



# ALAGAPPA UNIVERSITY

(A State University Established in 1985)  
Karaikudi - 630003, Tamil Nadu, India



<b>2017</b>  Accredited with A+ Grade by NAAC (COPA : 3.84)	<b>2018</b>  MHRD Govt. of India  UGC University Grants Commission Graded as Category - I & Granted Autonomy	<b>2018</b>  MHRD GOVERNMENT OF INDIA Swachh Campus Rank : 4	<b>2019</b>  NIRF NATIONAL INSTITUTIONAL RANKING FRAMEWORK Rank : 25	<b>2019</b>  QS India Rank : 20 BRICS Rank : 104 Asia Rank : 216
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## DEPARTMENT OF ECONOMICS AND RURAL DEVELOPMENT



### M.A., ECONOMICS

[Choice Based Credit System (CBCS)]

[For the candidates admitted from the academic year 2019-2020]

**Department of Economics and Rural Development**  
**ALAGAPPA UNIVERSITY, KARAIKUDI – 630 003**

**Regulations for M.A., Economics Regular Programme**

**Programme general objectives:** The subject of Economics is widely used for various development policy decisions throughout the world. Studying the subject of economics provides an in-depth understanding on theoretical and empirical issues of the various subjects of economics which ultimately help the students to enter into policy making body, research institutes, academic institutions, corporate houses, consultancy organisations, etc. This Post Graduate Course in Economics is expected to help the students in understanding the utility of the subject in different areas.

**Programme specific objectives:** The major objective of the designed programme is to train and provide necessary skills and understanding on various facets of economics. The specific objectives of this programme are:

1. To provide in-depth understanding on the basic concepts and theories in various branches of economics;
2. To provide details on the sectoral development of economy concerning India;
3. To provide exposure to the national and international economic problems;
4. To familiarize the important economic problems and concepts to the students;
5. To facilitate the students to acquire skills in systematic evaluation and follow-up of economic projects.
6. To prepare the students for competing for Indian Economic Services (IES), Economists position at RBI, NABARD, Planning Commission, Consultancy Organisations and other leading academic and research institutions.

**Programme outcome:**

On successful completion of the programme

1. The students will be able to understand the functions of key economic instruments.
2. The students will be able to use macro and micro economic models to explain the changes in real world economic analysis.
3. The students will be able to apply econometric and statistical tools in economic analysis.
4. The students will be able to acquire significant knowledge to face various competitive examinations.

**Duration of the course:** This is a two-year full-time programme offered in four semesters under CBCS.

**Eligibility:** Applicants who have passed B.A. in Economics/ Business Economics/ Cooperation/B.B.M./ B.B.E./ B.B.A./ B. Com./ B.Sc. Statistics / B.Sc., Agricultural Economics and B.Sc. Mathematics in the specified programmes are eligible for admission to the M.A., Economics Programme. Both male and female students not exceeding 20 in number will be admitted to this programme. Those who are waiting for the results of final

semester examination can also apply for this programme. The students will be selected based on their marks scored in the UG programme.

### **Conditions for Qualifying the Programme:**

*Theory Papers:* A candidate who does not pass the examination relating to any theory papers in each of the semesters shall be permitted to appear in such failed paper or papers in the ensuing supplementary examination as held by the University.

*Project / Thesis Report:* Project report shall be evaluated internally by the faculty of the department who has guided the student and by an external examiner as well. The internal (25 marks) and external examiner (75 marks) shall evaluate the research project/thesis which will have a total of 100 marks. Each candidate shall be required to appear for viva-voce examination in defending the project. A candidate who fails in the Project/Thesis shall not be eligible for M.A Economics Degree till he/she repeats the Project/Thesis under supervision and secures pass marks.

*Passing Minimum:* A candidate shall be declared to have passed the examination, if he obtains not less than 50% of the marks in each paper, including project/thesis. Candidates who do not obtain the required minimum marks for a pass in any papers and project/thesis shall be required to reappear and pass the same at the subsequent appearance.

*Classification of Successful Candidates:* Candidates who secure not less than 60% of the aggregate marks in the whole examination shall be declared to have passed the examination in the first class. Candidates who secure not less than 50% of the aggregate marks in the whole examination but below 60% shall be declared to have passed the examination in the second class. Candidates who obtain 75% of the marks in the aggregate shall be deemed to have passed the examination in first class with distinction, provided they pass all the examinations prescribed for the course at the first appearance.

*Ranking:* Candidates who pass all the examinations prescribed for the course in the first appearance only are eligible for ranking.

*General:* In all other matters that are not specified here, the regulations of the University will be followed.

## M.A., Economics – Regular Programme

*[Course Structure and Scheme of Examination from the Academic Year 2019-20 Onwards]*

S.N	Code	Name of the course	Credit	Hours/Week	Marks		
					IA	EA	Total
<b>SEMESTER I</b>							
1	455 101	Micro Economics – I	5	5	25	75	100
2	455 102	Macro Economics – I	5	5	25	75	100
3	455 103	Statistical Analysis	4	4	25	75	100
4	455 104	Dynamics of Rural Development	4	4	25	75	100
5	455 501	Computer Application for Data Analysis (E)	4	4	25	75	100
		Library/Seminar/Spoken English	-	8	-	-	-
		<b>Total</b>	<b>22</b>	<b>30</b>	-	-	<b>500</b>
<b>SEMESTER II</b>							
6	455 201	Micro Economics – II	5	5	25	75	100
7	455 202	Macro Economics – II	5	5	25	75	100
8	455 203	Issues in Indian Economic Development	4	4	25	75	100
9	455 204	Indian Financial Institutions and Markets	4	4	25	75	100
10	455 502	Econometrics (E)	4	4	25	75	100
11	455 701	Non Major Elective - I	2	3	25	75	100
	SLC-I*	MOOCs	Extra Credit				
		Library/Yoga/Spoken English/ Career Guidance/ Seminar	-	5	-	-	-
		<b>Total</b>	<b>24</b>	<b>30</b>			<b>600</b>
<b>SEMESTER III</b>							
12	455 301	Public Finance – I	4	4	25	75	100
13	455 302	Development Economics	4	4	25	75	100
14	455 303	Research Methodology	4	4	25	75	100
15	455 304	International Economics - I	4	4	25	75	100
16	455 503	Mathematics for Economic Analysis (E)	4	4	25	75	100
17	455 702	Non Major Elective - II	2	3	25	75	100
	SLC-II*	MOOCs	Extra Credit				
		Library/Yoga/Competitive Examination Coaching/ Career Guidance/Seminar	-	7	-	-	-
		<b>Total</b>	<b>22</b>	<b>30</b>			<b>600</b>
<b>SEMESTER IV</b>							
18	455 401	Monetary Economics	4	4	25	75	100
19	455 402	Agricultural Economics	4	4	25	75	100
20	455 403	Public Finance – II	4	4	25	75	100
21	455 404	International Economics - II	4	4	25	75	100
22	455 999	Project Report and Viva-Voce	6	12	25	75	100
		Library/Seminar/Competitive Examination Coaching	-	2	-	-	-
		Total	<b>22</b>	<b>30</b>	-	-	<b>500</b>
		<b>Grand Total</b>	<b>90 + Extra Credit</b>	<b>120</b>	-	-	<b>2200</b>

\*Credits earned through Self Learning Course (MOOCs) shall be transferred in the credit plan of the programme as extra credits.

### List of Elective Courses

S.N	Code	Name of the course	Credit	Hours/Week	Marks		
					IA	EA	Total
1	455 501	Computer Application for Data Analysis	4	4	25	75	100
2	455 502	Econometrics	4	4	25	75	100
3	455 503	Mathematics for Economic Analysis	4	4	25	75	100
4	455 504	Energy Economics	4	4	25	75	100
5	455 505	Environmental Economics	4	4	25	75	100
6	455 506	Project Planning and Evaluation	4	4	25	75	100
7	455 507	Industrial Economics	4	4	25	75	100

<b>Semester – I</b>			
<b>Course code: 455 101</b>	<b>Micro Economics – I</b>	<b>Credits: 5</b>	<b>Hours: 5</b>
<b>Objectives</b>	➤ This course aims to provide an understanding of the way individual households and business firms make choices and decisions.		
<b>Unit-I</b>	<b>Theory of Consumer Behaviour:</b> Utility Theory: Total Utility and Marginal Utility- Ordinal Approach: Indifference Curve (Income and Substitution Effects, Slutsky Theory and Compensated Demand Curve) and their Application; Revealed Preference, Theory of Demand (Hicks)- Characteristics of Goods Approach (Lancaster)- Consumer choice involving risk: N-M Hypothesis; Friedman-Savage-Markowitz Hypothesis		
<b>Unit-II</b>	<b>Theory of Production and Cost:</b> Theory of Production Function: Marginal Product, Average Product and Total Product- Elasticity of Substitution: Euler's Theorem– Technical Progress and Cobb-Douglas, CES, VES, Trans-log Production Function and Frontier Production Function: Empirical Work – Traditional and Modern Theories of Cost – Derivation of Cost Functions: Total Cost, Average Cost, Marginal Cost, Average Fixed Cost, Average Variable Cost.		
<b>Unit-III</b>	<b>Market Theories:</b> Price and Output Relations: Perfect Competition, Monopoly, Monopolistic Competition, Monopsony, Bilateral Monopoly- Product Differentiation- Selling Cost – Excess Capacity under Monopolistic Competition – Imperfect Competition– Oligopoly: Non-collusive (Cournot, Bernard, Edgeworth, Chamberlin, Kinked Demand Curve and Stackelberg's Solution) and Collusive (Cartels and Mergers, Price Leadership and Barometric Point Price System) Contestable Market – Global Competition.		
<b>Unit-IV</b>	<b>Pricing Practices:</b> Historical Pricing- Premium Pricing– Penetration Pricing– Economy Pricing– Skimming Price– Psychological Pricing– Neutral Strategy– Captive Product Pricing– Optional Product Pricing– Bundling Price– Promotional Pricing Strategy– Geographical Pricing– Line Pricing– Peak Load Pricing.		
<b>Unit-V</b>	<b>Alternative Theories of Firm:</b> Critical Evaluation of Marginal Analysis: Baumol's Sales Maximization and Williamson's Model of Managerial Discretion – Marris Model of Managerial Enterprise– Full Cost Pricing Rule-Bains Limit Pricing Theory; Sylos-Labini's Model– Behavioural Model of the Firm: Cyert and March.		
<b>Reference and Textbooks</b>			
Gravelle, H. & Rees, R. (2004). <i>Microeconomics</i> . (3 <sup>rd</sup> ed.). Prentice Hall, Pearson Education. Bv Canada.			
Jehle, G.A. & Reny, P.J. (2001). <i>Advanced Microeconomic Theory</i> . Pearson Education. India.			
Koutsyiannis, A. (2008). <i>Modern Microeconomics</i> . (2 <sup>nd</sup> ed.). MacMillan. London			
Kreps, D.K. (1996). <i>A Course in Microeconomic Theory</i> . Princeton University Press. New Jersey, NJ: USA.			
MasColell, A. Whinston, M.D. & Green, J.R. (1995). <i>Microeconomic Theory</i> . Oxford University Press. Mumbai.			
Pankaj, G. & Gupta, A. (2002). <i>Microeconomics: Theory and Applications – II</i> . Sarup & Sons. New Delhi.			
Samuelson, P.A. & William D.N. (2009). <i>Microeconomics</i> . (19 <sup>th</sup> ed.). Tata McGraw Hill International. New Delhi.			
Varian, H.R. (2010). <i>Microeconomic Analysis</i> . W.W. Nortonand Company. New York, NY.			
<b>Outcomes</b>	➤ Students will be able to critically analyse and explain consumers', firms', and markets' behaviour using tools and diagrams; assess the microeconomic theories and models in terms of their policy implications, advantages and limitations.		

