel L. Rubinfeld (1998), Econometric Methods and Economic Forecast– Mcgraw Hill.
11. Wooldridge, J. M.(2003), Introductory Econometrics: A Modern Approach– Thomson South Western.

M. A. Applied Economics

Semester - II

ENVIRONMENTAL AND ECOLOGICAL ECONOMICS(Elective Paper)

Course Content: (4 Credits and 39 Classes)

1. **Concepts and Issues in Environmental Economics:**
   Introduction to Environmental and Ecological Economics – Historical Perspectives (Classical, Neo-Classical AndModern) –Nature and Scope of Environmental Economics – The Environment and Economics Interactions – Genesis of Environmental Problems – Market Failures, Public Goods and Externalities – Coase Theorem – Environment versus Development – Resource Scarcity and Material Balance Principle– Thermodynamics – Entropy – Problems of Free rider and Moral Hazard – Transaction Costs – Property Rights – Open Access Resources – Collective Action – Environment and Development Trade-off – Environmental Kuznet's Curve.

2. **Economic Values and Valuation:**
   Ecosystem Services and Values –Use Value & Non–use Value – NPV–Direct – Indirect – Option – Existence Value – Services – Provisioning – Regulating – Habitat – Cultural & Amenity Services – EconomicValuation– Need for Valuation – Theory of Market & Non – market Valuation – Methods of Valuation – Total Economic Valuation Framework – Direct and Indirect Methods of Valuation – Revealed Preference – Stated Preference – Contingent Valuation – Travel Cost – Hedonic pricing – Market Based – Meta Analysis.

3. **Common Property Resources and Management Issues**:

Concepts – CPR use and misuse – Over utilization, Degradation of CPR – Free rider – Tragedy of commons –Common property management – Institutional issues – Failure of open access management – Institutional framework – Community participation and management of resources – Collective and community management.

4. **Biophysical Limit to Economic Growth &Theory of Sustainable Development**:
   a. *Limit to growth*: (Neo) Malthusian perspective – Ehrlich – Neo classical perspective – resource scarcity – Empirical evidence – before 1970s and after 1970s – Growth & environment – Environmental Kuznet's curve – Ecological economics perspectives – Boulding – Roegen – Daly – Steady State.

   b. *Economics of Sustainable Development*: Defining Sustainable Development – Different Approaches to Sustainability – Measurement of Sustainability – Rules of Sustainable Development and Indicators – The Hartwick–Solow Approach – Weak & Strong Sustainability – Ecological Economics Sustainability – Safe Minimum Mtandards (SMS) Sustainability.

5. **Environmental Regulation, Policy and Global Environmental Issues:**
   a. *Pollution Control Instruments*: Command and control methods – standards, technology mandates – Market based incentives – Pigouvian Tax – taxes and tradable permits, subsidies, property rights, liability rules – Incentives and market structure – Voluntary mechanisms.

   b. *Global Problems & Issues*: Acid Rain– ozone depletion and global warming – Causes, consequences & international responses – Economics of climate change: causes– possible effects– costs of mitigating green house gas emissions– adaptation measures.

Reference Books:
1. Baumol, W. J. and W. E. Oates (1988), *The Theory of Environmental Policy*, Second edition,Cambridge University Press, Cambridge, 299 pp
2. Bromely, D.W. (1995), Handbook of Environmental Economics, (Ed.), Blackwell, London
3. Common, M. (1988), *Environmental and Resource Economics: An Introduction*, Longman Group UK Limited, London, 319 pp
4. Dasgupta, P.S. and K.G. Maler (1997), Environment and Emerging Development Issues, (Ed.), Cambridge University Press, Cambridge
5. Hanley, N., J. Shogren, and B. White (1997), *Environmental Economics in Theory andPractice*, Macmillan Press, 464 PP
6. Kolstad, C.D. (2003), Environmental Economics, Oxford University Press, New Delhi
7. Markandya, A. and J. Richardson (1992), The Earth Scan Reader in Environmental Economics, (Eds.), Earth Scan, London
8. Mitchell, R. C., and R. T. Carson (1989), Using Survey to Value Public Goods: The Contingent Valuation Method, Resource for the Future
9. Ostrom, E. (1990), Governing the Commons: The Evaluation of Institutions for Collective

Actions, Cambridge University Press, Cambridge
10. Pearce, D.W. and R. Turner (1991), Economics of Natural Resource Use and Environment, John Hopkins University Press.
11. Sankar, U. (2001), *Environmental Economics,* Oxford University Press, (Ed.), New Delhi, 469 PP.