<b>Semester – I</b>			
<b>Course code: 455 102</b>	<b>Macro Economics – I</b>	<b>Credits: 5</b>	<b>Hours: 5</b>
<b>Objectives</b>	➤ The course covers key models that help to analyze and explain macro-economic phenomena. It investigates economic growth, business cycles, consumption, savings investment, unemployment, fiscal and monetary policy.		
<b>Unit-I</b>	<b>Basic Concepts:</b> Need for a Separate Study of Macro Economics- National Income – Circular Flow of Income and Expenditure of Two Sector, Three Sector and Four Sector Models– National Income and National Product– Methods: Income, Expenditure and Product- Concepts of National Income – Measurement of National Income: Current Price and Constant Price– Difficulties in the Measurement of National Income– National Income and Measure of Welfare- Difficulties; Distribution Effects.		
<b>Unit-II</b>	<b>Macro Economic Theories:</b> The Classical Theory of Employment– Say’s Law of Markets- Aggregate Demand and Supply (Two, Three and Four Sector Model) – The Consumption Function- Keynesian Psychological Law of Consumption: APC, MPC, APS, MPS Relations– The Marginal Efficiency of Investment (MEI)– Relation Between the MEC (Central Stock) and the MEI (Investment)– Factors other than the Interest Rate Affecting Inducement to Invest – Income Determination in Closed and Open Economy– The Keynesian Theory of Income, Output and Employment.		
<b>Unit-III</b>	<b>Macro Economic Theories:</b> Savings and Investment Equality (The Classical and Keynes criticism of the view)– The Accelerator Theory of Investment– Lags in Investment: Koyek’s Approach– Financial Theories of Investment: Duesenberry’s Financial Theory of Investment– Jorgenson’s Neo-Classical Theory of Investment– Multipliers: Investment Multiplier, Period Multiplier, Employment Multiplier, Super Multiplier.		
<b>Unit-IV</b>	<b>Post-Keynesian Developments in Macro Economics:</b> IS-LM Curves Model Real Sector Equilibrium: The Derivation of the IS Curve, Shift in the IS Curve; The LM Curve, Shift in the LM Curve; Intersection of the IS and LM Curves, Effectiveness of IS and LM- Phillips Curve: Long-run Phillips Curve- Rational Expectations Theory- Numerical Problems of IS curve– Two and Three Sector Model– Derivative of LM curve– Determination of Income and Interest under IS Curve.		
<b>Unit-V</b>	<b>Supply Side Economics:</b> Supply Side Economics: Laffer Curve- Taxation and Labour Supply– Reagan Economics and Supply Side Economics– Reducing the Burden of Government Regulations, Increasing Growth Rate, Effect on the Distribution of Income.		
<b>Reference and Textbooks</b>			
Blanchard, O. & Johnson, D.R. (2012). <i>Macroeconomics</i> . Prentice Hall. Toronto.			
Carlin, W. & David, S. (2007). <i>Macroeconomics: Imperfections, Institutions, and Policies</i> . Oxford University Press. New Delhi.			
David Romer. (2011). <i>Advanced Macroeconomics</i> . McGraw-Hill Higher Education. New Delhi.			
David, R. (2011). <i>Advanced Macroeconomics</i> . McGraw Hill Higher Education. London.			
Froyen, R.T. (2008). <i>Macroeconomics: Theory and Policies</i> . (9 <sup>th</sup> ed.). Prentice Hall. Pearson Education. New Jersey.			
Levacic, R. & Rebmann, A. (1982). <i>Macro Economics: An Introduction to Keynesian - Neoclassical Controversies</i> . Palgrave Macmillan. London.			
<b>Outcomes</b>	➤ Students will be able to describe full employment and price-level stability; analyse unemployment and inflation, explain the components of aggregate economic activity, fluctuations and effects for the national economy.		

<b>Semester – I</b>			
<b>Course code: 455 103</b>	<b>Statistical Analysis</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To familiarize the application of statistical methods in socio-economic analysis among the students.		
<b>Unit-I</b>	<b>Measures of Central Tendency and Dispersion:</b> Mean, Median and Mode– Empirical Relationship between Mean, Median and Mode; Measures of Dispersion– Range, Mean Deviation, Quartile Deviation, Standard Deviation and Coefficient of Variation– Skewness.		
<b>Unit-II</b>	<b>Correlation and Regression Analysis:</b> Correlation Analysis: Scatter Diagram, Karl Pearson’s Coefficient of Correlation; Rank Correlation, Spearman’s Coefficient of Rank Correlation; Application of Correlation in Empirical Works– Regression: Difference between Correlation and Regression, Fitting Regression Lines (between two variables), Regression Coefficients; Application of Regression in Empirical Works.		
<b>Unit-III</b>	<b>Probability:</b> Mathematical and Statistical probability: Events, Addition and Multiplication Theorems– Definition and Properties of Normal, Binomial, Poisson, Chi- square, ‘t’ and ‘F’ tests (Basic Concepts and Simple Problems) – ANOVA, MANOVA.		
<b>Unit-IV</b>	<b>Estimation:</b> Point Estimation, Four Properties of Point Estimator, Interval Estimation (Concept only)– Tests of Significance: Test for Mean Difference (Small and Large Samples) – Proportion and Difference between Proportions (for Large Sample Variances Numerical Problems only)– Chi-square Tests and its Applications– Goodness of Fit.		
<b>Unit-V</b>	<b>Computer Applications:</b> Data Entry and Processing using Excel– Downloading Data from Internet and its Conversion into Application– Computing Mean, Median, Mode, Standard Deviation and CV using Excel – Creating and Modifying Graphs and other Charts – Computing Growth Rate- Correlation and Regression using SPSS.		
<b>Reference and Textbooks</b>			
Nagar, A.L. & Das, R.K. (2006). <i>Basic Statistics</i> (2 <sup>nd</sup> ed.). Oxford University Press. New Delhi.			
Agarwal, Y.P. (2012). <i>Statistical Methods: Concepts, Applications and Computations</i> . Sterling Publishers. New Delhi.			
Grewal, P.S. (1990). <i>Methods of Statistical Analysis</i> . Sterling Publishers. New Delhi.			
Gujarathi, D. (2017). <i>Basic Econometrics</i> . Tata McGraw Hill. New Delhi.			
Gupta, S.P. (2014). <i>Statistical Methods</i> . S. Chand & Company. New Delhi.			
Gupta, C.B. & Gupta, V. (2009). <i>An Introduction to Statistical Methods</i> . Vikas Publishers. New Delhi.			
Gupta, S.C. (2014). <i>Fundamentals of Statistics</i> . Himalaya Publishing House. Mumbai.			
Miller, I. & Miller, M. (1999). <i>Mathematical Statistics</i> (6 <sup>th</sup> ed.). Prentice Hall. New Jersey. NJ.			
Mood, A.M. Graybill, R.A. & Boes, R.C. (1974). <i>Introduction to the Theory of Statistics</i> . McGraw-Hill. New Delhi.			
Spiegel, M.R. & Constable, R.L. (1992). <i>Theory and Problems of Statistics</i> . McGraw-Hill. Singapore.			
<b>Outcomes</b>	➤ Students will be able to understand and apply descriptive and inferential statistical techniques using excel and SPSS to support economic decision making.		

<b>Semester – I</b>			
<b>Course code: 455 104</b>	<b>Dynamics of Rural Development</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide an in-depth understanding on the development scenarios of rural economy with a special focus on India.		
<b>Unit-I</b>	<b>Structure, Growth and Development:</b> Genesis of Rural Development– Conceptual Framework– Objectives, Scope, Importance and Indicators of Rural Development– Rural Development Administrative Structure– Infrastructure– Education, Health, Electricity, Roads, Markets, Urban Connectivity.		
<b>Unit-II</b>	<b>Theories and Dimension of Poverty:</b> Theories Applicable to Rural Development- Balanced vs. Unbalanced Growth, Lewis Theory of Surplus Labour, Dualistic theories, Trickle-down theory, Myrdal's Backwash Effect Theory– Poverty: Concept and Dimensions; Measurement of Poverty– Causes and Consequences of Poverty– Trends and Determinants.		
<b>Unit-III</b>	<b>Rural Development Programmes:</b> Integrated Rural Development Programme (IRDP), TRYSEM and DWCRA- Swarnajayanti Gram Swarozgar Yojana (SGSY)– Sampoorna Grameen Rozgar Yojana (SGRY)– Rural Housing Schemes (IAY & PMGSY)– Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGP)- National Social Assistance Programme: NOAPS, NMBS, NFBS.		
<b>Unit-IV</b>	<b>Voluntary Organization as Change Agent in Rural Development:</b> VOs vs. NGOs – Typology – Strategies of development oriented NGOs – VOs and Five Year Plans– Guidelines to VOs– Role of NGOs in Rural Development- Problems faced by NGOs.		
<b>Unit-V</b>	<b>Participatory Development:</b> Significance, Concept and Meaning– Approaches to People's Participation– Supply Leading Vs. Demand Driven Approach, Types of People's Participation; Strategies to Promote People's Participation– Social Capital: Definition, Types and Role in Rural Development.		
<b>Reference and Textbooks</b>			
Government of India. (Various issues). <i>Five Year Plans</i> . Planning Commission of India. New Delhi.			
Jhingan, M.L. (2011). <i>Economics of Development and Planning</i> . Vrinda Publications. New Delhi.			
Lalitha, N. (2004). <i>Rural Development: Trends and Issues</i> . (Vol. I and II.). Dominant Publishers. New Delhi.			
Maheswari, S.R. (1995). <i>Rural Development in India - A Public Policy Approach</i> . Sage Publications. New Delhi.			
Narayanasamy, N. (2009). <i>Participatory Rural Appraisal: Principles, Methods and Applications</i> . Sage Publications. New Delhi.			
Reddy, V.K. (2012). <i>Rural Development in India</i> . Himalaya Publishing House. New Delhi.			
Singh, H. (1995). <i>Administration of Rural Development in India</i> . Sterling. New Delhi.			
<b>Outcomes</b>	➤ On successful completion of the course, the students will be able to gain insight into the socio-economic structure of rural India and understand the prospects and problems of rural development programmes and role of non-governmental organisation in India.		



<b>Semester - I</b>			
<b>Course code: 455 501</b>	<b>Computer Application for Data Analysis (E)</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide an in-depth knowledge on the use of computer in economic analysis.		
<b>Unit-I</b>	<b>Basic Knowledge of Computer:</b> Introduction to Operating System: Types and Versions of Operating System- Basic Knowledge of Internet: Creating E-mail Address, Sending and Getting E-mails, Features of Inbox, Attaching Images or Documents to E-mail.		
<b>Unit-II</b>	<b>MS-Office:</b> MS-Word: Creating, Opening and Saving Files– Editing and Formatting Text: Spell, Grammar Check and Thesaurus Check- Auto Correct- Creation of Tables and Volumes- Page Alignment, Mail Merger and Track Change Mode- MS-Power Point: Creating Slides, Editing Slides, Insert Table, Picture and Animation; Slide Show.		
<b>Unit-III</b>	<b>Data Download:</b> Data Search from Paid and Non-Paid Sources like NSSO, CSO, CACP, MOA, MOSPI, etc- Presentation of Data: Editing, Coding and Tabulating Data; Diagrammatic and Graphic Representation of Data- Processing Data- Online Journals– Sourcing of Online Research Articles from Various Publishers.		
<b>Unit-IV</b>	<b>MS-Excel for Analysis:</b> Creating, Opening and Working with Data in MS-Excel Data Analysis: Mean, Median, Mode, Percentiles, Quartiles, Standard Deviation, Variance, Range Minimum, Maximum, Skewness, Kurtosis and Growth Model– Tables– Diagram- Computing NPV, BCR and IRR.		
<b>Unit-V</b>	<b>Data Analysis using SPSS:</b> Basics of Data Analysis– Data Entry in SPSS – Importing Data from Non-SPSS File Format, Merging Data from Multiple files, Transforming Variables and Recoding Variables- Computing with SPSS- Preparation of Graphs with SPSS- Data Analysis: Descriptive Statistics, Growth Rates, Correlation and Regression Models.		
<b>Reference and Textbooks</b>			
Ajai, S.G. & Gaur, S.S. (2009). Statistical Methods for Practice and Research A Guide to Data Analysis Using SPSS. Sage Publisher. New Delhi.			
Croxtton, F.E. Cowden, D.J. & Klein, S. (1988). Applied General Statistics. Prentice Hall of India. New Delhi.			
Cunningham, J.B. & Aldrich, J.O. (2012). Using SPSS. Sage Publications. New Delhi.			
Dhanasekaran, K. (2013). Computer Application in Economics. Vrinda Publications. New Delhi.			
Gupta, S.P. (2018). Statistical Methods. S. Chand & Sons Publishers. New Delhi.			
Rajaraman, V. & Neeharika, A. (2014). Fundamentals of Computers. Prentice Hall of India. New Delhi.			
<b>Outcomes</b>	➤ By the completion of this course, the students will be able to gain comprehensive knowledge of creating, sending, receiving E-mails and attaching images or documents, MS-Word, MS-Power Point, MS-Excel and to compute NPV, BCR, IRR using SPSS.		

<b>Semester - II</b>			
<b>Course code: 455 201</b>	<b>Micro Economics – II</b>	<b>Credits: 5</b>	<b>Hours: 5</b>
<b>Objectives</b>	➤ To provide theoretical foundation of the micro-economic theory especially about the basic concepts such as scarcity, choice, efficiency, equity, equilibrium and uncertainty.		
<b>Unit-I</b>	<b>Factor Pricing:</b> Neo-classical Approach: Marginal Productivity Theory, Product Exhaustion Theorem- Elasticity of Technical Substitution, Progress and Factor Shares– Theories of Distribution: Ricardo, Marx, Kalecki, Kaldor and Sraffa.		
<b>Unit-II</b>	<b>Equilibrium Analysis:</b> General and Partial Equilibrium- Walrasian Excess Demand and Input-Output Approaches- Existence, Stability and Uniqueness– Two Sector Model- Stopler-Samuelson Theory- Relationship between Output Mix and Real Factor Prices- Rybezynski Theory.		
<b>Unit-III</b>	<b>Theory of Uncertainty:</b> Individual Behaviour towards Risk and Uncertainty: Risk Preference and Aversion– Sensitivity Analysis: Gambling and Insurance- Economics of Insurance: Cost and Risk, Risk Pooling, Spreading, Moral Hazard and Portfolio Selection– Optimal Consumption under Uncertainty– Game Theory: Non-Cooperative Games; Prisoner's Dilemma.		
<b>Unit-IV</b>	<b>Economics of Search:</b> Models- Efficient Market Hypothesis– Stochastic Model– Model of Inventory Demand– Market with Incomplete Information: Search and Transaction Costs, Economics of Information, Asymmetric Information, Moral Hazards and Adverse Selection.		
<b>Unit-V</b>	<b>Welfare Economics:</b> Pigouvian Welfare Economics– Pareto Optimal Conditions– Value Judgments – Social Welfare Function– Compensation Principle– Inability to Obtain Optimum Welfare – Sen's Welfare Economics– Theory of Second Best– Arrow's Impossibility Theorem– Equity and Efficiency Trade Off.		
<b>Reference and Textbooks</b>			
Gibbons, R. (1992). <i>Game Theory for Applied Economists</i> . Princeton University Press. New Jersey, NJ.			
Bryant, W.D.A. (2010). <i>General Equilibrium: Theory and Evidence</i> . World Scientific Publishing. Singapore.			
Koutsiyannis, A. (2008). <i>Modern Micro Economics</i> . MacMillan. London.			
Mandal, R.K. (2008). <i>Microeconomic Theory</i> . Atlantic Publishers. New Delhi.			
Layard, P.R.G. & Walters, A.W. (2001). <i>Microeconomic Theory</i> . McGraw Hill. London.			
Samuelson, P.A. & William, D.N. (2009). <i>Microeconomics</i> (19 <sup>th</sup> ed.). Tata McGraw Hill. New Delhi.			
Stigler, G. (1996). <i>Theory of Price</i> . Prentice Hall of India. New Delhi.			
Varian, H.R. (2010). <i>Microeconomic Analysis</i> . W.W. Norton and Company. New York, NY.			
<b>Outcomes</b>	➤ The students will be able to understand micro economic theories on factor pricing, distribution, uncertainty, stochastic models and welfare theories and explore the real market situations.		

<b>Semester – II</b>			
<b>Course code: 455 202</b>	<b>Macro Economics – II</b>	<b>Credits: 5</b>	<b>Hours: 5</b>
<b>Objectives</b>	➤ To provide detailed understanding on various macro-economic models which would help the students to integrate the models with theory.		
<b>Unit-I</b>	<b>Theories of Business Cycle:</b> Keynesian Theory of Business Cycles- Samuelson's Model- Interaction Between Multiplier and Accelerator- Hicks Theory – Discretionary Fiscal Policy for Stabilization – Financing Increases in Government Expenditure- Reduction in Taxes to overcome Recession - Fiscal Policy to Control Inflation- Crowding-out Effect and Effectiveness of Fiscal Policy- Tools of Monetary Policy – Monetary Policy to Cure Recession.		
<b>Unit-II</b>	<b>Theories of Economic Growth:</b> Technological Progress and Economic Growth – The Growth of Population – Capital Output Ratio- Income Effect and Capacity Effect – Impact of Increase in the Saving Rate- Effect of Population Growth – Long-run Growth and Technological Change – Endogenous Growth Model- Investment in Human Capital – Kuznets Curve.		
<b>Unit-III</b>	<b>Government and Macro Economy:</b> Public Expenditure – Growth of Public Expenditure – Effects of Public Expenditure on Production and Distribution - Characteristics of a Good Tax System – Problem of Equity in Taxation – Benefits Received Theory – Ability to Pay Theory – Shifting the Burden of a Tax – Incidence of Tax and Elasticity of Demand – Elasticity of Supply – Tax and Cost Conditions of the Industry – Mobilization of Resources for Capital Formation –Fiscal Policy and Price Stability – Budget Deficit – Fiscal Deficit – Measures to Reduce Fiscal Deficit.		
<b>Unit-IV</b>	<b>Inflation and Unemployment:</b> Meaning, Measures and Types of Inflation- Inflation in India – The Economic Effects of Inflation – The Classical and Neo Classical Theories of Inflation – The Keynesian Theory of Inflation - The Monetarist View on Inflation - Measures to Control Inflation – Inflation and the Rate of Unemployment- Modifications in Phillips Curve – Policy Dilemma: What is Desirable Inflation or Unemployment?		
<b>Unit-V</b>	<b>Poverty and Inequality:</b> Measures of Poverty – Absolute and Relative Poverty – Sen's Index – Capability Approaches – Income and Asset Distribution – Lorenz Curve - Gini Concentration Ratio – Patrimonial, Casino, Crony Capitalism – Income Distribution		
<b>Reference and Textbooks</b>			
Carlin, W. & Soskice, D. (2014). Macro Economics: Institutions, Instability and the Financial System. Oxford University Press. London.			
David, R. (2011). Advanced Macroeconomics. McGraw Hill Higher Education. London.			
Dornbusch, R. Fischer, S. & Richard, S. (2013). Macro Economics. Tata McGraw Hill Publishing Company Limited. New Delhi.			
Dornbusch, R. Fischer, S & Startz, R. (2007). Macroeconomics. (9 <sup>th</sup> ed.). McGraw Hill. New York, NY.			
Levacic, R. & Rebmman, A. (1982). Macro Economics: An Introduction to Keynesian - Neoclassical Controversies. Palgrave Macmillan. London.			
Piketty, Thomas (2004). Capital in the Twenty First Century. The Belknap Press of Harvard University Press. Cambridge.			
Wickens, M. (2011). Macroeconomic Theory: The Dynamic General Equilibrium Approach. Princeton University Press. New Jersey, NJ.			
<b>Outcomes</b>	➤ Students will be able to understand macro economic theories, inflation and unemployment and contemporary perspectives on the role of government policy.		

<b>Semester - II</b>			
<b>Course code:455 203</b>	<b>Issues in Indian Economic Development</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide understanding about the basic characteristics of Indian economy and helps to analyse the progress and changing nature of various sectors and its contribution.		
<b>Unit-I</b>	<b>Overview:</b> State of the Economy at the Beginning of the Fifties - Policy of Planned Development – Growth and Structural Change till the Eighties – New Economic Policy – Performance of the Economy since 1991 – Major Aspects of Transformation.		
<b>Unit-II</b>	<b>Agricultural and Rural Sector:</b> Review of Agricultural Growth – Green Revolution – Review Price and Other Policies - Policy Initiatives needed in relation to Agriculture and Rural Sector – Non-Farm Activities, Diversification and Exports – Impact of Liberalisation and WTO; Investment in Agriculture and Irrigation – Water Policy.		
<b>Unit-III</b>	<b>Industrial Service and Infrastructure Sectors:</b> The Growth and Maturing of Indian Industry since Liberalisation – Productivity Growth and Rise in Competitiveness – Exports – Rise of Service Industry – India and I.T. – Policy regarding Public Enterprises – Disinvestment – Impact of WTO and Trade Liberalisation – State of Infrastructure – Promoting Investment in Infrastructure– Public-Private Partnership.		
<b>Unit-IV</b>	<b>Social Development:</b> Human Development Indicators - Review of Change since early Fifties, Wide Regional Variations – Poverty Reduction Measures in India – Demographic Transition – Regional Differences – Health Services, Health Policy, Education Policy, Financing of Health and Education – Employment and Unemployment Trends: Employment Guarantee Scheme – Long-term Policy to reduce Poverty and Unemployment – MDGs - SDGs.		
<b>Unit-V</b>	<b>Savings and Capital Formation:</b> Growth Trends- Monetary and Fiscal Policy Management- NITI Aayog- External Sector: Trade Policy, FDI, Exchange Rate Management- Investment Climate – Competition Policy – Human Development – Strategies for Sustainable Development at a High Rate.		
<b>Reference and Textbooks</b>			
<p>Rama Kanungo, Chris Rowley &amp; Anurag Banerjee. (2018). <i>Changing the Indian Economy: Renewal, Reform and Revival</i>. Elsevier Asian Studies Series. Netherland.</p> <p>Joshi, V. &amp; Little, I.M.D. (1996). <i>India's Economic Reforms 1991-2001</i>. Oxford University Press. New Delhi.</p> <p>Kapila, U. (2015). <i>Indian Economy since Independence</i>. (ed.). Academic Foundation. New Delhi.</p> <p>Basu, K. (2004). <i>India's Emerging Economy: Performance and Prospects in the 1990s and Beyond</i>. (ed.). MIT Press. Cambridge.</p> <p>Pulin, N. (2015). <i>The Economic Development of India</i>. Routledge. London.</p> <p>Rangarajan, C. (2004). <i>Select Essays on Indian Economy</i>. Vol.1&amp;2. Academic Foundation. New Delhi.</p> <p>Rothermund, D. (1991). <i>An Economic History of India from Pre-Colonial Times to 1991</i>. (2<sup>th</sup>ed.). Routledge. New York, NY.</p> <p>Alamgir, J. (2009). <i>India's Open Economy Policy: Globalism, Rivalry, Continuity</i>. Routledge. London.</p>			
<b>Outcomes</b>	➤ This enables the students to know about the development process in India since independence, understand the problems and measures in their contextual perspectives and analyse the current issues.		

<b>Semester - II</b>			
<b>Course code: 455 204</b>	<b>Indian Financial Institutions and Markets</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide a comprehensive understanding about the nature and functions of the financial institutions in the Indian financial markets.		
<b>Unit-I</b>	<b>Introduction to Money:</b> Simple Exposition to Money Demand and Money Supply - RBI and Measures of Money Supply - Commercial Banks and Credit Creation - RBI Control on Money Supply - Time Value of Money and Interest Rates.		
<b>Unit-II</b>	<b>Introduction to Indian Financial System:</b> Overview of Indian Financial System - Functions of Financial System - Players - Structure and Growth - RBI and other Regulatory Bodies.		
<b>Unit-III</b>	<b>Money and Capital Markets:</b> Indian Money Market - Instruments - Institutions - Functioning of Indian Money Market - Changes in the Regulatory Framework - Growth - Stocks and Bonds - Primary and Secondary Markets - Process of Initial Public Offer - Offer of Government Bonds - Stock Market Functioning - Stock Indices - Evaluation of Stocks and Bonds - Understanding Stock Market Information.		
<b>Unit-IV</b>	<b>Foreign Exchange Market:</b> Exchange Rate - Types - Determination of Exchange Rate - Nature of FOREX Market - Nature of FOREX Inflow and Outflow - Examples of ECBs and NREs - RBI and Exchange Rate Management.		
<b>Unit-V</b>	<b>Financial Derivatives:</b> Need for Derivatives - Types of Derivatives - Example of How Stock Index Derivatives could be used to Hedge Risks in Stock Market Investment - Evaluation of Financial Derivatives – Foreign Exchange Derivatives and Swaps.		
<b>Reference and Textbooks</b>			
Bhole, L.M. (2002). <i>Indian Financial Institutions and Market</i> . Tata McGraw Hill Ltd. New Delhi.			
David, S. et al. (2005). <i>Financial Institutions, Markets, and Money</i> . (9 <sup>th</sup> ed.). Wiley Publication. New York, NY.			
Fabozzi, F.J. Modigliani, F.P. & Jones, F.J. (2009). <i>Foundations of Financial Markets and Institutions, International Edition</i> . Pearson Higher Education. New Jersey, NJ.			
Goldstein, M. (2006). <i>Financial Regulation after the Subprime and Credit Crisis</i> . Peterson institute. Washington, D.C.			
Khan, M.F (2006). <i>Indian Financial Institutions</i> . Tata McGraw Hill Ltd. New Delhi.			
Madura, J. (2014). <i>Financial Markets and Institutions</i> . Thomson Publications. Singapore.			
Pathak, B.V. (2007). <i>The Indian Financial System: Markets, Institutions and Services</i> . Pearson Education India. New Delhi.			
<b>Outcomes</b>	➤ After completion of this course, the students will be able to understand the role and function of the financial system, evaluate and create strategies to promote financial products and services, the significance of foreign exchange market in reference to the macro economy.		