M. A. Applied Economics

Semester - II

ECONOMICS OF TECHNOLOGY AND INNOVATION(Elective Paper)

Course Contents: (4 Credits and 39 Classes)

1. **Basic Concepts:(08 Classes)**
   Technological Change in any Production Process – Role of Research and Development in Growth – Nature and Importance of Innovation – Inventions and Innovations in the Context of Developing Countries– Radical and Disruptive Innovations and User Led Innovations – Linear and Chain Linked Innovations.

2. **Understanding Technological Change:(16 Classes)**
   a. *Earlier Perspectives*:Keynesian Approach– Neo-Classical Approach– Vintage Models– Learning Processes– Epidemic and Probit Models – Market Structure and Innovation – Empirical Measurement and Evidence across Time.

   b. *Diffusion and Learning*:Models of Diffusion – Strategic Adoption of New Technologies – Network Externalities – Learning through R&D – Total Factor Productivity.

   c. *Evolutionary Perspective on Technological Progress*:Bounded Rationality and Non-OptimizingBehavior– Incremental Innovation– Path Dependence and Firm Level Diversity – Co-evolution of Technology and Institutions.

d. *Systemic Perspective on Innovation*:National System of Innovation – Sectoral and Regional Systems of Innovation – Measuring Innovations – Conventional Vs New Instruments – Composite Measures – Functions of Innovation Systems – International Perspective on Innovations and Transfer of Technology – Channels of Transfer – Technology and International Trade – Changes in International Governance and Rules.

3. **Multinational Corporations, Technology Transfer, Exports:(05 Classes)**
Theories Of TNCs – Impact on Host LDCs – Transfer Pricing – Technology Transfer – Spillovers and Technology Development – Exports.

4. **Technology Policy:(05 Classes)**
Market Failure and Need for Policy Intervention – R&D Incentives – IPR Regime – Problems of Appropriation and Patents – Empirical Issues.

5. **Indian Experience in Technology and Innovations:(05 Classes)**
Phases in Technological Changes and Indian Economic Policy – Policy towards Technology Imports and Dissemination – Globalization and Changes in the Policy Frame – Changes in Innovations and Patents Policy – Allocation of Funds to Public and Private R &D.

Reference Books

1. Caves, R.E. (1982), Multinational Enterprises and Economic Analysis, Cambridge University Press.
2. Dunning, J.H. (1981), International Production and the Multinational Enterprises, Allen &Unwin.
3. Dunning, J.H. (1988), Multinational, Technology and Competitiveness, Allen &Unwin.
4. Fagerberg, J., D. Mowery and Richard Nelson (Eds.) (2004), The Oxford Handbook of Innovation, Oxford University Press.
5. Greenhalgh, C. And Mark Rogers (2010),Innovation, Intellectual Property, and Economic Growth, Princeton University Press.
6. Hall, B. and Nathan Rosenberg (Eds.) (2010), Handbook of the Economics of Innovation, Volumes I and II, Elsevier.
7. Stoneman, P. (1983), The Economic Analysis of Technological Change, Oxford University Press.
8. Stoneman, P. (2001), The Economics of Technological Diffusion, Wiley-Blackwell.
9. Stoneman, P. (Ed.) (1995), Handbook of Economics of Innovation and Technological Change, Wiley-Blackwell.
10. Swann, P.G M. (2009), The Economics of Innovation, Edward Elgar.