<b>Semester – II</b>			
<b>Course code: 455 502</b>	<b>Econometrics (E)</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide basic understanding on the application of econometrics in various economic analysis.		
<b>Unit-I</b>	<b>Basic Econometrics:</b> Introduction – Econometrics - Nature, Meaning and Scope of Econometrics - Economic theory and Econometrics - Methodology of Econometrics - Uses of Econometrics.		
<b>Unit-II</b>	<b>OLS:</b> Assumptions – Violations of OLS Assumptions – Reasons, Cause, Effects, Solutions – Heteroscedasticity, Auto Correlation and Multicollinearity – Identification of Variables – Models – Predictability - Biases – BLUE.		
<b>Unit-III</b>	<b>Applications in Microeconomics:</b> Consumer Demand Analysis: Specification and Estimation of Demand Equations – Estimation of Engel Curves – Estimation of Complete Systems of Demand Equations – Production Analysis: Specification and Estimations of Production Functions: Cobb-Douglas, CES and Translog, Measurement of Multifactor Productivity.		
<b>Unit-IV</b>	<b>Applications in Macroeconomics:</b> Demand for Money - Term Structure of Interest Rates - Phillips Curve - Exchange Rate and Purchasing Power Parity.		
<b>Unit-V</b>	<b>Use of Econometrics Software:</b> Uploading Raw Data - Summary Statistics - OLS Method: Model Specification, Estimation, Interpretation, Diagnostic Checks - Time Series Analysis: Unit Root Tests, Co-integration Analysis, Estimation of VAR Model - Panel Data Analysis.		
<b>Reference and Textbooks</b>			
Hatekar, R. N (2010). Principles of Econometrics: An introduction (Using R). Sage Publications. India.			
Gujarathi, D. (2012). Basic Econometrics. Tata McGraw Hill. New Delhi.			
Maddala, G.S. & Lahiri, K. (2010). Introduction to Econometrics. John Wiley & Sons. New York, NY.			
Patterson, K. (2001). An Introduction to Applied Econometrics - A Time Series Approach. MacMillan Press Ltd. London.			
Pindyck, R.S. & Rubinfeld, D.L. (1997). Econometric Models and Economic Forecasts (4 <sup>th</sup> ed.). Irwin McGraw-Hill. New York, NY.			
Ramanathan, R. (2001). Introductory Econometrics with Applications (5 <sup>th</sup> ed.). Cengage Learning India Pvt. Ltd. New Delhi.			
Thomas, R.L. (1993). Introductory Econometrics: Theory and Applications. Longman. London.			
<b>Outcomes</b>	➤ By the end of this course, the students will be able to interpret the results of an estimated model and conduct statistical inference to evaluate an economic model using statistical software.		

<b>Semester – II (Non Major Elective - I)</b>			
<b>Course code: 455 701</b>	<b>Economics for Competitive Examinations</b>	<b>Credits: 2</b>	<b>Hours: 3</b>
<b>Objectives</b>	➤ To provide sufficient information and knowledge for writing competitive examinations in the realm of economics.		
<b>Unit-I</b>	<b>Structure of the Indian Economy:</b> Indian Economy Since 1900s - National Income – Methods of Calculating National Income – VKRV Rao and Naoroji Contributions – Difficulties – Trends in National Income in India – Sectoral Contribution Since 1950 – Population Growth Since 1950s - Economic Development and Demographic Changes – Growth Rate, Death Rate, Birth Rate – 3 Stages.		
<b>Unit-II</b>	<b>Economic Planning:</b> Policy Objectives of Planning– Types of Planning – History of Planning in India– Review and assessment of New Economic Policy and Liberalization, Privatization and Globalization.		
<b>Unit-III</b>	<b>Agriculture and Industrial Development:</b> Agricultural Development since 12 <sup>th</sup> century - under Five Year Plans- Structural Change- Impact of New Economic Policy (1991) – Industrial Development Under Five Year Plans – New Industrial Policy (1991). State-wise Agriculture and Industry.		
<b>Unit-IV</b>	<b>Banking and Fiscal Policy:</b> History of Indian Banking System – Functions of RBI – Nationalisation of Commercial Bank, Development Bank– Co-operative Bank– Stock Exchanges– India's Fiscal Policy –Tax reform – Introduction of VAT - GST.		
<b>Unit-V</b>	<b>Foreign Trade:</b> India and the World Trade- Foreign Trade and Balance of Payment Since 1950s – Exchange Rate Policy – Foreign Capital and Foreign Ai – Meaning of MNCs – FEMA-India and WTO - Role of WTO – History of GATT, SAARC, ASEAN, BRICS.		
<b>References and Textbooks</b>			
Dutt, G. and A. Mahajan (2016). <i>Indian Economy</i> . S. Chand Publishing. New Delhi.			
Government of India (various issues). <i>Economic Survey of India</i> . Economic Division. Ministry of Finance. Government of India. New Delhi.			
Government of India (various issues). <i>Statistics and Abstract</i> . Ministry of Statistics and Programme Implementation. Government of India, New Delhi.			
Gupta. K.R and J.R. Gupta (2008). <i>Indian Economy</i> . Atlantic Publishers. New Delhi.			
Puri. V.K. and S.K. Misra (2016). <i>Indian Economy: It 's Development Experience</i> . Himalaya Publishing House. New Delhi.			
Sankaran. S. (2014). <i>Indian Economy</i> . Marghan Publications. Chennai.			
<b>Outcomes</b>	➤ The students will be able to develop strong conceptual knowledge and analytical skills to excel in different competitive examinations.		

<b>Semester - III</b>			
<b>Course code: 455 301</b>	<b>Public Finance - I</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To explain the conceptual framework, theoretical dimensions and policy underpinnings of core public finance.		
<b>Unit-I</b>	<b>Role of Government:</b> Nature and Scope of Public Finance - Rationale for Government Intervention – Musgrave’s Three Functions of Government – Types of Government Intervention – Production Versus Provision – Regulation of Markets – Sources of Public Revenue – Deficit Financing.		
<b>Unit-II</b>	<b>Taxation:</b> Theories of Taxation: Ability and Benefit Principles of Taxation (Lindhal), Principle of Maximum Social Advantage– Taxable Capacity – Shifting and Incidence – Types of Taxes – Characteristics of Good Tax System.		
<b>Unit-III</b>	<b>Public Expenditure:</b> Theories of Public Expenditure: Wagner’s Law, Peacock Hypothesis, Samuelson Theory of Public Goods– Basics of Cost Benefit Analysis.		
<b>Unit-IV</b>	<b>Decentralization:</b> Rationale for Decentralization: Economic, Administrative and Political – Assignment of Taxes and Expenditure between Various Tiers of a Federal Government – Rationale and Role of Local Governments.		
<b>Unit-V</b>	<b>Deficit Financing:</b> Deficit Financing – Monetarist Versus Keynesian Views – Pattern of Deficit Financing – Public Debt Management and Implication for Growth, Inflation and Interest Rate.		
<b>Reference and Textbooks</b>			
Friedman, M. (1959). <i>A Monetary and Fiscal Framework for Economic Stability, in Essays in Positive Economics</i> (2 <sup>nd</sup> ed.) University of Chicago. Chicago.			
Government of India (various years). <i>Economic Survey</i> . Ministry of Finance. New Delhi.			
Moore, W.S. & Penner, R. (Ed.) (1980). <i>The Constitution and the Budget</i> . American Enterprise Institute. Washington, D.C., USA.			
Musgrave, R.A. & Musgrave, P.B. (2004). <i>Public Finance in Theory and Practice</i> . Tata McGraw Hill. New Delhi.			
Jha, R. (1998). <i>Modern Public Economics</i> . Routledge. London.			
Hillman, A. L. (2003). <i>Public Finance and Public Policy</i> . Cambridge University Press. London.			
Herber, B.P. (1967). <i>Modern Public Finance</i> . Richard D. Irwin. Homewood.			
Goode, R. (1986). <i>Government Finance in Developing Countries</i> . TMH. New Delhi.			
Atkinson, A.B. & Stiglitz, J.E. (1980). <i>Lectures on Public Economics</i> . TMH. New York,			
<b>Outcomes</b>	➤ On successful completion of this course, students will be able to demonstrate a good understanding of the fiscal framework, fiscal policy principles, taxation and policy choices, analysis of key issues and challenges in fiscal policy in a particular development or country context.		



<b>Semester - III</b>			
<b>Course code: 455 302</b>	<b>Development Economics</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To exhort the students to understand the concepts and issues of economic growth and development, models, theories and developmental policies.		
<b>Unit-I</b>	<b>Concepts and Issues in Economic growth:</b> Distinction between Economic Growth and Economic Development – Factors of Economic Growth: Economic and Non-Economic – Characteristics of Modern Economic Growth – Inter-relations among Modern Economic Growth – Obstacles of Economic Development and Growth.		
<b>Unit-II</b>	<b>Economic Development:</b> Harrod–Domar Growth Model – Strategy of Economic Development – Big Push Strategy – Inducement to Invest – Nurksian, Singer’s and Hirschman’s Doctrine – Mahalanobis Strategy.		
<b>Unit-III</b>	<b>Theories of Economic Growth and Development (Modern and Partial):</b> The Neoclassical Growth Model with and without Technical Progress: Kaldor, Mirrlees, Solow, Denison, Abramovitz and Kendrick– Partial Theories: Rosentein-Roden, Nelson, Rostow– Dual Theory: Lewis, Ranis and Fei model, Jorgenson, Dixit and Marglin model.		
<b>Unit-IV</b>	<b>Planning and Development:</b> Concept – Types of Planning – Policy Models – Projection Models – Development Planning Models – The Wage Goods model in Development Planning – Input-Output Analysis in Planning and Development – Linear Programming and Development Planning.		
<b>Unit-V</b>	<b>Policies and Development:</b> LPG Model – PURA – Pricing Policy – Labour and Wage Policy – Agriculture and Industrial Policy – Foreign Trade Policy – Fiscal and Monetary Policy – Inclusive Growth.		
<b>Reference and Textbooks</b>			
Ahmed, A. Kundu, A. & Peet, R. (2010). <i>New Economic Policy in India</i> . Routledge, Taylor and Francis. Abingdon.			
Ray, D. (1998). <i>Development Economics</i> . Princeton University Press. New Jersey, NJ.			
Ghatak, S. (2003). <i>An Introduction to Development Economics</i> . Allen & Unwin. London.			
Higgins, B. (1959). <i>The Theory of Economic Growth</i> . George Allen & Unwin. London.			
Szirmai, A. (2005). <i>Dynamics of Socio Economic Development-An Introduction</i> . Cambridge University Press. Landon.			
Foley, D.K. & Michl, T.R. (1999). <i>Growth and Distribution</i> . Harvard University Press. Cambridge.			
Kapila, U. (2015). <i>Indian Economic Reforms</i> . Academic Foundation. New Delhi.			
<b>Outcomes</b>	➤ The students will be able to demonstrate about inequalities between rich and poor countries, per capita income, economic growth, poverty and inequality, understand the major growth theories, models of planning and policy and demonstrate the familiarity with the issues of economic development.		

<b>Semester - III</b>			
<b>Course code: 455 303</b>	<b>Research Methodology</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To impart knowledge in various kinds of research, the process and techniques involved in carrying out research and writing the research report.		
<b>Unit-I</b>	<b>Scientific Research Method:</b> Definition – Purpose and Principles of Scientific Method, Steps in Scientific Research – Ethical issues in research– Types of Research: Applied and Action Research, Qualitative and Quantitative Research, Development Policy and Participatory Research - Theory and Facts.		
<b>Unit-II</b>	<b>Process of Research:</b> Identification and Formulation of Research Problem – Criteria in Selection of Topic- Literature Review — Objectives and Hypothesis – Role and Functions – Independent and Dependent Variables - Concepts and Model Building.		
<b>Unit-III</b>	<b>Methods of Research:</b> Research Design and its Components – Exploratory, Descriptive and Experimental Methods of Research – Social Survey Method – Case Study Method - Cross Sectional and Longitudinal Research - Historical Method.		
<b>Unit-IV</b>	<b>Tools of Data Collection and Analysis: Types of Data:</b> Quantitative and Qualitative – Continues and Discrete - Primary and Secondary Data Sources – National Sample Survey and Census – Internet Sources - Methods of Data Collection : Interview Method, Focus Group Discussion, Participatory Rural Appraisal – Designing Schedule and Questionnaire – Rating Scale – Pre-Test and Pilot Study – Validity and Reliability Scales – Master Tabulation – Analytical Table Data Cleaning, Trimming, Univariate, Bivariate and Multivariate Analyses.		
<b>Unit-V</b>	<b>Report Writing:</b> Format of Research Report – Types of Reports - Analysis and Interpretation of Data – Inference - Footnotes and Endnotes – Citations – References and Bibliography – Glossary – Proof Checking – Summary Preparation - Finalisation of Research Report.		
<b>Reference and Textbooks</b>			
Bhandarkar, P.L. & Wilkinson, T.S. (2010). <i>Methods and Techniques of Social Research</i> . Himalaya Publishing House. Mumbai.			
Ghosh, B.N. (2007). <i>Scientific Method and Social Research</i> . Sterling Publishers. New Delhi.			
Gupta, S.P. (2012). <i>Statistical Methods</i> . S. Chands & Sons. New Delhi.			
Kent, R. (2001). <i>Data Construction and Data Analysis for Survey Research</i> . MacMillan. London.			
Kerlinger, F.N. (2000). <i>Foundation of Behavioural Research</i> . Rinehard & Winstion. New York, NY.			
Kishnaswamy, O.R. & Ranganatham, M. (2011). <i>Methodology of Research in Social Sciences</i> . Himalaya Publishing House. Mumbai.			
Kothari, C.R. (2013). <i>Research Methodology: Methods and Techniques</i> . New Age International Publishers. New Delhi.			
Kumar, R. (2014), <i>Research Methodology: A Step-by-Step Guide for Beginners</i> . Sage Publishers, New Delhi.			
Young, P.V. (2008). <i>Scientific Social Survey and Research</i> . Prentice Hall. New Delhi.			
<b>Outcomes</b>	➤ The students will be in a position to design and execute research plans using appropriate methodologies in conducting primary and secondary data based studies.		

<b>Semester - III</b>			
<b>Course code: 455 304</b>	<b>International Economics - I</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide a critical overview of the main economic theories relating to international trade.		
<b>Unit-I</b>	<b>Introduction to International Economics:</b> Importance of International Economics – International Trade and Economic Growth – Subject Matter of International Economics – Purpose of International Economic Theories and Policies – Current International Economic Problems.		
<b>Unit-II</b>	<b>Theories of International Trade:</b> Distinguishing Features of Internal and International Trade – the Pure Theory of international Trade: Theories of Absolute Advantage, Comparative Advantage and Opportunity Cost – Heckscher-Ohlin Theory of Trade: Factor Price Equalization Theory; Empirical Relevance of the H-O Theory.		
<b>Unit-III</b>	<b>Alternative Trade Theories:</b> Vent-for-Surplus Approach– Kravis and Linders Theory of Trade– Imitation Gap and Product Cycle Theory- Role of Dynamic Factor in Explaining the Emergence of Trade- Trade Under Imperfect Competition and Increasing Returns to Scale – Measurement of Gains from Trade and Their Distribution.		
<b>Unit-IV</b>	<b>Economic Growth and International Trade:</b> Introduction – Effect of Growth on Trade – Production and Consumption Effects of Growth Combined Effect – Effects of Growth on Terms of Trade; Immiserizing Growth – Technical Progress and International Growth – Import Substitution and Export Promotion Strategy.		
<b>Unit-V</b>	<b>Gains from Trade:</b> Meaning – Factors Determining the Gains from Trade – Gains from Trade and Income Distribution – Measurement of Gains from Trade and their Distribution – the Gains from Trade in the Case of Large and Small Country – Free Trade Vs No Trade – Restricted Trade Vs No Trade.		
<b>Reference and Textbooks</b>			
Bhatia, H. L. (2006). <i>International Economics</i> . Vikas Publishing House Pvt. Ltd. New Delhi.			
Desai, S.S.M. & Bhalerao, N. (2010). <i>International Economics</i> . Himalaya Publishing House. New Delhi.			
Hallwood, C. P. & MacDonald, R. (2009). <i>International Money and Finance</i> . Blackwell Publishing. New Delhi.			
Krugman, P.R. Obstfeld, M. & Melitz, M. J. (2012). <i>International Economics: Theory &amp; Policy</i> (9 <sup>th</sup> ed.). Addison-Wesley. New Delhi.			
Levi, M.D. (2009). <i>International Finance: The Markets and Financial Management of Multinational Business</i> (5 <sup>th</sup> ed.). Routledge. New Delhi.			
Mannur, H. G. (2005). <i>International Economics Theory and Policy Issues</i> . Vikas Publishing House Pvt. Ltd. New Delhi.			
Salvatore, D. (2016). <i>International Economics</i> (12 <sup>nd</sup> ed.). John Wiley & Sons. Singapore.			
<b>Outcomes</b>	➤ By the completion of this course, the students will be able to understand the theories of international trade, gross gains from trade and differentiate standard, classical and orthodox trade theories.		

<b>Semester - III</b>			
<b>Course code: 455 503</b>		<b>Mathematics for Economics Analysis (E)</b>	<b>Credits: 4</b>
<b>Hours: 4</b>			
<b>Objectives</b>	➤ To strengthen the fundamental mathematical skills essential for solving economic problems.		
<b>Unit-I</b>	<b>Functions:</b> Linear Algebra-Matrices-Operations – Determinants -Inverse-Cramer’s Rule-Rank. Solution to System of Linear Equations – Functions: Equations – Concepts –Intercept Parameter – Slope Co-efficient – Quadratic forms - Application in Micro Economics – Equilibrium.		
<b>Unit-II</b>	<b>Differential Calculus: Derivatives:</b> Partial Derivatives – Youngs Theorem Total Differential - Marginal and Elasticity Concepts - Production and Cost Analysis - Driving Marginal and Average Cost and Revenues.		
<b>Unit-III</b>	<b>Optimization Through Derivatives:</b> Optimization Technique -Maxima and Minima - First and Second Order Conditions - Utility and Profit Maximization - Cost Minimization.		
<b>Unit-IV</b>	<b>Integral Calculus:</b> Definite and Indefinite Integrals - Application in Micro Economics: Consumer and Producers Surplus.		
<b>Unit-V</b>	<b>Input-Output Models and Linear Programming:</b> Input-Output Models: Open and Closed Models – Static and Dynamic Models - Linear Programming – Graphic and Simplex Method - Maximisation and Minimisation Problems.		
<b>Reference and Textbooks</b>			
Binmore, K.G. (1981). <i>Foundations of Analysis</i> . Cambridge University Press. London.			
Sydsaeter, K & Hammond, P.J. (2002). <i>Mathematics for Economic Analysis</i> . Pearson Education India. New Delhi.			
Intriligator, M.D. (1971). <i>Mathematical Optimization and Economic Theory</i> . Prentice Hall. New Jersey, NJ.			
Bartle, R.G. & Sherbert, D.R. (2000). <i>Introduction to Real Analysis</i> . John Wiley & Sons. New Jersey, NJ.			
Dhrymes, P.J. (2013). <i>Mathematics for Econometrics</i> . Springer, Singapore.			
Allen, R.G.D. (1986). <i>Mathematical Analysis for Economists</i> . Macmillan India Ltd. New Delhi.			
Chiang, A.C. (1985). <i>Fundamental Methods of Mathematical Economics</i> . McGraw Hill. New Delhi.			
Gupta, S.P. (1997). <i>Statistical Methods</i> . S. Chand and Sons. New Delhi.			
Gupta, S.C. & Kapoor, V.K. (1997). <i>Fundamentals of Applied Statistics</i> . S. Chand & Sons. New Delhi.			
<b>Outcomes</b>	➤ On successful completion of this course, students will be able to understand the mathematical knowledge and expertise to the problems of economics.		

<b>Semester – III (Non Major Elective – II)</b>			
<b>Course code: 455 702</b>	<b>Statistics for Decision Making</b>	<b>Credits: 2</b>	<b>Hours: 3</b>
<b>Objectives</b>	➤ To familiarise the importance of the application of basic statistical methods in decision making for the students from other disciplines than Economics.		
<b>Unit-I</b>	<b>Measures of Central Tendency:</b> Application of Measures of Central Tendency– Computing Mean, Median, Mode, Geometric Mean, Harmonic Mean and Weighted Averages – Its Usefulness in Research and Decision Making.		
<b>Unit-II</b>	<b>Measures of Dispersion:</b> Use of Measures of Dispersion– Computing Range, Mean Deviation, Quartile Deviation, Standard Deviation and Coefficient of Variation – Significance of Dispersion in Decision Making.		
<b>Unit-III</b>	<b>Probability:</b> Meaning of Probability – Binomial, Poisson, Chi-square, ‘t’ and ‘F’ tests for Small and Large Samples – Usefulness of these Measures in Research.		
<b>Unit-IV</b>	<b>Correlation:</b> Correlation Analysis – Types of Correlation – Interpretation of ‘r’ in analysis – Application of Correlation in Empirical Works and in Decision Making.		
<b>Unit-V</b>	<b>Regression Analysis:</b> Methods of Estimation of Regression Coefficient – Simple Linear Regression Model, Multiple Linear Regression Model – Interpretation of Regression Coefficients $R^2$ and $R^2$ – Computing different Growth Rates.		
<b>Reference and Textbooks</b>			
Agarwal, Y.P. (1998). <i>Statistical Methods: Concepts, Applications and Computations</i> . Sterling Publishers. New Delhi.			
Damodar Gujarati, (2013). <i>Basic Econometrics</i> . Tata Mcgraw Hill. New Delhi.			
Gupta, C.B. (2005). <i>An Introduction to Statistical Methods</i> . Vikas Publishers. New Delhi.			
Gupta, S.C. (2000). <i>Fundamentals of Statistics</i> . Himalaya Publishing House. Bombay.			
Gupta, S.P., (2009). <i>Statistical Methods</i> . S. Chand & Company. New Delhi.			
Murray, R. Spiegel, (2012). <i>Theory and Problems of Statistics</i> . McGraw-Hill. Singapore.			
Wooldridge, M. (2009). <i>Introductory Econometrics: A Modern Approach</i> . Cengage Learning India Private Limited. Delhi.			
<b>Outcomes</b>	➤ At the end of this course, the students from other than economics disciplines will be able to get a comprehensive knowledge in descriptive statistics, probability and inferential statistics which are most commonly used for decision making.		