M. A. Applied Economics

Semester - II

POLITICAL ECONOMY& DEVELOPMENT (Elective Paper)

Course Contents: (4 Credits and 39 Classes)

1. **Introduction to Political Economy**: **(08 Classes)**
   a. *Historical Development of Political Economy*: Overlapping Theories of Economics and Politics – Adam Smith, Thomas Malthus, David Ricardo, John Stuart Mill, and Karl Marx – Classical Debates among Economists and Political Scientists on the Role of State and Market.

   b. *The Trinity*: Supply, Demand, Equilibrium –Utility and Productivity: TheQuantity of Quality– Market Organization: Ideal Types – Prices or Profit?

2. **Modern Political Economy**: **(12 Classes)**
   a. *Debates*: Alfred Marshall, John Maynard Keynes, Friedrich Hayek, Milton Friedman– Current Economists like Paul Krugman and John Cochrane –Public Choice and Rational Choice Theories – Culture, Race, Gender and the Economy–Poverty –Inequality& Growth –Sources and Remedies under the State Policies and Role of the Market.

   b. **State and Market:** How the Economy is Political and Why – Political Economy of Industrialization – State and Theories of State – Typologies – The Cold War and Impact on the Economy of the World – The Welfare State –Democracy and Development.

3. **Political Economy and Globalisation: (07 Classes)**

Global Political Economy –International Trade – Transnational Production – The Global Financial System –Governingthe Global Political Economy –Financial Crisis and Globalisation– Political Economy and International Trade – Understanding the Role of WTO.

4. **Political Economy of Environmental Protection:(07 Classes)**
Climate Change and IPCC– Emerging Issues in the Study of Political Economy– Identity – Accountability – Redistribution – Power – Divisions – Violence – Security – Environment – Health.

5. **Institutional Economics**: **(05 Classes)**
Basic tenets of Institutional Economics – Political overtones in Institutional understanding – Institutional Stability and Change – Power & The State.

References:
1. Barma, Naazneen H. and Steven K. Vogel (Eds) (2008), The Political Economy Reader: Markets as Institutions Routledge.
2. North, Douglass (1990), Institutions, Institutional Change and Economic Performance. Cambridge: Cambridge University Press.
3. Glipin, Robert (2001), Global Political Economy: Understanding the International Economic Order, Princeton University Press, Princeton.
4. Heilbroner, Robert L (1999), The Worldly Philosophers Touchstone, Rockfellar Centre New York.
5. Stiglitz, Joseph. (1997), The Role of Governments in the Economies of Developing Countries In Edmond Malinvaud Et Al, 1997, Development Strategy and the Management of the Market Economy, Volume 1, Oxford: Clarendon Press.
6. Phelps Edmund S. (1985), Political Economy: An Introductory Text, W. W. Norton & Company.
7. Tabb William K. (1999), Reconstructing Political Economy: The Great Divide in Economic Thought , Routledge.
8. Clark Barry (2016), Political Economy: A Comparative Approach, Praeger.
9. Ruparelia Sanjay, Reddy Sanjay, Harriss John and Corbridge Stuart (Eds) (2011), Understanding India's New Political Economy: A Great Transformation? , Routledge.
10. Varoufakis Yanis, Halevi Joseph, Theocarakis Nicholas J. (2011), Modern Political Economics: Making Sense of the Post-2008 World, Routledge.

POST GRADUATE TEACHING DEPARTMENTS OF ECONOMICS

GONDWANA UNIVERSITY,GADCHIROLI

Master of Arts(M.A.)Applied Economics

PAPER PATTERN

SEMESTER –I,II, III, IV

Time : Three Hours   **Max.Marks:80**

Note : 1) All questions are compulsory

   2) All questions carry equal marks

Que.1) Long Answer   (any one)   16

   A   OR   B

Que.2) Long Answer   (any one)   16

             A   OR   B

Que.3) Short Answer   (any Two)   16

(A) (B) (C) (D)

Que.4) Short Answer   (any Two)   16

(A) (B) (C) (D)

Que.5) Very Short Answer   (all question are compulsory)   16

(A) (B) (C) (D)