<b>Semester - IV</b>			
<b>Course code: 455 401</b>	<b>Monetary Economics</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide an exposition about the various core monetary theories, policies and its usefulness in real world situation.		
<b>Unit-I</b>	<b>Monetary Theories:</b> The Quantity Theory of Money – The Classical and Keynesian Theory – Milton Friedman’s Quantity Theory – Don Patinkin’s Integration Theory- Tobin’s Portfolio Analysis – Baumol’s Inventory Approach – Gurley and Shaw Thesis – Radcliffe Committee – Sayer’s Thesis.		
<b>Unit-II</b>	<b>Money Supply and Banking:</b> Money Supply Components (M1, M2, M3 and M4) and Determinants of Money Supply – High Powered Money – Riefler and Burgess Hypothesis on Money Supply (UK, USA – Non-Bank Financial Intermediaries)- Credit Creation by Commercial Banks and Monetary Transmission – Central Bank and Credit Control – Narasimham Committee Recommendations – Autonomy of RBI, MPC.		
<b>Unit-III</b>	<b>Theories of Interest:</b> Classical and Neoclassical Theory of Interest – Modigliani Stock Vs Flow Analysis – Structure of Rate of Interest – Segmented Market Theory, Liquidity Premium, Portfolio Behavior Theory – Expectation Theory (Yield Curve – Short-run and Long-run.)		
<b>Unit-IV</b>	<b>Money Market and Capital Market:</b> Features of Capital and Money Markets – Characteristics of Undeveloped and Developed Money Market – Indian Money Market: Treasury Bills – CRR, SLR, Repo Rate (Repurchase)- Capital Market: Primary and Secondary Markets – NPAs- Capital Asset Pricing Model, William Sharpe – Markowitz model on Risk and Return – Alpha and Beta Securities – Stock Exchange: BSE and NSE– SEBI – Derivatives, Hedging, Swap (Only Concepts).		
<b>Unit-V</b>	<b>Monetary Policy:</b> Role of Monetary Policy in Developing Economy – Lags in Monetary Policy – Monetary Vs Fiscal Policy, the Great Debate – Inflation – Inflationary Gap – Stagflation – Philips Curve - Samuelson and Solow Model – Impact of Financial Sector Reforms in India – Efforts to Unearth Block Money.		
<b>References:</b>			
Dewett, K.K. (2006). <i>Modern Economic Theory</i> . S. Chand Company Pvt. Ltd. New Delhi.			
Dornbusch, R.; Fischer, S. and S. Richard (2013). <i>Macro Economics</i> . Tata McGraw Hill Publishing Company Limited. New Delhi.			
McCallum, B.T. (1989). <i>Monetary Economics: Theory and Policy</i> . Macmillan.			
McConnell, C.R. and H.C. Gupta (1987). <i>Introduction to Macro Economics</i> . Tata McGraw Hill Publishing Company Limited. New Delhi.			
Pierce, D.G. and P.J. Tysome (1985). <i>Monetary Economics: Theories, Evidence and Policy</i> . Butterworths. London.			
Walsh,C.E. (1998). <i>Monetary Theory and Policy</i> . MIT Press. Cambridge. Massachusetts. USA.			
<b>Outcomes</b>	➤ Students will be able to explain major monetary theories, the main channels of monetary transmission mechanism, develop understanding of money market, capital market and their real effects on the economy.		

<b>Semester - IV</b>			
<b>Course code: 455 402</b>	<b>Agricultural Economics</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide a detailed account on the development of agricultural economy and the related issues with a special focus on Indian agriculture.		
<b>Unit-I</b>	<b>Agriculture and Economic Development:</b> Nature and Scope - Traditional Vs. Modern Agriculture– Green Revolution and its Impact - Sustainable Agriculture and Organic Farming – Interdependence between Agriculture and Industry - Agrarian Crisis - Farm subsidy - Experiences of Developed and Developing Countries.		
<b>Unit-II</b>	<b>Cropping Pattern and Corporate Farming:</b> Cropping Pattern and its Dynamics – Mono Cropping - Cropping Intensity and its Determinants - Economic Logic of Cropping Pattern – Recent Trends in Agriculture: GM Crops and its Economics – Corporate Farming.		
<b>Unit-III</b>	<b>Agriculture Inputs and Productivity:</b> Land and its Utilization – Seed and its Importance - Irrigation Sources and Development – Mechanization and its Impact on Labour – Fertiliser and its Impact on Productivity – Trends in Production and Productivity of Crops - Production Function Analysis in Agriculture – Farmers’ Suicides.		
<b>Unit-IV</b>	<b>Agricultural Finance and Capital Formation:</b> Need for Agricultural Finance – Sources of Agricultural Finance: Non-institutional and Institutional Sources - Indebtedness: Meaning, Reasons and Impact - Farm Capital Structure and its Changes – Relationship between Public and Private Investment.		
<b>Unit-V</b>	<b>Agricultural Markets and Prices:</b> Characteristics of Primary Agricultural Markets in India - Marketable Surplus and Marketed Surplus – Marketing Agencies and Channels - Agricultural Price in India: Objectives and Instruments of Agricultural Price Policy – Cost Concepts - Role of CACP – Supply Response – WTO and Agricultural Exports – Farm Profitability in India.		
<b>References and Textbooks</b>			
Bhaduri, A. (1984). The Economic Structure of Backward Agriculture. MacMillan. New Delhi.			
Bhalla, G. S and G. Singh (2011). Indian Agriculture: Four Decades of Development. Sagee Publications. New Delhi.			
Dantwala, M.L. et al.. (1991). Indian Agricultural Development Since Independence. Oxford and IBH. New Delhi.			
Gualti, A. and T. Kelly (1999). Trade Liberalisation and Indian Agriculture. Oxford University Press. New Delhi.			
Kahlon, A.S. And D.D. Tyagi (1983). Agriculture Price Policy in India. Allied Publishers. New Delhi.			
Puri. V.K. and S.K. Misra (2016). Indian Economy: It's Development Experience. Himalaya Publishing House. New Delhi.			
Rao, C.H.H. (2004), Agricultural Growth, Rural Poverty and Environmental Degradation in India. Oxford University Press. New Delhi.			
<b>Outcomes</b>	➤ Students will be able to understand the interdependence between agriculture and industry, the concepts like productivity, production function analysis, marketable surplus, marketed surplus and instrument of agriculture price policy, WTO and agricultural exports.		

<b>Semester – IV</b>			
<b>Course code: 455 403</b>	<b>Public Finance – II</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide a detailed account on the trends of revenue, expenditure and budgeting		
<b>Unit-I</b>	<b>Trend and Pattern of Public Revenue:</b> India's Public Revenue – Taxes of Union, State and Local Governments – Trends in Tax Revenue – Tax-GDP ratio- Tax and Distributive Justice – Direct Versus Indirect Taxes – Tax Reforms - Rate and Procedure of Rationalization – GST in Union and State Taxes.		
<b>Unit-II</b>	<b>Trend and Pattern of Public Expenditure:</b> India's Public Expenditure – Trend in Union, State and Local Government's Public Expenditure – Public Expenditure/GDP – Change in the Composition of Public Expenditure: Developmental Versus Non-Developmental, Plan Versus Non Plan, Revenue Versus Capital – Economic and Functional Classification of Public Expenditure – Implications.		
<b>Unit-III</b>	<b>Basics of Budgeting:</b> Constitutional Basis for Budgeting – Process of Passing Finance and Appropriation Bills in the Parliament/Assembly – CAG and PAC – FRBM – Deficit, Public Debt and Monetary Management.		
<b>Unit-IV</b>	<b>Centre-State Financial Relations:</b> Role of Finance Commission in Filling Vertical and Horizontal Fiscal Imbalance – Plan Transfers and Discretionary Transfers – Latest Finance Commission Report of the Union and State Governments.		
<b>Unit-V</b>	<b>Recent Fiscal Reforms:</b> Latest Commentary on India's Fiscal Policy – Tax Reforms, Expenditure Pruning, Constitutional Constraints on Deficit - Fiscal and Monetary Policy Nexus.		
<b>Reference and Textbooks</b>			
Friedman, M. (1959). A Monetary and Fiscal Framework for Economic Stability, in Essays in Positive Economics. (2 <sup>nd</sup> ed.). University of Chicago. Chicago.			
Government of India (various years). Economic Survey. Ministry of Finance. New Delhi.			
Moore, W.S. and R. Penner (1980). The Constitution and the Budget. (ed.). American Enterprise Institute. Washington, D.C.			
Musgrave, R.A. & Musgrave, P.B. (2004). Public Finance in Theory and Practice. Tata McGraw Hill. New Delhi.			
Jha, R. (1998). Modern Public Economics. Routledge. London.			
Hillman A. L. (2003). Public Finance and Public Policy. Cambridge University Press. London.			
Herber, B.P. (1967). Modern Public Finance. Richard D. Irwin. Homewood.			
Goode, R. (1986). Government Finance in Developing Countries. TMH. New Delhi.			
Atkinson, A.B. & Stiglitz, J.E. (1980). Lectures on Public Economics. TMH. New York, NY.			
<b>Outcomes</b>	➤ The students will receive a conceptual clarity on spending, taxing and financing activities of the government and a thorough grounding on the principles underlying the role of the state and centre financial relations.		



<b>Semester - IV</b>			
<b>Course code: 455 404</b>	<b>International Economics - II</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide a detailed account on the balance of payments and the related issues.		
<b>Unit-I</b>	<b>Terms of Trade, Tariff and Protection:</b> Concept of Terms of Trade – Their Uses and Limitations – its importance in the Theory of Trade – Secular Deterioration of Terms of Trade, its Empirical Relevance and Policy Implications for Less Developed Countries – Trade as an Engine of Growth – Theories of Terms of Trade: Views of British School, Rawl, and Singer and Prebisch– Theory of Intervention – Economic Effects of Tariff on National Income - Terms of Trade and Income Distribution – Effects of Quotas – Effective Rate of Protection.		
<b>Unit-II</b>	<b>International Economic Integration:</b> Benefits of Integration – Types of Integration – Forms of Economic Cooperation – the Theory of Custom Union – its Features – Partial and General Equilibrium Approach – Vanek Model – Welfare Gains or Losses from a Custom Union – Lipsey Model – Dynamic Effects of Custom Union.		
<b>Unit-III</b>	<b>Balance of Payment:</b> Meaning Structure and Components of Balance of Payment – Equilibrium and Disequilibrium in the Balance of Payment – Consequences of Disequilibrium in the Balance of Payment – Balance of Payment and Balance of Trade – Causes and Methods of its Correction (Monetary and Non- Monetary Measures and Their Relative Merits and Demerits).		
<b>Unit-IV</b>	<b>Review of National Income and Balance of Payment Accounting:</b> National Income Accounts and Balance of Payments Accounts: Balance of Trade, BOP on Capital and Current Account, Overall BOP, BOP Accounting Principles (Credits and Debits, Double Entry Book Keeping).		
<b>Unit-V</b>	<b>Balance of Payment and Policy:</b> Automatic Adjustment Mechanism under Gold Standard – Balance of Payment and National Income – Expenditure Reducing and Expenditure Switching Policies – Direct Control for Adjustment – Policies for Achieving Internal and External Balance.		
<b>Reference and Textbooks</b>			
Bhatia, H.L. (2006). <i>International Economics</i> . Vikas Publishing House. New Delhi.			
Desai, S.S.M. & Bhalerao, N. (2010). <i>International Economics</i> . Himalaya Publishing House. New Delhi.			
Hallwood, C.P. & MacDonald, R. (2009). <i>International Money and Finance</i> . Blackwell Publishing. England.			
Krugman, P.R. Obstfeld, M. & Melitz, M.J. (2012). <i>International Economics: Theory &amp; Policy</i> , (9 <sup>th</sup> ed.) Addison-Wesley. Boston.			
Levi, M.D. (2009). <i>International Finance: The Markets and Financial Management of Multinational Business</i> , (5 <sup>th</sup> ed.). Routledge. London.			
Mannur, H.G (2005). <i>International Economics Theory and Policy Issues</i> . Vikas Publishing House. New Delhi.			
Salvatore, D. (2016). <i>International Economics</i> . (12 <sup>th</sup> ed.). John Wiley and Sons. Singapore.			
<b>Outcomes</b>	➤ The students will be able to familiarise the major models of international trade, differentiate in terms of their assumptions and implications, critically analyse the relevance of terms of trade and usage of appropriate measures to correct the BOP and trade reforms.		

## List of Elective Courses

Course code: 455 504	Energy Economics	Credits: 4	Hours: 4
<b>Objectives</b>	➤ To provide an understanding about the role of energy in economic activity, economic methods of assessing energy technologies to address the problems and issues concerned with energy.		
<b>Unit-I</b>	<b>Introduction to Energy Economics:</b> Natural Resources: Importance; Role of Natural Resources in Economic Development– Energy Resources: Types and Classification, Properties of Energy, Forms of Energy– Emergence of Energy Economics: Its Scope and Nature; Energy Indicators – Energy Economics and its relations with other Branches.		
<b>Unit-II</b>	<b>Energy and Development:</b> Role of Energy in Economic Development – Energy Intensity and Elasticity - National and International Comparison – Low, Middle and High Income Economies – Role of International Institutions: OPEC, IEA and World Bank.		
<b>Unit-III</b>	<b>Energy and Environment:</b> Energy crisis: Causes and Consequences, Remedial measures– Environmental Crisis: Causes and Consequences; Impact of Energy Consumption and Production on Environment– Role of Energy and Environmental Economists in solving Energy Crisis.		
<b>Unit-IV</b>	<b>Energy Conservation and Energy Management:</b> Energy Planning and Energy Conservation: Meaning, Objectives and Importance– Energy Management: Meaning, Objectives and Importance – Recent Developments: Energy Auditing, Energy Accounting, Energy Pricing and Taxes– Sustainable Energy Management.		
<b>Unit-V</b>	<b>India's Energy Profile:</b> Indian Energy Sector– Organizational Structure – Energy Supply (Coal, Oil, Gas and Power by Hydro, Nuclear, Thermal) – Energy Demand for Agriculture, Industry, Transport and Domestic – Renewable Energy Sources and Technology – Renewable Energy Programmes – Energy Generation under Five Year Plans – Energy Issues and Policy Options for India.		
<b>Reference and Textbooks</b>			
Agarwal, S.K. (1985). <i>Environment and Natural Resources Economics</i> . Scott Foresman Company. London.			
Common, M. (1985). <i>Environmental and Resource Economics</i> . Longman. London.			
Government of India, 10 <sup>th</sup> and 11 <sup>th</sup> Five Year Plan Documents, Planning Commission of India.			
Munasinghe, M. and P. Meier (2008). <i>Energy Policy and Modeling</i> . Cambridge University Press. UK.			
Rao, H. (1990). <i>Rural Energy Crisis: A Diagnostic Analysis</i> . Ahish Publishing House. New Delhi.			
TERI (2010). <i>TERI Energy Data Directory and Year Book</i> . The Energy Research Institute. New Delhi.			
William, B. (Ed.) (1997). <i>Readings in Ecology, Energy and Human Society: Contemporary Perspectives</i> . Harper and Row. New York.			
<b>Outcomes</b>	➤ Students will be able to understand the energy efficiency, conservation and role of energy in economic development, key factors to be considered in evaluating alternative energy policy options.		

<b>Course code: 455 505</b>		<b>Environmental Economics</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To expose the knowledge about the relation between economy and environment and basic economic principles and concepts used.			
<b>Unit-I</b>	<b>Introduction:</b> Environment – Eco-system – Nexus between Ecology and Economics – The Principle of Material Balance – Trade-off between Economic Growth and Sustainable Development – Limits to Growth – Global Warming – Environmental Issues in different Economic Systems.			
<b>Unit-II</b>	<b>Cost Benefit Analysis:</b> Environmental Pollution – Sources and Types of Pollution – Pareto Optimality – Externality – Social Cost and Efficiency-Divergence between Social and Private Cost – Problem of Second Best – Environmental Impact Assessment – Cost-Benefit Analysis.			
<b>Unit-III</b>	<b>Externalities and Environmental Monitoring:</b> Environmental Externalities – Pigouvian Taxes and Subsidies- Pollution Permits and Mixed Instruments (The Charges and Standards Approach) – Coase’s Bargaining Solution and Collective Action- Informal Regulation and the New Model of Pollution Control-Monitoring and Enforcement of Environmental Regulations.			
<b>Unit-IV</b>	<b>Methods of Valuation:</b> User Values, Option Values and Non-use Values; Valuation Methods – Methods based on Observed Market Behaviour; Hedonic Property Values and Household Production Models (Travel Cost Method and Household Health Production Function), Methods based on Response to Hypothetical Markets, Contingent Valuation Method – Cost Based Methods.			
<b>Unit-V</b>	<b>Environment Policy:</b> Policy Measures: Basic Approaches to Environmental Policy – Regulation and Effluent Fees: A Comparison – Distributive Effects of Environmental Policy – International Environmental Policy – India’s Environmental Policy – Law on Environmental Protection and Pollution Control in India.			
<b>Reference and Textbooks</b>				
Barry, C.F. (1994). <i>Environmental Economics</i> , McGraw Hill. Ince. International,				
Butin, J.A. (1981). <i>The Economics of Environmental and Natural Resource Policy</i> . West view Press. Boulder. Colorado.				
Centre for Science and Environment (various issues). <i>Citizens Report on Environment</i> . Centre for Science and Environment. New Delhi.				
Chand, Attar (1985). <i>Environmental Challenges</i> . UPH Publishers. New Delhi.				
Goldberg Jake (1992). <i>Economics and the Environment</i> . Chelsea House Publishers.				
Kneese, V.A. Ayres, R.U. and C.A. Ralph (2015). <i>Economics and the Environment: A Materials Balance Approach</i> . Routledge. Taylor and Francis. Abingdon. UK.				
Robert, E.A. (1983). <i>Man and Environment</i> . Penguin Books.				
<b>Outcomes</b>	➤ This course will enable the students to understand the link between economic principles and environmental issues, the ways in which the key concepts are used in applied policy analysis.			

<b>Course code: 455 506</b>		<b>Project Planning and Evaluation</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide exposure to the students about the methodology for preparing project proposal and evaluating the projects of all aspects.			
<b>Unit-I</b>	<b>Project - Basic Concepts:</b> Project: Concept, Characteristics, Classification – Project Life Cycle – Identification and Sources of Project – Framing the Objectives of Project.			
<b>Unit-II</b>	<b>Project Formulation:</b> Methodology – Project Feasibility Analysis: Techno-Economic Feasibility, Input Feasibility, Project Design, Network Feasibility and Financial Feasibility, Project Social Cost Benefit Feasibility– Pre-Investment Report.			
<b>Unit-III</b>	<b>Project Appraisal:</b> Methodology – Appraisal of Different Feasibility Analysis – Criteria for Project Appraisal – Discounted and Un-discounted Techniques.			
<b>Unit-IV</b>	<b>Project Monitoring:</b> Methodology – Aspects to be Covered – Designing and Operating the Monitoring System – Tools – Rate of Disparity and Milestone Approach.			
<b>Unit-V</b>	<b>Project Evaluation:</b> Need for Evaluation – Criteria for Evaluation- Performance indicators – Impact of the Project – Evaluating the Worthiness of Project – Project Replication.			
<b>Reference and Textbooks</b>				
Gittinger J, Price. (1984). <i>Economic Analysis of Agricultural Projects</i> . 2 <sup>nd</sup> Edition. the Johns Hopkins University Press. London.				
Lettle, IMD and Mirreles (1974). <i>Project Appraisal and Planning for Developing Countries</i> . Oxford and INH Publishing Co. New Delhi.				
Mathoo P.K. (1978). <i>Project Formulation in Developing Countries</i> . South Asia Books. New Delhi.				
Mishra S.N. and J. Beyer. (1978). <i>Cost Benefit Analysis – Case study of Ratnagiri Fisheries Project</i> . Hindustan Publishing Corporation. Delhi.				
Moder J.J., and Philips. (1964). <i>Project Management with C.P.M and PERT</i> . Reinhold Publishing Corp. Nelyor.				
Pandey I.M., (2010). <i>Financial Management</i> . Vikas Publishing. New Delhi.				
Prasanna Chandra (1987). <i>Project-Preparation Appraisal Budgeting and Implementation</i> . Tata Mc Grow Hill. New Delhi.				
Puttaswamaiah K. (1980). <i>Project, Evaluation Criteria and Cost-Benefit Analysis</i> . Oxford and IBH Publishing. New Delhi.				
<b>Outcomes</b>	➤ Students will be able to assess different approaches to project management, critically evaluate a project and also present a project plan.			

<b>Course code: 455 507</b>		<b>Industrial Economics</b>	<b>Credits: 4</b>	<b>Hours: 4</b>
<b>Objectives</b>	➤ To provide a detailed account on the development of industrial economy and the related issues with a special focus on Indian Industries			
<b>Unit-I</b>	<b>Role of Industries in Development:</b> Concepts of Industrial Economics- Rational of Industrialization- Evolution of Industries in India- Need, Importance and Role of Industries in Economic Development- Linkages between Industry and Agriculture Sectors- Industrial Development-Experience of Developed and Developing Countries.			
<b>Unit-II</b>	<b>Entrepreneurs and Industry:</b> Definition of Industrial Entrepreneurs- Entrepreneurial Motivation- Types, Characteristics and Functions of Industrial Entrepreneurs- Role of Entrepreneurs in Economic Development- Role of Women Entrepreneurs in the Industrial Development- Rural Entrepreneurship Development in India- Institutional Finance to Entrepreneurs Development- Problems of Industrial Entrepreneurs.			
<b>Unit-III</b>	<b>Industrial Location:</b> Determinants of Industrial Location: Technical Factors, Economic and Infrastructural Factors, Other Factors- Theories of Industrial Location: Central Place Theory, Renner's Theory, Rawstron's Principles, Weber's Theory, the Market Area Theory of Tord Palander, Central Place Theory of Losc - Trend of Industrial Location in India.			
<b>Unit-IV</b>	<b>Finance for Industries:</b> Significance of Finance to Industrial Development- Owned, and External Funds for Industrial Development- Role and Types of Institutional Finance- Functions of IFCI, IDBI, SIDBI, MSFC, ICICI, SFCs, SIDC, Commercial Banks, etc., in Industrial Development- Industrial Finance in India its Trends and Problems.			
<b>Unit-V</b>	<b>Current Issues in Industrial Development:</b> Recent Trends in Industrial Growth in India- Growth of Major Industries: Cotton Textiles, Iron and Steel, Jute, Sugar, Coal, Cement and Engineering Goods- Development and Problems of Small-Scale Industries in India- Role of Public and Private Sectors in India - Effects of Liberalization on Industrial Development in India- Role of MNCs in Industrial Development- Remedies for Sick Industries- Industrial Policy of India before and after 1990s.			
<b>References:</b> Ahluwalia, I.J. (1985). <i>Industrial Growth in India</i> . Oxford University Press, New Delhi. Barthwal, R.R. (2010). <i>Industrial Economics: An Introductory Text Book</i> . Wiley Eastern Ltd. New Delhi. Brahmananda, P.R. and V.R. Panchamukhi (Ed.) (1987). <i>The Development Process of the Indian Economy</i> . Himalaya Publications. New Delhi. Cherunilam, F. (1994). <i>Industrial Economics: Indian Perspective</i> . Himalaya Publishing House. Mumbai. Dutt, G. and A. Mahajan (2016), <i>Indian Economy</i> , S. Chand Publishing, New Delhi. Kidwell, D.D. Blackwell, D.W. Whidbee, D.A. and R.W Sias (2011). <i>Financial Institutions. Markets, and Money</i> . John Wiley and Sons. New Jersey. United States. Kuchhal, S.C. (1980). <i>Industrial Economy of India</i> , Chaitanya Publishing House Allahabad. Reserve Bank of India. <i>Report on Currency and Finance (Annual)</i> . Government of India. New.				
<b>Outcomes</b>	➤ Students will be able to realize the importance of industrial development and the factors which influence its growth based on the current issues and trends in industrial development.			

## CURRICULUM VITAE

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**Educational qualification:** M.A., M. Phil., Ph.D., (all in Economics)

### Professional experience:

- Senior Professor and Head, Department of Economics and Rural Development, Alagappa University, Karaikudi (January 2008 to till date).
- NABARD Chair Professor and Head, Department of Economics and Rural Development, Alagappa University, Karaikudi (January 2011 to December 2016).
- Reader, Gokhale Institute of Politics & Economics, Pune, (December 2000 to January 2008).
- Lecture, Gokhale Institute of Politics and Economics, Pune (November 1994 to December 2005).

### Honours and Awards:

- Full-time Member (Official), Commission for Agricultural Costs and Prices, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi.
- Vice-President, Indian Society of Agricultural Economics, Mumbai, November 23, 2017.
- Professor Ramesh Chandra Agrawal Award of Excellence, Indian Society of Agricultural Economics, Mumbai, on November 29, 2009.
- Honorary International Researcher, Centre for Comparative Water Policies and Laws, School of Commerce, University of South Australia, Adelaide.
- Member, Editorial Committee, Indian Journal of Agricultural Economics.

### Recent publications:

- Narayanamoorthy, A. and P. Jothi (2019), "Water Saving and Productivity Benefits from SRI: A Study of Tank, Canal and Groundwater Irrigated Settings in South India", *Water Policy*, Vol. 21, No. 1, pp. 162-177, (IWA, London, UK)
- Narayanamoorthy, A. (2018), "Financial Performance of India's Irrigation Sector: A Historical Analysis", *International Journal of Water Resources Development*, Vol. 34, No.1, pp. 116-131 (Routledge, London, UK).
- Narayanamoorthy, A. and N. Devika (2018), "Economic and Resource Impacts of Drip Method of Irrigation on Okra Cultivation: An Analysis of Field Survey Data", *Journal of Land and Rural Studies*, Vol. 6, No.1, pp. 1-19 (Sage Publications).
- Narayanamoorthy, A.; M. Bhattarai and P. Jothi (2018), "An Assessment of Economic Impact Drip Irrigation in Vegetable Production in India", *Agricultural Economics Research Review*, Vol. 31 (1): 105-112.
- Narayanamoorthy, A. (2017), "Farm Income in India: Myths and Realities", *Indian Journal of Agricultural Economics*, Vol. 72, No. 1, January-March, pp. 49-75.
- Narayanamoorthy, A.; R. Suresh and P. Alli (2017), "Dynamics of Input Use Efficiency in Selected Crops Cultivation in India: A Temporal and Spatial Analysis", *Indian Journal of Agricultural Economics*, July-September, Vol. 72, No.3, pp. 215-229.
- Narayanamoorthy, A. (2015), "Groundwater Depletion and Water Extraction Cost: Some Evidence from South India", *International Journal of Water Resources Development*, Vol. 31, No. 4, pp. 604-617 (Routledge, London, UK).

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## ***CURRICULUM VITAE***

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### **Educational qualification:**

- M.A, Economics
- M.Phil, Economics
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### **Professional experience:**

- Assistant Professor, Department of Economics and Rural Development, Alagappa University, Karaikudi (February 2016 to till date).

### **Recent publications:**

- Narayanamoorthy, A.; M. Bhattarai and R. Suresh (2018), “Has Profitability of Foodgrain Production Declined After Implementation of MGNREGS in India?”, in Bhattarai, M. et al., (eds.), *Employment Guarantee Programme and Dynamics of Rural Transformation in India*, Springer, Singapore, pp 131-152.
- Narayanamoorthy, A. R. Suresh and P. Alli (2017), “Public Procurement of Foodgrains and Farm Income Nexus in India: A Macro-Level Analysis”, *Indian Journal of Agricultural Marketing*, Vol. 31, No. 3, pp. 13-26
- Narayanamoorthy, A. R.Suresh and P. Alli (2017), “Dynamics of Input Use Efficiency in Selected Crops Cultivation in India: A Temporal and Spatial Analysis”, *Indian Journal of Agricultural Economics, July-September*, Vol. 72, No.3, pp. 215-229.
- Narayanamoorthy, A. and R. Suresh (2016), “Does Urbanisation Affect Tank Irrigation Development in Tamil Nadu? A Macro-Level Analysis”, *Review of Development & Change*, Vol.21 No. 2, pp. 11-34.
- Narayanamoorthy, A.; P. Alli and R. Suresh (2016), “Is Farm Profitability Declining in India?: The Case of Sugarcane Crop” in D. Marothia .; W. Martin, A. Janaiah and C.L. Dadhich (Eds.), *Re-Visiting Agricultural Policies In the Light of Globalisation Experience: The Indian Context*, Indian Society of Agricultural Economics, Mumbai , pp. 145-159.

Total Citation: 21

h- index: 4

i10- index: 0

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### **Educational qualification:**

- M.B.E., Master of Business Economics
- Ph.D., Economics

### **Professional experience:**

- Assistant Professor, Department of Economics and Rural Development, Alagappa University, Karaikudi, February, 2016 to till date.
- Assistant Professor, Department of Economics, Guru Nanak College, Chennai, June, 2014 to January, 2016.
- Guest Lecturer, Department of Economics, Bharathiar University, Coimbatore, June, 2013 to May, 2014.

### **Recent publications:**

- Ramesh Kumar, K. (2017), "Demographic dividend and youth unemployment: Evidence from Indian states", *Shanlax International Journal of Economics*, Vol. 5, No.2, pp.8-17.
- Ramesh Kumar, K. (2017), "Women, Work and Wage in Rural Labour Market in India- Special reference to Tamilnadu", *World Journal of Science and Research*, Vol. 2, Spl. Issue, pp.123-131.



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### **Educational qualification:**

- M.S., Economics
- Ph.D., Economics

### **Professional experience:**

- Research Fellow, Research Economist at Cornell University, Ithaca, New York.
- Senior Food Policy Advisor to the Malawi Ministry of Agriculture
- Senior Lecturer at the University of Malawi.
- IFPRI's coordinator of its Central Asia program during 1997-2003 and the coordinator of the South Asia Initiative of IFPRI during 2001-2006.

### **Honours and Awards:**

- Fellow of the National Academy of Agricultural Sciences, India, 2018

### **Recent publications:**

- Babu, S.C. and R.P. Shah (2019), *Agricultural Research and Extension System in Nepal: An Organisational Review*, IFPRI, Discussion Paper 01810, International Policy Research Institute, Washington, DC.
- Jain, P.K.; B.S. Hansra, and S.C. Babu (2019), Open and Distance learning for Capacity Development of Extension Professionals, in (Ed.) *Agricultural Extension Reforms in South Asia, Status, Challenges and Policy Options*, Public Food Policy and Global Development Series, pp. 275 – 285.
- Babu, S.C.; M.George and P. Nilam (2018), “Integrating Environmental Considerations in the Agricultural Policy Process: Evidence from Nigeria” *Environmental Development*, Vol. 25, No. 2, pp. 111-125.
- Lalitha, A.; S.C. Babu and K.S. Purnima (2018) “Internet of Things: Applications to Developing Country Agriculture Sector”, *International Journal of Agriculture Sciences*, Vol. 10, No. 20, pp. 7410-7413.
- Deepayan, D. and S.C. Babu (2018), “What Does it Take to Stabilise India’s Sugar Market?”, *Economic and Political Weekly*, Vol. 53, No.36, pp. 16-18.
- Danielle, R.; H.; Steven, S.C.; Babu, H.L. Sheryl and M. David (2018), “The Kaleidoscope Model of Policy Change: Applications to Food Security Policy in Zambia”, *World Development*, Vol. 109, No. pp. 101-120.

Total Citation: 7506

h- index: 42

i10- index: 163

## ***CURRICULUM VITAE***

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### **Educational Qualification:**

- M.A., Economics
- M.Phil., Economics
- Ph.D., Economics

### **Professional Experience:**

- Professor, Department of Economics, University of Madras, Chennai, March 1999 to till date.
- Reader, Pachaiyappa's College, Kanchipuram, Tamil Nadu, October 1987 to February 1999.

### **Honours and Awards:**

- Received University Grants Commissions Faculty Improvement Programme in 1995.
- Awarded the Union Planning Commissions' Chair on Planning and Development during 1999-2003.

### **Recent publications:**

- Sivagnanam, K.J. and K. Murugan (2019), "Impact of Public Spending on National Food Security Mission and Farmers Livelihoods in Tamil Nadu", *Journal of Land and Rural Studies*, Vol.7, No. 2, pp. 121-140.
- Sivagnanam, K.J.; K. Murugan and M. Thenkovan, (2019), Impact of National Food Security Mission on Farmers Livelihood in Tamil Nadu", *Economic Affairs*, Vol. 64, No. 1, pp. 137-150.
- Murugan, K. and K.J. Sivagnanam, (2018), "Agrarian Crisis and Farmer's Suicide Scenario in Tamil Nadu", *Research Journal of Humanities and Social Sciences*, Vol. 9, No. 4, pp. 819-823.
- Abubakar, J. and K.J. Sivagnanam (2017), Fisher's Effect: An Empirical Examination Using India's Time Series Data, *Journal of Quantitative Economics*, Vol. 15, No. 3, pp. 611-628.
- Murugan, K. and K.J. Sivagnanam (2018), Fisheries Sector and Economic Growth in India, *Journal of Economic and Social Development*, Vol. 14, No. 2, pp. 83-99.
- Sivagnanam, K.J. (2017), *Farmer Suicides in Kerala*, AERC Research Study No: 161, Agro Economic Research Centre, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi, University of Madras, Tamil Nadu.

Total Citation: 56

h- index: 3

i10- index: 1

## *CURRICULUM VITAE*

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- M.A., Economics
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### **Professional experience:**

- Professor, Department of Economics, Pondicherry University, Pondicherry, March 2006 to till date.
- Registrar (i/c), Pondicherry University, February, 2016 to July, 2017.
- Reserve Bank of India Chair Professor, Institute for Social and Economic Change, Bangalore, April, 2005 to February, 2006.

### **Honours and Awards:**

- Vice President (Elect), the Indian Econometric Society (2014-15, 2015-16 and 2016-17)

### **Recent publications:**

- Ramachandran, M. And S. Carmel (2018), “Appetite for Official Reserves”, *Economic and Political Weekly*, Vol. 53 No.13, pp. 120-128.
- Rather, S.R. .; R.S. Durai and M. Ramachandran (2018), “Inflation and the Relative Price Dispersion: a Case for Four Percent Solution”, *Australian Economic Papers*, Vol. 57, No.1, pp. 81-91.
- Rafi, O.P.C.M. and M. Ramachandran (2018), Capital Flows and Exchange Rate Volatility Experience of Emerging Economies”, *Indian Economic Review*, Vol. 53, No. 1-2, pp. 183-205.
- Balaji, B.; S. R.S.Durai and M. Ramachandran (2018), “Spillover Effects of Real and Nominal Uncertainties in India”, *Journal of Quantitative Economics*, Vol.16, No.1, pp.143-162.
- Bathmanaban, B.; R.S.S.Durai and M. Ramachandran (2017), “The Relationship between Output Uncertainty and Economic Growth-Evidence from India”, *Economics Bulletin*, Vol. 37, No. 4, pp. 2680-2691.
- Paul, S.; S.R. Rather and M. Ramachandran (2017), “Money and Inflation in India: Evidence from P-star Model”, *Bulletin of Economic Research*, Vol. 69, No.4, pp. E94-E111.

Total Citation: 618

h- index: 11,

i10- index: 13

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- M.A., Economics
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### **Professional experience:**

- Senior Scientist, M S Swaminathan Research Foundation (MSSRF), Chennai, April, 2013 to till date.
- Program Director, Reliance Foundation, Chennai, June, 2012 to March, 2013.
- Research Associate, United Nations Development Programme, New Delhi, March, 2010 to June, 2012.
- Scientist, M S Swaminathan Research Foundation, Chennai, June, 2005 to February, 2010.

### **Recent publications:**

- Rukmani, R.; R. Gopinath; G. Anuradha; R. Sanjeev and Varun Kumar Yadav(2018), “Women as A Drivers of Change for a Nutrition-Sensitive Agriculture: The Case Study of a Novel Extension Approach in Wardha”, *Agriculture Research*, Vol. 8, No. 31, pp.1-8.
- Sujath, R. and R. Gopinath (2018),“*Hype over Pad Man but India’s Menstrual Owes Continues*”, The Hindu Centre for Politics and Public Policy, March 12, 2018
- Gopinath, R.; R. Vimal and N. Amaravathi (2017), “Cost-Return Analysis of Floriculture: A Case Study from Vedaranyam, Tamil Nadu”, *Indian Journal of Social Research*, Vol. 58, No. 4,pp. 495-506.
- Nagaraj, K.; P. Sainath; R. Rukmani and R. Gopinath (2014), “Farmers’ Suicides in India: Magnitudes, Trends, and Spatial Patterns, 1997-2012”, *Review of Agrarian Studies*, Vol 4, No 2, pp. 53-83.
- Gopinath, R (2012), “Changing Irrigation Pattern in an Indian Village: Case Studies of Two Farmers”, in Brij Raj Chauhan and A Satyanarayana (Eds), *Changing Villages in India*, Rawat Publications, Delhi.

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### **Educational qualification:**

- M.A., Economics
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- Ph.D., Economics

### **Professional experience:**

Sr. Research Analyst, Institute of Economics Growth, New Delhi (August 2019 to till date)

### **Recent publications:**

- Susanto Kumar Beero and A. Narayanamoorthy, (2019), *Irrigation Impacts on Rural Poverty in India: Macro and Micro Evidence*, Concept Publishing Company, New Delhi.
- Beero, S.K. (2018), “Rural Infrastructural, Value of Agricultural Output and Poverty Nexus in Rural India: A Multi-District Study” *Agricultural Situation in India*, Vol. 75, No. 2, May, pp. 20-29.
- Beero, S.K. (2016), “Infrastructural Development and Literacy Nexus in Rural India: A District Level Analysis” *Man and Development*, Vol. 38, No. 3, March, pp. 125-134.
- Beero, S.K. (2016), “Poverty in Irrigated and Rainfed Ecosystems: Village Studies in Tamil Nadu” *Productivity*, Vol. 57, No. 2, Jul-Sept., pp. 141-148.